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FOR SAMENA TELECOMMUNICATIONS COUNCIL'S MEMBERS

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Featured

LEADERS' SUMMIT 2022 COVERAGE

THIS MONTH

INNOVATION AND RESOURCES FOR THE 5G ERA

MAY-JUNE, VOLUME 13, 2022

SAMENA
TRENDS

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Innovation and Resources for the 5G Era

The Coming years are critical in observing and recalibrating approaches on how digital technology is deployed, and how its positive role in post-pandemic recovery processes can be enhanced, while we tread ahead to meet the objectives set forth under the 17 Sustainable Development Goals despite numerous digital challenges and risks lurking all around us.

2022 onwards, our collective actions and ambitions should indeed be synchronized, as we endeavor to operate and develop sustainably in the new 5G digital era. Fulfilling the 17 SDGs or achieving the 15 aspirational targets recently developed as part of the work of the UN Secretary-General's Roadmap for Digital Cooperation Roundtable Group on Global Connectivity, will depend on commitment from all of us to collaborate, partner, and take decisive steps to ensure benefits of connectivity are brought to all corners of the society, and that an enabling environment is guaranteed for the Private Sector to grow and thrive.

With the Industry and the Member States are quickly moving toward adopting G5 regulatory benchmarks and performance criteria, policy and regulatory approaches necessarily need to more effectively address the requirements of the private sector, in particular of Telecom Operators, to enable them to achieve reasonable scale. This is very important in the context of the implementation of new connectivity streams, including through 5G and IoT, to ensure that the full potential of new technologies and networks and their many use-cases can materialize and contributed to achieving the SDGs. Spectrum resources are a critically important aspect to consider in this regard. There is consensus that spectrum is a major stepping stone for building a sustainable Digital Economy. As a national asset and scarce national resource, however, spectrum needs to be managed to optimize returns to the government while generating equal, if not more, value to the overall national economy. Given the prevailing data trends, an additional 1000 to 2000 MHz of mid-band spectrum would, therefore, be needed to fulfill the data traffic demand and meet this fundamental technical requirement. In SAMENA Council's views, fulfilling the spectrum resource gap in the future would require significant amount of licensed spectrum in both 3800-4200 MHz as well as 6 GHz bands. Coincidentally, this resource gap has a direct correlation with efforts being exerted to fill digital gaps, and to fulfill the United Nations Connect 2030 Agenda.

National and municipal challenges can be overcome by effectively utilizing mid-band frequencies of the 6 GHz/sub-6GHz spectrum. Moreover, from a 5G sustainable infrastructure development point of view, 6 GHz is an important band for mobile fixed links and for backhauling; a necessity for the timely proliferation of 5G connectivity. In fact, 6GHz can be the ideal band for balancing the capacity and coverage necessary to meet future wide-area deployment requirements cost-effectively. This mid-band set of frequencies has the potential to deliver optimal ROI and a smaller carbon footprint due to inherent less power consumption. This has direct bearing on the future of 5G and unearthing its true potential, of which only one third lies in simply providing mobile broadband.

Bocar A. BA
Chief Executive Officer
& Board Member
SAMENA Telecommunications
Council

To move forward in a sustainable manner, such spectrum resources could prove to be critical for Operators. Sustainability and inclusiveness are the key principles for any ecosystem. It is truly through collaboration and by fostering inclusion and participation, and by meeting resource requirements of the private sector, that we can sustain digital momentum. To close the gap between connectivity and digital economy, we need to tackle the financial resource gaps for building digital infrastructure and address the spectrum resource gaps for achieving true, meaningful connectedness that transcends simple internet access and multimedia content.

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ITU/UNESCO Broadband Commission 2022

ITU/UNESCO Broadband Commission Urges Faster Global Action on Digital Development

The Broadband Commission for Sustainable Development met in Kigali, Rwanda, this weekend to pinpoint new actions that can drive faster progress towards universal meaningful access to digital networks and services.

The high-level advocacy group came together for its annual Spring Meeting at the invitation of the Commission Co-Chair, H.E. President Paul Kagame of Rwanda, ahead of the landmark digital development conference held every four years by the International Telecommunication Union (ITU): the World Telecommunication Development Conference (WTDC).

In his opening remarks to the meeting, President Kagame told Commissioners: "We are still living in tough times, economically, politically, and in terms of global public health. The immediate future is full of uncertainties and risks. But one thing is sure: All of the challenges we face can be handled faster, better, and more equitably, by investing in universal, affordable broadband."

Commission Co-Chair Carlos Slim also emphasized the importance of connectivity in the wake of the ongoing global health crisis. "For the adoption gap, carriers could provide the devices, and government programmes could pay the monthly subscription for families that qualify, ensuring reasonable packages with unlimited minutes and enough data. This would support remote education, e-health, and e-commerce, among many other digital services," he said.

Commissioners and Special Guests representing government leaders, heads of international organizations and private sector companies, along with civil society and academia, discussed the power of digital transformation to create broad and positive socio-economic impact and looked at ways to rapidly increase access to broadband, foster innovative partnerships, empower youth, and build trust in online spaces.

> *"We are still living in tough times, economically, politically, and in terms of global public health. The immediate future is full of uncertainties and risks. But one thing is sure: All of the challenges we face can be handled faster, better, and more equitably, by investing in universal, affordable broadband."*
>
> **- H.E. President Paul Kagame of Rwanda**

In particular, they confronted chronic connectivity challenges and discussed how to ensure affordable, sustainable, and equitable access to digital services across regions, especially in the world's 46 Least Developed countries, where 17% of the population is still without a mobile broadband signal, and hundreds of millions more kept offline by high prices, lack of digital skills and awareness, and a dearth of usable, relevant and accessible content.

Recognizing the role digital technologies play in all facets of economic activity, Commissioners shared government and business strategies that are incentivizing investment in digital literacy, connectivity, and skills.

Commission Co-Vice Chair Houlin Zhao, ITU Secretary-General, noted that "One of the challenges we need to overcome is reducing the cost of broadband subscriptions and digital devices, especially in low- and lower-middle-income economies. Affordability of broadband services in developing countries is also one of the Commission's 2025 targets. I do hope that we can use this moment to accelerate the achievement of these targets and break down these last barriers to connectivity."

"Digital and media literacy skills are among the most empowering of human transformations: in terms of our livelihoods, in terms of our access to quality and lifelong education, in terms of decisions guiding our health and safety, and in terms of understanding and exercising our civil rights," said Dr Tawfik Jelassi, UNESCO's Assistant Director-General for Communication and Information, representing UNESCO Director-General Audrey Azoulay, who serves as the Commission's other Co-Vice Chair. "Broadband Commissioners have a unique awareness of this. We have a unique capacity to lead change, through innovation, investment, advocacy and partnership."

This latest Commission meeting – the first in-person meeting in two years – provided clear synergies with WTDC, set to kick off with the theme of "Connecting the unconnected to achieve sustainable development".

Doreen Bogdan-Martin, Director of ITU's Telecommunication Development Bureau and the Commission's Executive Director, emphasized the urgent need for strong partnerships to step up connectivity.

"In alignment with the Partner2Connect Digital Coalition, the UN Secretary General's Roadmap for Digital Cooperation and the 2030 Common Agenda, the Commission will leverage the strength of its membership and collective expertise to advocate for meaningful, safe, secure, and sustainable broadband communications services," she said.

The Broadband Commission made an advocacy pledge to the ITU Partner2Connect Digital Coalition to help reach inclusive universal connectivity, through policy recommendations addressing broadband policy, access, affordability, use and skills and the advocacy actions to realize 2025

Broadband Advocacy Targets. Pledges were also received by 16 Broadband Commissioners and their entities.

The meeting also highlighted the new Call to Action: My Digital Future, presented by Generation Connect Visionaries Board members as an outcome of the first-ever Generation Connect Youth Summit, calling for inter-generational efforts to build an equitable, inclusive digital future.

A video, Broadband Transforming Lives, addressed Broadband Commission Advocacy Target 4 on digital skills for youth and adults, highlighting the work of young changemakers who are embracing technology to make a positive impact on their communities. These voices of the younger generation, together with Commissioners' input, will be conveyed to the upcoming UN Transforming Education Summit 2022, which aims to shape the future of education and learning.

Commissioners also reported on the progress of the Commission's four current Working Groups: Virtual Health & Care; Smartphone Access; Data for Learning; and AI Capacity Building.

A preview of the forthcoming report of the Working Group on The Future of Virtual Health and Care, co-chaired by Dr Ann Aerts, Head of the Novartis Foundation, and the World Health Organization, emphasized the need for sound stewardship of the global explosion in virtual health triggered by the COVID-19 pandemic, to ensure it drives equitable health access and does not exacerbate existing health inequities.

Commission Co-Vice Chair Houlin Zhao, ITU Secretary-General, noted that:

"One of the challenges we need to overcome is reducing the cost of broadband subscriptions and digital devices, especially in low- and lower-middle-income economies. Affordability of broadband services in developing countries is also one of the Commission's 2025 targets. I do hope that we can use this moment to accelerate the achievement of these targets and break down these last barriers to connectivity."

LEADERS' SUMMIT 2022

Resilience and Integration in the New Opportunity Realm

SAMENA Telecommunications Council congregated leaders and experts at its Leaders' Summit 2022, which was held at the Atlantis, the Palm in Dubai on 9th May 2022 under the theme "Thriving with Resilience & Integration in the New Opportunity Realm". The Summit was hosted by Huawei and focused on many critical issues of the ICT industry.

This year's Summit was an effort to fulfill diverse expectations from SAMENA Council members, industry stakeholders, other industries and sectors, as well as regulatory authorities and global institutions. Therefore, multiple discussions were conducted, covering a wide range of topics and issues by industry leaders and experts with diverse backgrounds and who are enabling the Public and Private sectors in treading the new opportunity landscape.

The Agenda of this Summit was built to address the need for:

- Integration of technologies in the current, "fifth-generation" business environment.
- Developing new synergies, such as with autonomous driving, learning, health and financial services, to name a few.
- Driving the future of connectivity toward sustainability – both for the business as well as for the environment.
- Revisiting and rethinking ICT infrastructure funding and financing by adopting new models in a sustainable manner, but in a way that promotes sharing of the responsibility among all players on matters of connectivity and universal digital access.
- Catalyzing new partnerships, for which SAMENA Council has made an official pledge to support and advocate the objectives of the ITU's recently launched Partner2Connect Digital Coalition.
- Given the magnitude of connecting everyone, fostering collaboration among the communications service providers that are operating at the surface of the planet and those that are operating in space. On this front, Mohamed Bin Rashid Space Center's leadership participated and led a bi-lateral meeting during the Leaders' Summit.

Many telecoms and multi-industry leaders contributed to the success of the Summit with keynotes, visions statements and

Leaders' Summit 2022 Participants

- Belgium
- Canada
- China
- Egypt
- France
- Germany
- India
- Iraq
- Ireland
- Italy
- Jordan
- Kenya
- Kuwait
- Lebanon
- Malaysia
- Netherlands
- Oman
- Pakistan
- Palestine
- Romania
- Russia
- Rwanda
- Saudi Arabia
- Senegal
- Serbia
- Singapore
- Somalia
- South Africa
- Spain
- Sri Lanka
- Sudan
- Switzerland
- Turkey
- UK
- United Arab Emirates
- USA

> *"As you deal with the numerous technical and regulatory challenges of your industry, please remember that your leadership directly affects the quality of life for everyone. You are no longer providing a nice-to-have service. You are as essential to the health and well-being of countries, economies, companies, and individuals almost as the food we eat and the air we breathe."*
>
> - **H.E. Sheikh Nahyan bin Mubarak Al Nahyan**
> UAE Cabinet Member & Minister of Tolerance & Coexistence

expertise, including H.E. Majed Al Mesmar Director General of UAE's Telecommunications and Digital Government Regulatory Authority (TDRA) and the chief patron of the Leaders' Summit 2022, H.E. Houlin Zhao, Secretary-General, ITU, Eng. Olayan AlWetaid, CEO, stc Group, Saudi Arabia, Mr. Bocar BA, CEO of SAMENA Council, as well as leading private sector members such as Mr. Steven Yi President, Huawei Middle East and Africa.

Highlighting the need for more collaboration and concerted efforts to achieve the Broadband Commission's mandate of bridging the

> *"I want to extend special recognition and my heartfelt thanks to the Regulators and Government leaders in the Middle East and the greater SA-ME-NA region for their hospitality to and their exceptional cooperation with ITU."*
>
> - **H.E. Houlin Zhao,** Secretary-General of ITU

digital divide and bringing the goal of universal connectivity to the forefront of policy discussions through the facilitation of impactful public-private partnerships, thought leadership and actionable policy recommendations, the SAMENA Council Leaders' Summit 2022 also gathered several Broadband Commissioners and Broadband Commission executives, including Ms. Doreen Bogdan Martin, Executive Director of the Secretariat and ITU BDG Director, Mr. Bocar BA, CEO of SAMENA Council, H.E. Majed Al Mesmar Director General of UAE's Telecommunications and Digital Government Regulatory Authority (TDRA), Mr. Denis O'Brien, Chairman of Digicel Group, Mr. Lacina Koné, CEO of Smart Africa, and Professor Jeffrey Sachs, Director of the Center for Sustainable Development at Columbia University & President of the UN Sustainable Development Solutions Network. Commissioner Mr. Kevin Martin of Meta was represented by Dr. Robert Pepper, Head, Global Connectivity Policy and Planning.

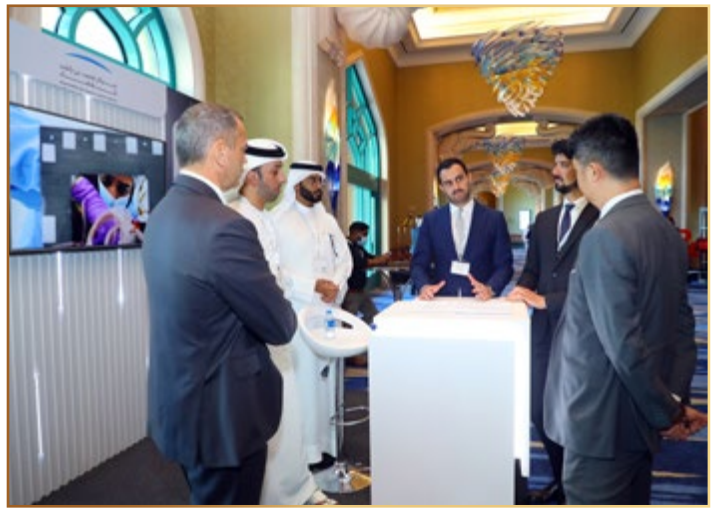
Mr. Bocar BA, as CEO of SAMENA Council and Broadband

> *"Our collective efforts are now in need of producing outcomes that should tangibly support the success of the Government Sector Leaders and, at the same time, should enable the success of the Private Sector Decision-makers."*
>
> **- Mr. Bocar BA**
> CEO & Board Member of SAMENA Council

> *"Similar to the future of terrestrial players in the digital space, including many present here today, the future of outer space is sustainability...being able to collaborate with SAMENA Council on this Summit has been among the most productive initial steps... It is important that the international community, which includes many of the Leaders present in this SAMENA Council Leaders' Summit, act in a timely manner to preserve and protect outer space for future generations while striving to explore it and utilize it for the benefit of humankind."*
>
> **- H.E. Salem Al Marri**
> Director-General, Mohamed Bin Rashid Space Center (MBRSC)

> *"Our crisis is a carbon crisis, not an energy crisis – we are not short of energy."*
>
> **- Dr. Jeffrey D. Sachs**
> Professor – Columbia University,
> President - UN Sustainable Development Solutions Network

Commissioner, during his opening speech, stated that "With increased dependencies of our economic and social systems on digital communications infrastructure and services, it is pertinent to address both persisting and emerging challenges associated with new network trends, approaches, policies, regulation, technologies, methodologies, fiber deployment, stakeholder obligations and collective responsibility toward sustainability across all fronts…" He further stated that in the strive for improving and expanding



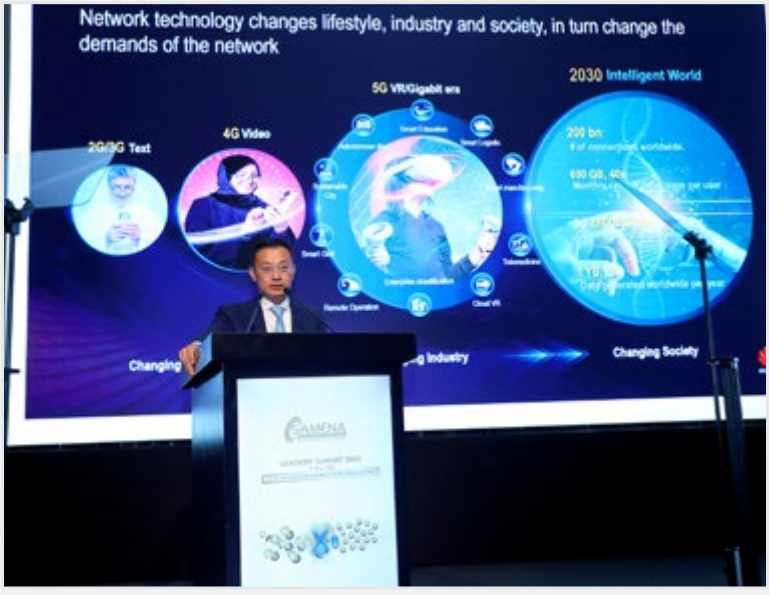
> *"The Partner2Connect Digital Coalition is a game-changing opportunity to take a holistic approach, catalyze new partnerships, and mobilize the resources needed to connect those who are still offline. I am calling on all players and partners to join P2C and work together so we can achieve our goal of meaningfully connecting those 2.9 billion people who are still offline."*
>
> **- Ms. Doreen Bogdan-Martin**
> Director BDT of ITU

"We are very optimistic to have better future, to launch 4G and 5G, and launching e-Gov despite all challenges, and we have world bank projects that will support this mission. We are also looking for Arab countries to benefit from Palestinian human resources

- H.E. Dr. Ishaq Sider
Minister of Telecom & IT in Palestine

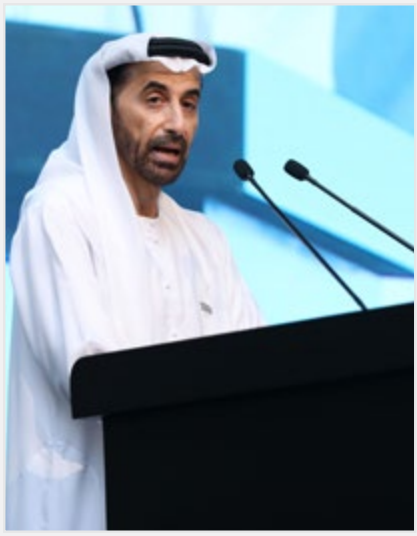
connectivity, decisions should be attentive to ICT sustainability and to climate action, and address Telecom Operators' issues, including rethinking Industry taxation and financing and funding of ICT infrastructure development, emphasizing on partnerships as key to success. In this regard, Mr. BA took the opportunity to announce SAMENA Council's pledge to the ITU's "Partnership2Connect Digital Coalition", stating that SAMENA Council would use all its advocacy channels to support the objectives and goals of the P2C Initiative.

Huawei's President of the Middle East & Africa Region and Member of the Supervisory Board, Mr. Steven Yi, stated: "The global digital economy is developing



"Many operators have already started looking at the future radio spectrum options, such as considering 6GHz, which will provide rich spectrum bands to continue developing 5G technology... A fair and open business environment that encourages operators to select the best technology in the market without any restriction also enables operators to quickly deploy 5G networks."

- Mr. Steven Yi
President of Huawei ME



"With increased dependencies of our economic and social systems on digital communications' infrastructure and services, it is pertinent to address both persisting and emerging challenges associated with new network trends, approaches, policies, regulations, technologies, methodologies, fiber deployment imperatives and innovations happening at the Radio Access Network. In addition, stakeholder obligations with respect to sustainable investments, digital service and citizen-centric service delivery need to be discussed"

- H.E. Majed Sultan Al Mesmar
Director General, Telecom & Digital Government Regulatory Authority (TDRA)

rapidly, and over 50% of the global GDP will be digitalized in 2022. Huawei is dedicated to come together with industry partners to share knowledge, experiences, and best practices to continuously create value for telecom carriers and to help enterprises accelerate their digital transformation.

"The ICT sector and in particular 5G, cloud, and digital power will play a vital role in tackling sustainability needs of the Telecom industry and its contributions to other industries. It is essential to keep building onto past successes in terms of dialogue, timely decision-making, and innovation, so that momentum in the region 5G development can be maintained. Huawei is committed to innovation, and we highly value the need to work together to address the issues that our Industry and our world face, and drive our collected work towards meetings the region digital future requirements. Leaders' Summit 2022 is a platform, which supports stakeholders' commitment to understanding and adjusting to new realities and to setting new goals in digital development", Yi added.

The Leaders' Summit 2022 placed strong focus on sustainability from both terrestrial and space perspectives. The Summit also witnessed the official launch of IntelligentRAN in the region. The Huawei IntelligentRAN opens new paths to wireless intelligence, bringing the next level of service capability including agile service, smart experience, smart green and smart operations and management. Moreover, the Summit also showcased the launch

of a joint UNESCO Huawei report titled "Talent Ecosystem for Digital Transformation: Insight Report on ICT in Higher Education and TVET (Technical and Vocational Education) in the Middle East and Pakistan". The report echoed the importance of developing ICT talents and creating relevant ecosystems to enhance ICT skills in the region and expand access to career opportunities in the digital world. The report showed a focus on ICT skills development has resulted in high ICT skills among the populations in the region. Data shows that 79% of individuals in the UAE have basic ICT skills in 2019. The corresponding figure is 61% in Saudi Arabia and 63% in Bahrain.

The past four, and particularly the last two virtual editions of Leaders' Summit, had delved into the fast-unfolding reality of digitalization in the era of 5G, with Connectivity, Digital Infrastructure, Cloudification, Artificial Intelligence, Internet of Things, Data Centers, Optical Networks, IPv6/IPv6+, Investment Incentivization, and Policy as well as Regulation taking on whole new dimensions. Leaders' Summit 2022 built the case for taking 5G discussion beyond connectivity to real-life innovations and impact for the business and the society.

> *In the presence of 300+ attendees, Leaders' Summit 2022 demonstrated how balance in geographical, gender, market, technology, and policy representation can be achieved.*

The Leaders' Summit 2022 welcomed Chairmen and CEOs from the private sector, with several one-on-one conversations held with leading personalities and leaders from the region's and the world's leading private sector ICT conglomerates, with top decision-makers from regulatory authorities around the region in attendance. The Summit had the full participation of global leaders and entities focused on institutionalizing and fostering cross-sector digitization and collaboration, making the Leaders' Summit the year 2022's premier destination for leadership, dialogue, demonstration, and for refining future policy and regulation. Trends and synergies shaping the next decade, and perspectives

from Operators and entities contributing to sustainable growth and development, such as through Education, were brought into the spotlight. The Summit's discussions were complemented by technology exhibition by Huawei, particularly focusing on New Technology, New Opportunity, and New Life.

> *Stakeholders need to work with SAMENA Council on decarbonization and advocating policies that are sustainability-driven. Net zero ambition needs to be at the heart of our businesses and strategies as we address environmental, social and governance (ESG) indicators. SAMENA is the right platform to drive a framework for climate action within the Telecom Industry.*

Leaders' Summit 2022's timing was closely linked with the Industry's evolving need for planning new investments in 5G, cloud infrastructure, and in discovering resilience in the new opportunity landscape. Moreover, the Summit aimed to signal normalcy in business, and to help open doors for leadership discourse

on critical industry, policy, business, and societal matters as digital transformation paces on. After a hiatus of two years, the physical edition of Leaders' Summit once again welcomed renowned global and regional leaders to a platform known for its outstanding multistakeholder engagement, leadership, collaboration, innovation display, and knowledge-exchange in a world-class setting, powered by the Industry's greatest enablers. The objectives of the back-to-business, physical edition of Leaders' Summit were to help demonstrate leadership and commitment of stakeholders to accelerate post-pandemic recovery; showcase participation and relevance of new industries and stakeholders in the 5G and post 5G eras; experience newest innovations in digital 5G-era technologies, network infrastructure, collaboration models, integrated digital service delivery; and to unearth new possibilities for Telecom Operators as well as vertical segments in materializing new business successes.

The Summit has addressed how network technology is changing industries and the society, in turn, changing the demands of data in the network, as well as explore connectivity requirements for the 5G era, identifying new trends and innovations that will drive advanced networks of tomorrow. In the presence of 300+ attendees, Leaders' Summit 2022 demonstrated how balance in geographical, gender, market, technology, and policy representation can be achieved. The Summit covered very important areas for the Industry, especially relating to Connectivity and the New Digital Life, Full Optical Networking, NBN, OpenRAN, Universal Service Obligation, Infrastructure Funding & Financing Models, Broadband Commission Agenda for Action, ITU's Take on Re-thinking ICT Policy, Cloud &

Network Synergies, FinTech, New Human Experiences & Challenges, Sustainability & Net-Zero Transition, Space-based Platforms & 5G Tech Innovations, , ICT Talent & Expectations of Younger Generation, among subject matter.

SAMENA Council Leaders' Summit, for over a decade, has been the go-to platform that provides new possibilities for Business Leaders, Policy & Regulatory Leaders, and Global Thinkers to participate, deliberate, and align common visions on the realization of a beneficial digital future for the whole of humanity, and for achieving better business gains for the Private Sector.

Leaders' Summit 2022 – Key Messages & Takeaways

- We need to leverage the "new normal", the post-covid world, and the new changes that have taken place. This will require significant spending on infrastructure, special attention to worker's morale and conditions. Social stability is really is key to managing risks and to anticipate the future.
- We have to ensure that everyone can access connectivity and meaningful and safe content and services while at the same time ensuring that value is created and captured locally, fulfilling what the younger generation is expecting from digital technologies.
- Infrastructure is at the heart of fulfilment of national ICT visions, such as the KSA's Vision 2030. However, Telcos will not be able to invest alone – everyone who is benefitting from the Digital Services should be contributing.
- During the pandemic, 800 million people came online because they saw the value of the Internet. There continues to exist usage gap, and no longer a coverage gap.
- Great responsibility has been placed on the shoulders of the telco industry and infrastructure is needed to support economic recovery and progress.
- Operators' OPEX increases due to system and network complexity. Therefore, reducing OPEX and achieving green development is essential for operators' future growth in light of the carbon-neutral background and the demand for cost reduction and increased efficiency.
- Networks themselves must evolve to meet the region's sustainability goals.
- Operators are shifting into adjacent markets and making the transition from "Telcos) toward becoming "TechCos".
- 5G and cloud have integral role in enabling the digital economy and data sovereignty and digital power have a strong role in tackling the sustainability needs of the telecom industry and how an integrated intelligent ICT architecture will light up the future.
- Operators can gain access to new opportunities by integrating technologies, infrastructure investment, connectivity, and spectrum availability, which will benefit vertical industries and economic sectors.
- Telecom Operators can improve networks capabilities and performance by taking advantage of new technologies and larger bandwidth spectrum such as 6GHz frequency band and the introduction of intelligent capabilities into industrial mobile networks.
- As networks evolve due to the increased demand for reliable connectivity, ultra-low latency, and the need for speed, coverage, and capacity, security will remain a top priority, and it is important to align with global network standards set by bodies such as 3GPP and the GSMA.
- In the age of "collaborative regulation", policy and regulatory approaches should aim to more effectively address the needs of the private sector, in particular of Telecom Operators, to enable them to achieve reasonable scale.
- 5G is about far more than MBB, which is approximately 33% of its true potential. Much has to be done for us to see new 5G services.
- 5G and AI important – but we also need to hear more about supporting technologies on compression and security to secure clouds are safe, data is secure and safe and that infrastructures are resilient.
- Metaverse and the emerging ecosystem enterprises require much understanding on many fronts.
- Women empowerment is increasing, as knowledge is key in driving success.
- Regulation needs to be agile to enable and accompany the changes that have

happened.

- Big collaborative efforts between all ecosystem stakeholders and sectors – smart healthcare, education, etc. are underway and are coming quickly.
- Think beyond costs – connectivity is technology, business innovation and sustainability
- Technology companies and new digital solutions need to become game-changers in enabling Telecom Operators and enterprises and public-sector entities to achieve more from networks.
- Simplification of application deployment in a distributed cloud architecture needs to happen.
- Operators should be looking into Crypto and blockchain and embracing as fintech offerings.
- Put the minimum of data protection criteria to establish a baseline, considering privacy is a difficult or almost impossible goal to achieve
- It is a real balance to guard privacy without restricting monetization and new innovative solutions.
- All industries have to think ahead, and while doing so, a special focus should be placed on sustainability.
- Climate change, protecting the environment, providing quality health care should be among our core priorities, with great emphasis placed on cooperation, working together, building strong, prosperous societies and economies.
- There needs to be a paradigm shift to embrace a shift in technologies that are less energy intensive. Our approach should be driven by the philosophy of "more bits, less watts".
- Telcos need digital transformation and the transition to net zero, especially as it is estimated that 14% of the global CO2 emissions will come from data centers.
- The only way to succeed is by working together, as our challenges are great and diversified, relating to Energy, Environment, Sustainability, Safety, and Security.
- Stakeholders need to work with SAMENA Council on decarbonization and advocating policies that are sustainability-driven. Net zero ambition needs to be at the heart of our businesses and strategies as we address environmental, social and governance (ESG) indicators.
- SAMENA is the right platform to drive a framework for climate action within the Telecom Industry.

Stakeholders need to work with SAMENA Council on decarbonization and advocating policies that are sustainability-driven. Net zero ambition needs to be at the heart of our businesses and strategies as we address environmental, social and governance (ESG) indicators.

SAMENA Council Members on Path to Addressing Climate Change

Earlier in March this year, various SAMENA Council Member Operators, including stc Group, Etisalat by e&, Zain Group, and Omantel, among others, signed an MoU with the aim to strengthen cooperation to reduce the Operators' carbon footprint through their operations. The multi-operator memorandum reflects the efforts of the SA-ME-NA region's major telecom operators to improve the ICT industry and activate their roles in facing environmental challenges, focusing on climate change and advancing the regional sustainability agenda. "This memorandum is an extension of KSA's vision in strengthening partnership between all sectors to preserve and sustain the economic, social and environmental resources achieved by the Gulf countries for future generations," said Abdullah Abdulrahman Alkanhl, chief corporate affairs officer, stc. Salem Al-Mannai, vice president of Technology Infrastructure at e&, said: "Through this memorandum, the group seeks to strengthen its partnerships to confront climate change and make all possible efforts to motivate other sectors to join these endeavors aimed at accelerating the achievement of carbon neutrality in the possible time frame in addition to our commitment to the GSMA initiative; to move the entire mobile industry to carbon neutral by 2050." Jennifer Suleiman, Zain group chief sustainability officer, said: "Climate change and reducing our carbon footprint are material to Zain's strategic objectives across our markets. This collaboration between like-minded operators is a transformative step towards advancing sustainability across the GCC and is in line with our sustainability ambition of providing meaningful connectivity leading to systemic change." Said Al Ajmi, vice president operations, of Omantel, said: "We are proud to be one of the first telecommunication companies in the region to issue a sustainability report covering performance in all these aspects, as we issued our first report in 2012, in addition, we launched several initiatives aimed at reducing our impact on the environment by building on the digital transformation and automation and benefiting from it, in developing and transforming our procedures and processes."

Zain Embarks on Key Corporate Sustainability Strategy

Zain Group, a leading telecom innovator, is focused on providing meaningful connectivity and driving equitable systematic change, centered on a five-year corporate sustainability strategy. Announcing the publication of its 11th consecutive annual sustainability report, entitled 'A resilient journey across a challenging year', Zain, which has presence in seven markets across the Middle East and Africa, summarizes its sustainability-related activities during the year based on its new five-year Corporate Sustainability strategy that is grounded on the UN's Sustainable Development Goals (SDG). The report showcases how Zain continues to improve and adapt its activities to align to international best practices and reporting that follows the GRI Standards Framework. Zain is also implementing the Sustainability Accounting Standard Board (SASB) framework

Huawei Intelligent Net-Zero Carbon Campus Solution Wins WSIS Prize

Huawei was named Champion at the World Summit on the Information Society (WSIS) 2022 Forum's Prizes Ceremony in Geneva. The WSIS 2022 Prizes Campion, was presented to Huawei for its use of their intelligent net-zero carbon campus solution at the Yancheng Low-carbon & Smart Energy Industrial Park project. A total of 996 projects were considered for this award, and the selection process took five months. WSIS is the world's largest annual gathering of the ICT for development community. The event aims at advancing global sustainable development goals is co-organized by the ITU, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Programme (UNDP), and other UN organizations and WSIS action plan facilitators. The WSIS Prizes contest awards

for Telecommunications Services. Commenting on the report, Bader Al-Kharafi, Zain Vice-Chairman and Group CEO, said: "Throughout 2021, Zain remained unwavering in its determination to drive equitable systemic change in the communities in which it operates by providing access to meaningful connectivity, especially in the face of many socio-economic and environmental challenges, and lasting impacts of the Covid-19 pandemic, which hindered development across the globe." "Nevertheless, 2021 was a significant year for progress with respect to Zain's sustainability agenda, underscored by the many initiatives successfully implemented across our footprint, and highlighted by the upgraded A- score received from CDP indicating our regional leadership in addressing climate change." Duncan Howard, Zain Bahrain CEO, commented: "We are proud that our many sustainability initiatives have been recognized through this upgraded CDP score. Our commitment to Sustainability and Inclusion covers many areas, including social innovation, climate change, and inclusivity, as well as creating shared value. During 2021, Zain Bahrain expanded its Sustainability efforts and established a dedicated function to achieve the United Nation's Sustainable Development Goals (SDGs) to align with Bahrain's vision 2030." Zain's five-year Corporate Sustainability strategy formulated in 2020 is centered on four pillars: Climate Change; Social Business; Inclusion; and Generation Youth. It is based on the UN's SDGs, aiming to establish purpose-driven activities anchored in meaningful connectivity to drive equitable systematic change. The vision is to reduce inequalities, safeguard the planet, foster innovation, and build prosperous communities

prizes for outstanding sustainability projects in 18 categories, including information and communication infrastructure, E-government, E-environment, E-health, and E-agriculture. Huawei's intelligent net-zero carbon campus solution was nominated for this year's environment category. The Yancheng Park project was jointly developed by Huawei and the Yancheng Power Supply Company, a subsidiary of the State Grid Corporation of China. The project uses the triple-dimensional model for energy transformation, decarbonization, and digital transformation. By focusing on the three scenarios of smart energy management, carbon management, and campus management, this project delivers real-time monitoring of energy equipment, strong carbon emission management, intelligent and convenient access control management, and intelligent and coordinated micro-grid control. The campus is powered by complementary energy sources and integrates its energy consumption system with on-campus terminals. The project is a showcase of an intelligent and low-carbon campus that contributes to a green, low-carbon, safe, and efficient modern energy system.

"etisalat by e&" Launched as the New Brand Identity for Etisalat UAE, Reflecting Recent e& Group Positioning

e& (formerly known as Etisalat Group) unveiled "etisalat by e&" as the new brand identity for Etisalat UAE in line with the Group's recent positioning as the global technology and investment conglomerate that digitally empowers societies. The brand evolution comes at a time when the Group continues to accelerate its digitalization leadership in line with its objectives for exploring new geographies and adjacencies and pursuing strategic partnerships and acquisitions. Etisalat UAE has been a key enabler of the Group's business growth, enabling the UAE's Fiber Household Penetration leadership since 2016, maintaining market leadership in the UAE, constantly ranking as one of the most advanced mobile networks in the world, providing premium connectivity and supporting customers every step of the way through holistic digital-first offerings. It continues to lead the digitalisation conversation, driven by its robust UAE strategy that envisages it to be the digital telco that is a customer champion in a hyper-connected digital world. Commenting on the brand change in the UAE, Hatem Dowidar, Group CEO of e&, said: "The evolution of Etisalat UAE builds on the solid foundations of its success as the Group's growth engine since 1976 and signals the imminent change that our UAE telecoms business will undergo in keeping with its aspirations to deliver amidst a dynamic business landscape. "With a progressive mindset for our brand and strategy, we will boost global customer satisfaction, achieve synergies of scale, expand our digital services and explore adjacent businesses. I am confident that the refreshed brand identity of Etisalat UAE encapsulates the dynamism of our journey ahead while remaining true to our commitment to making a bigger difference than ever imagined." Another exciting chapter for Etisalat UAE. Etisalat UAE is on a mission to "Grow", "Transform", and "Excel". The technology leader has embarked on a new journey that predicates upon a shift in operating model, which will support sustaining its leading position, while enhancing digital customer experience and operational agility. As part of its new strategy, Etisalat UAE will grow core and digital services, by enriching consumers' value propositions with digital services that cater for consumers' new lifestyles and emerging demands beyond basic telecom services, including areas like gaming, health, and insurance. Moreover, Etisalat UAE will continue to act as the business trusted partner and advisor by enabling their connectivity and beyond connectivity requirements, which, in turn, will accelerate the digital economy and pivot new, sustainable demand in future-forward spaces like private networks, autonomous vehicles, and AI. Superior customer experience is a foundational block in Etisalat UAE's transformation into a digital telco. The company will harness the power of analytics to offer personalized experiences across all digital and physical channels. The step-change in experience will be enabled by a radical simplification in the operating model, which will power value creation in a more efficient and innovative manner. Masood M. Sharif Mahmood, CEO of Etisalat UAE, said: "Etisalat symbolizes the strong homegrown roots that we are proud of and will continue to treasure as the brand embarks on a new chapter of evolution. Our telecoms business has been the growth engine behind our company as we stay committed to the aspirations of the UAE leadership to be a leading ICT and technology hub. "For more than four decades, we have been instrumental in building bridges that connected people, linking our past as a giant telco to becoming

the digital telco of the future. Etisalat UAE's refreshed brand identity as "etisalat by e&" signifies our strong technological capabilities coupled with our extensive telco expertise, and highlights our robust UAE strategy ambitions. "As we uphold the e&'s rich telecoms heritage, our focus remains the same in this 'connectivity renaissance' era: maximize value for our customers and bring positive change to their lives in the age of digitalization. We will go from strength to strength by successfully executing our UAE strategy to boost our digital telco strength as well as better align with our goals and future aspirations as a customer champion in a hyper- connected world." CEO of Etisalat UAE added: "Human capital is the main asset in our transformation; we will continue to drive talent development in the ICT sector while promoting a culture of innovation bravery. Etisalat UAE will remain the factory of technological leadership that serves the wider community and bridges the digital divide." Regardless of dynamic changes in the industry and in keeping with several achievements thus far, Etisalat UAE is set to stay agile and resilient in line with the Group's mission to explore limitless possibilities for a bright, digital future. Etisalat Group has changed its brand identity to e&, effective from 23 February 2022. Its strategy aims to accelerate growth through the creation of a resilient business model representing the Group's main business pillars. The Telecoms business currently continues to be led by Etisalat UAE in e&'s home market and by existing subsidiaries for international operations, upholding the Group's rich telecoms heritage, bolstering the strong telecoms network and maximizing value for the Group's various customer segments. Ramping up the digital services for individual customers to elevate their digital-first lifestyle, e& life brings next-generation technologies through smart connectivity platforms in entertainment, retail and financial technology. To enable the digital transformation of governments, large-scale enterprises and corporates, e& enterprise focuses on maximizing value through its end-to-end solutions in cybersecurity, cloud, Internet of Things (IoT) and Artificial Intelligence (AI), as well as deploying mega projects. e& capital allows the Group to focus its efforts on driving new mergers and acquisitions while maximizing shareholder value and strengthening global presence.

Leading Regional Operators and Huawei Jointly Release IntelligentRAN in the Middle East

As a step to elevate the intelligence of wireless networks to the next level, stc, Zain, Etisalat UAE, the telecoms pillar of e& in the UAE, du, from Emirates Integrated Telecommunications Company (EITC), and Huawei jointly release IntelligentRAN in the Middle East. The launch of IntelligentRAN aims to inject intelligence to wireless networks and achieve autonomous driving network in the wireless domain in the future. Internet of Everything will lead to a 100-fold increase in network traffic and number of services by 2030. Operators are currently facing challenges of providing multiple services, as well as facing operation and maintenance complexities with the potential of higher energy consumption. With IntelligentRAN, Huawei will inject Artificial Intelligence while inheriting SingleRAN. The MIE (Mobile Intelligence Engine) is introduced in IntelligentRAN, which is divided into two functional nodes. In the site layer, MIE is introduced to meet the real-time requirements, and in the network layer, MIE is introduced to provide functions like post data analysis, training on the data gathered, and training of more precise models. Network and base station, MIE coordinate data, models, and decisions, jointly deliver intelligence to wireless networks, hence achieve fast provisioning for services. Huawei plans to work with stc, Zain, Etisalat UAE, du to implement intelligent identification, intelligent fault detection to prevent predicting faults, and enrich the autonomy and intelligence model database and capabilities that can help the industry to work in the next direction of ICT transformation. Bader Abdullah Allhieb, Infrastructure Sector VP, stc: "At stc, we are committed to provide advanced technologies and contribute to building a strong sustainable future for Saudi and the region, and support realizing the Digital Transformation Strategy of the Kingdom of Saudi Arabia. We strongly believe that such an advanced technology from a leading provider of ICT such as Huawei will help us achieving our commitments." In their statement, Zain Group said: "As one of the leading pioneers of mobile telecommunications in the Middle East, Zain Group is keen to explore the benefits that IntelligentRAN can bring to our region. We are consistently seeking technologies that bring competitive benefits, robust network performance and world-class experiences to our valued customers across the Middle East." Marwan Bin Shaker, Senior Vice President of Access Network Development, Etisalat UAE, said: "As we continue to build scalable technological competencies with our robust telecoms expertise to design powerful, seamless digital experiences for our customers this is an integral step with Huawei for the release of IntelligentRAN. At the moment, we are expecting to bring intelligence in the wireless domain to achieve the realization of intelligent prediction based on data correlation analysis, make intelligent decisions based on future prediction, and to achieve network intelligence and optimum evolution to the future." From his side, Ahmed Al Shal, Acting Head of Technology Planning, du, said: "Accelerating intelligence products and services is an essential effort to achieve an end-to-end digitalization. Considering the capability requirements of the growing Metaverse and Internet of Vehicles, our partnership with Huawei will generate a higher level of network automation and optimal performance to ensure heightened customer excellence, provision and experience. Moreover, IntelligentRAN capabilities will allow us to further grow our 5G network and implement quick service provisioning and service assurance across a diverse segment of beneficiaries." Vanness You, Vice President of Huawei Middle East Marketing and Solutions, delivered a keynote speech titled "IntelligentRAN — Building a Fully Connected, Intelligent World", and said: "Partnering with the leading telecommunications providers in the region to release IntelligentRAN comes in line with our commitment to continuously offer the best services to our customers. With the capabilities of 5G, we are able to bring in "iService" for agile provisioning, "iOperation" for zero network faults, and "iNetwork" for optimal experience and energy efficiency." Aaron Jiang, President of Huawei's SingleRAN Product Line, added: "We're more than delighted to provide telecommunications operators with an innovative, and more importantly, an intelligent wireless network architecture. We will continue to explore on innovation of IntelligentRAN, and we expect to cooperate more with operators and industry partners to jointly promote the development of a new world of smart connectivity built with intelligent wireless networks."

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MEMBERS NEWS

stc Group Announces the Board Recommendation to Distribute 150% Stock Dividend to Its Shareholders

stc's board of directors announced its recommendation to the general assembly to increase the company's capital by 150% through granting bonus shares, by capitalizing SAR 30 billion from retained earnings, bringing stc's capital from SAR 20 billion (2 billion shares) to 50 billion riyals Saudi (5 billion shares), where (1.5) shares will be granted for every (1) share held by shareholders at the time of maturity. The aim for stc to increase its capital by granting bonus shares is to support the company in achieving its strategy of expansion and growth, and maximizing the total return for shareholders, by increasing and diversifying investments and seizing the expected growth opportunities in the telecommunications and information technology sectors in the Kingdom and the region. The capital increase is in line with the company's vision to become the leading company in the field of communications and information technology and to lead the digital transformation locally and regionally by providing innovative digital services, products and solutions. Furthermore, the increase is also consistent with the Kingdom's vision 2030 to spur the private sector contribution in the gross domestic product (GDP) through the diversification of the Saudi economy. The Chairman of the Board of Directors, His Royal Highness Prince Mohammad bin Khalid Al-Abdullah Al-Faisal stated, "The capital increase represents an important milestone for stc being one of the biggest listed companies in the Saudi market, as this capital increase is the largest in the history of the Saudi market. This increase will undoubtedly lead to enhancing the liquidity in the company's shares and make them more accessible to wider group of investors. stc is marching with tangible and clear steps towards achieving its strategy and vision of becoming the leading company in the field of digital and communications domain to enable the society and the economy to prosper in the Kingdom of Saudi Arabia and beyond. The company's "dare" strategy is based on four main pillars: expanding in scale and scope, enriching the customer experience, enabling digital transformation, and accelerating its assets monetization. Since the launch of its strategy, stc group has worked on many initiatives and projects that had a robust impact on increasing and diversifying the group's revenues through expansion of its core business in the Kingdom and the region, in addition to the investment made in new promising industries. These initiatives and projects have positively contributed towards sustainable and profitable growth of the company. The capital increase supports the implementation of stc's ambitious growth strategy through a series of innovative initiatives and projects, as the group began this year by launching multiple investments and partnerships in new and promising sectors. stc announced during the Leap Technology Conference this year that it is launching an initiative to establish a major digital center "MENA Hub" for the Middle East and North Africa with an investment of more than one billion US dollars in order to maximize the utilization of the huge infrastructure owned by the company in the region, including the data centers and international submarine cables. The investment will also help to take advantage of the Kingdom's strategic geographical location connecting the three continents digitally. In line with the Kingdom's efforts to promote economic diversification through acceleration of investment cycle to stimulate investment opportunities in the cloud computing and data hosting sector in the region, stc recently along with other partners announced the establishment of a company with a total capital of SAR 894 million, specialized in cloud computing in the Kingdom with Alibaba Cloud, the leading provider of digital technology and artificial intelligence services. This partnership aims to fulfill the growing demand for cloud computing services and solutions in the region by taking advantage of stc's distinguished advantage in the region through its differentiated state of the art infrastructure, services and technology solutions. Such initiatives confirm stc's strategy to establish partnerships with major global leading companies in the field of information technology. Also in a very promising emerging industry, stc announced this year the forming of a joint venture (JV) with the Public Investment Fund to equally establish a new company with a total capital of SAR 492 million, specialized in the field of Internet of Things (IoT) technologies. The aim of this JV is to promote and support the adoption of IoT technologies and contribute towards empowering the Internet of Things in the Kingdom and MENA region where the company will provide qualitative technical solutions that will enable the growth of important sectors (including

manufacturing, logistics, smart cities and etc.) It is expected that the capital increase will support the implementation of the group's strategy and vision, while ensuring that it continue to deliver distinguished operational and financial performance. It is also expected that the large and diversified investments made by the group will have a positive and tangible impact on the operational and financial results in the medium to long term as some of the group's new subsidiaries are in nascent stage and will start to positively reflect in group's performance as they reach operational and business maturity stage.

stc Announces the Successful Deployment of Multi-Layer 4G and 5G NSA Network on ORAN Platform

stc announced the successful deployment of multi-layer 4G and 5G NSA network on ORAN platform in collaboration with Mavenir, the leading digital enabler in the region announced the successful deployment of 4G-3CC Carrier Aggregation and 5G-NSA capable ORAN Mobile Infrastructure. Mavenir setup built on 3rd party 4G RRUs for B1, B2 & B28 bands and 5G-NSA N78 RRU from Mavenir, hosted on fully cloud-native Mavenir web-scale platform which showcases the true potential of O-RAN technology to transform Radio Access Networks towards an Open and Fully Interoperable RAN. This deployment along with other new emerging technologies in cloud-native RAN technology are in alignment with stc's strategic drive to deliver the foundation for a strong digital future while augmenting the Digital Transformation Strategy of the Kingdom of Saudi Arabia. With the global race to adopt O-RAN for broader network deployment, stc's latest success demonstrates its direction and leadership in the development of O-RAN with maturity to fulfill a variety of capabilities required by our customers. Eng. Bader A. Allhieb, stc Infrastructure VP, said: "Our commitment has always been to deliver a best-in-class Mobile Network to our deserving customers. Technological transformation is a keystone of stc's business strategy and 5G is an exciting milestone in stc's O-RAN journey. stc will continue to endeavor to always lead the market towards digital transformation, in line with the Kingdom's Vision 2030." "Mavenir is delighted to partner with stc in deploying multi-layer 4G and 5G NSA Access Network based on Open RAN standards and architecture. Open vRAN is a new network technology that allows separation of hardware and software components, enabling operators to deploy in more locations faster, it's easier to operate and maintain, it can further improve coverage and capacity hotspots. Operators have also concluded that Open vRAN will lead to a more cost-effective, secure, energy efficient and customer-focused network of the future." Says Dr Virtyt Koshi, SVP, GM EMEA, Mavenir. "Mavenir is proud to bring the Open vRAN solutions to Middle East together with partners like Dell, Comscope, etc., digitalizing operations, acting as the catalyst for innovation, and creating new opportunities for operators".

stc Provides Advanced Digital Technologies to 64 Locations Across Jeddah Season

stc Group, the leading national company in the Kingdom, and the Jeddah Season partner, provided a set of digital services for the season's locations to enhance the efficiency of the digital infrastructure and contribute to enriching the visitors' experience. These efforts are the result of the group's commitment to its pioneering role and strategy to support and empower the various sectors. The strategic partnership announced by stc group with the General Entertainment Authority, pursues to enable the digital transformation in the Kingdom. stc mobilized its human potential consisting of a technical team comprised by 200 specialists to continuously work on supervising and maintaining its technical services. Furthermore, the team prepared 64 locations to serve Jeddah season areas and provide the best 5G network. Moreover, stc team provided 12 circuits with a capacity of 12.75 GB at certain locations including, Aljohara stadium, City Walk, Yacht club, the Superdome, and Jeddah Pier, as well as two vehicles were employed for outdoor coverage at the City Walk. Besides, stc provided interactive gaming experience at its pavilion in the City Walk area, the group set up another pavilion to provide its services and products to visitors of Jeddah season at Jeddah Pier area.

stc Group Increases Investments and Expands in the Markets by Acquiring Giza Systems

Arabian Internet and Telecommunication Company (solutions) announces the signing of a sale and purchase agreement (SPA) on 04-06-2022G to acquire 89.49% of Giza Systems Company (Closed Joint Stock Company), in addition to 34% of Giza Arabia, which represents the shares that are not owned by Giza Systems Company, for a full cash consideration for the entire acquisition. The acquisition will be based on an Enterprise Value amounting to USD 158 million. It was agreed that the acquisition consideration shall be based on valuation formulas pursuant to the enterprise value, debt, cash and working capital as stated under the agreement terms and condition. solutions intend to fund the acquisition consideration via a mixture of banking facilities and cash. This comes after solutions signed on last April a binding offer with Energy Technologies to acquire (89.49 %) of Giza Systems Company (LLC), which is owned by Energy Technologies, in addition to solutions acquiring 34% of the unauthorized stake, owned by Giza Systems Company (LLC). The acquisition represents a strategic step that serves the objectives of stc Group in expanding its business in the region's markets and moving forward in achieving strategic goals that have dared and enhanced its position as a pioneer in digital transformation through its investments in the technology sector, in addition to enhancing the strength of the private sector in the Kingdom and the ICT market and digital solutions. The acquisition comes as a continuation of the investments recently made by the group, as it announced at the beginning of this year the establishment of an Internet of Things company in partnership with the Public Investment Fund. It also announced an investment of one billion dollars in data centers and marine cables, and finally the establishment of a cloud computing company in the Kingdom in partnership with Alibaba Cloud and other companies. It is worth noting that the sale and purchase agreement (SPA) for the acquisition is subject to a number of conditions that must be met, including - but not limited to - obtaining approvals from the relevant authorities, including the approval of the General Authority for Competition, in addition to other conditions, that of an organizational and commercial nature. It is worth mentioning that Giza Systems is a leading information technology company that was established in 1974. It also provides services that include systems and applications integration in addition to emerging technologies with offices in Saudi Arabia, United Arab Emirates, Qatar, Egypt, the United States of America, and other countries. It serves clients in more than 25 countries around the world.

Etisalat launches GoChat Messenger for free voice and video calls in UAE

Etisalat UAE, branded as etisalat by e& announced the launch of GoChat Messenger, an all-in-one free voice and video calling app, giving customers the flexibility of accessing unique features within one application. GoChat Messenger offers a hassle-free experience for customers to easily make and receive voice and video calls, chat with friends and family, transfer money to their families, pay bills, play games, stay updated with the latest news and events, access Smiles vouchers and deals, as well as several home services.

The launch follows e&'s recent unveiling of "etisalat by e&" as the new brand identity for Etisalat UAE, in line with the Group's positioning as the global technology and investment conglomerate that digitally empowers people and societies. This illustrates the company's continuous efforts to provide creative offerings that best support its customers' requirements and enhance the customer experience. The app is in line with the overall vision of etisalat by e& to empower customers with seamless digital applications, enabling experiences that enhance their digital lifestyles. Since the pandemic, the market witnessed an increase in penetration and popularity for internet calling apps. At etisalat by e&, there have been continuous efforts to ramp up efforts to ideate and create innovative propositions that drive smart connectivity, maximise value creation and enhance customer experience. GoChat Messenger is the latest addition to the suite of products and services that will benefit customers in the face of the ever-growing need for amplified connectivity in a post-pandemic era.GoChat Messenger is a global application that can be downloaded by anyone in the world, only requiring a mobile number for registration, connecting the UAE population with friends and family

across the globe and can be downloaded via Android and iOS app stores. The app offers unique features making it an all-encompassing app for life in the UAE. With GoChat Messenger, customers will remain up to date with the latest news and events in the country whilst staying entertained with free-to-play games as an embedded feature. It also aspires to making customers' lives easier, offering international and local money transfers, including bill payments through eWallet. GoChat Messenger also offers customers trustworthy and reliable home services including home cleaning, PCR at home, salon at home as well gifting services at their fingertips. Lastly customers can also access selected Smiles vouchers and deals directly through GoChat messenger.

Etisalat Group has changed its brand identity to e&, effective from 23 February 2022. Its strategy aims to accelerate growth through the creation of a resilient business model representing the Group's main business pillars. The telecoms business currently continues to be led by etisalat by e& in e&'s home market and by existing subsidiaries for e& international, upholding the Group's rich telecoms heritage, bolstering the strong telecoms network and maximising value for the Group's various customer segments.

Ramping up the digital services for individual customers to elevate their digital-first lifestyle, e& life brings next-generation technologies through smart connectivity platforms in entertainment, retail and financial technology. To enable the digital transformation of governments, large-scale enterprises and corporates, e& enterprise focuses on maximising value through its end-to-end solutions in cybersecurity, cloud, Internet of Things (IoT) and Artificial Intelligence (AI), as well as deploying mega projects. e& capital allows the Group to focus its efforts on driving new mergers and acquisitions while maximising shareholder value and strengthening global presence.

e& Buys 9.8% Stake in Vodafone for US$4.4 Billion

The UAE telco e& (formerly Etisalat) said it bought a 9.8 per cent stake in Vodafone Group Plc for $4.4 billion as the Middle Eastern telecommunications provider seeks to expand globally. e& offered about 130 pence ($1.59 dollars) a share, according to Bloomberg calculations. That's a premium of about 10 per cent to Vodafone's 117.82 pence closing price. The purchase makes e& Vodafone's largest shareholder, ahead of BlackRock, the Vanguard Group, and HSBC Holdings. The UAE telco plans to remain a long-term investor and won't make an offer for the rest of Vodafone shares, e& said in a stock exchange statement. e& has "made the investment in Vodafone to gain significant exposure to a world leader in connectivity and digital services" and aims to develop opportunities for commercial partnerships, it said. "As a geographically diversified company with a deep understanding of the global telecom sector, e& sees this investment as highly efficient use of its strong balance sheet at a compelling and attractive valuation with strong currency diversification benefits." With this deal, the UAE telco major may also partner with Vodafone in the areas of R&D, technological applications and procurement. Hatem Dowidar, Group CEO of e&, said: "Vodafone is one of the leading businesses at the heart of digital communications in Europe and Africa with a compelling business offering critical connectivity and digital services." "We are looking forward to building a mutually beneficial strategic partnership with Vodafone with the goal of driving value creation for both our businesses, exploring opportunities in the rapidly developing global telecom market and supporting the adoption of next-generation technologies," he added.

Etisalat UAE (now "etisalat by e&") to Sustain Leadership as a Digital Telco Resilient in the Future Hyper-Connected World

Etisalat UAE, the telecom pillar of e& in the UAE, aims to sustain leadership as a digital telco and is already making great strides towards remaining resilient in the future hyper-connected world by transforming its technology model and excelling in customer and employee experience, said Masood M. Sharif Mahmood, CEO, Etisalat UAE. Mahmood shared his insights during his keynote 'Reframing the future for telcos: unlocking growth through an accelerated reinvention in the digital age' at the ongoing Telecoms World Middle East 2022 conference. Held in Dubai, the event gathered leading stakeholders from across the telco ecosystem to collaborate and share insights on how to thrive in the future multi-faceted digital environment. "The evolution in the telecom sector is all about conquering crossroads by showcasing resilience. The industry has continuously adapted in the face of disruption, adjusting to endure and grow in a drastically evolving ecosystem. At Etisalat UAE, we have continued this leadership as a digital telco by focusing on our core while at the same time curating digital experiences that maximize engagement. During our transformation into a telecom orchestrator, we remained laser-focused on customer centricity, digitalization, and creating synergies across our businesses," Mahmood added during his keynote presentation. Telcos need to evolve into multi-sector digital service providers to maximize their share in the value chain. This entails rejuvenating the core and enabling next-generation verticals and digital experiences. We have started this ambitious journey to ensure sustained value creation by building new capabilities across AI and digital to thrive in an increasingly competitive and ever-changing market environment." He also highlighted how the telecom industry's challenges during the last decade encouraged telcos to find new opportunities and transition more and more towards techcos, driving digital transformation for their networks and services. In the era of 'connectivity renaissance' the 5G network will enable us to take advantage of the limitless possibilities that we can imagine, innovate and implement ideas that will drive smart connectivity and maximize value creation for our customers in all segments. The two-day event includes other speakers from Etisalat UAE and e&. Khalid Murshed, Chief Technology and Information Officer, Etisalat UAE spoke about embracing transformation to support an agile, scalable modern telco business; Ali Amiri, Group Chief Carrier & Wholesale Officer, e&, highlighted the evolution of the wholesale business and rethinking international wholesale strategies and Rashid Ali Al Ali, Vice President, International Sales, e& shared insights on how the future of gaming and metaverse will shape the wholesale business. Etisalat Group has changed its brand identity to e&, effective from 23 February 2022. Its strategy aims to accelerate growth through the creation of a resilient business model representing the Group's main business pillars. The Telecoms business currently continues to operate led by Etisalat UAE in e&'s home market and by existing subsidiaries for international operations, upholding the Group's rich telecoms heritage, bolstering the strong telecoms network and maximizing value for the Group's various customer segments. Ramping up the digital services for individual customers to elevate their digital-first lifestyle, e& life brings next-generation technologies through smart connectivity platforms in entertainment, retail and financial technology. To enable the digital transformation of governments, large-scale enterprises and corporates, e& enterprise focuses on maximizing value through its end-to-end solutions in cybersecurity, cloud, Internet of Things (IoT) and Artificial Intelligence (AI), as well as deploying mega projects. e& capital allows the Group to focus its efforts on driving new mergers and acquisitions while maximizing shareholder value and strengthening global presence.

Mobily, Cisco Build Region's Largest IoT Cloud Platform to Boost Saudi Arabia's Digitization

Etihad Etisalat Co., Mobily, and Cisco announced the completion of the region's largest Mobile IoT, or Internet of Things, cloud platform, hosted in Saudi Arabia, in a move that accelerates the Kingdom's digitization efforts. The new cloud platform enables a fully-automated management for IoT devices, powered by Cisco's IoT solution, with artificial intelligence and machine learning capabilities, the companies said in a statement. "Mobily is making progress towards the 2030 vision of country digitization through building a future-proof IoT deployment that will seamlessly support new automation, analytics, machine learning and IoT capabilities hosted locally in Saudi Arabia," said Majed Abdulaziz Alotaibi, CBO, Mobily. "These new capabilities are the foundation to support exciting new IoT use cases, including payments, smart cities and industrial applications," he added.

Mobily Books 41.2% Uptick in Net Profit in 1Q22

Saudi Arabian mobile network operator (MNO) Etihad Etisalat (Mobily) has published its financial results for the three months ended 31 March 2022, reporting a 5.8% year-on-year increase in revenues to SAR3.811 billion (USD1 billion), up from SAR3.603 billion in 1Q21. The company claims that the positive result was due to the growth of revenues generated by its business, consumer and wholesale units and 'healthy growth' in its overall subscription base. Further, EBITDA increased to SAR1.445 billion in 1Q22, up by 5.9% y-o-y, while interest and financial charges decreased 1% y-o-y to SAR125 million in the period under review, reflecting the company's efforts to reduce funding costs by refinancing a big portion of its debts. Net profit, meanwhile, improved by 41.2% y-o-y from SAR226 million to SAR319 million in 1Q22. CAPEX for the first three months of 2022 amounted to SAR220 million versus SAR155 million for the similar period of the previous year.

Omantel and SUBCO Elevate Their Relationship to the Next Level

Oman Telecommunications Company [Omantel], Oman's first and leading integrated telecommunications services provider and SUBCO have recently entered into a large capacity agreement for connectivity between Oman and various key telecom hubs in Europe through Omantel's extensive subsea network. Through this arrangement, Omantel will be providing ultra-high capacity connectivity from Muscat to SUBCO's new PoP's in London, Milan and Marseille effectively extending the Oman Australia Cable (OAC), due to be RFS in Q3, 2022, from Australia to Oman and all the way to Europe. Speaking

about Oman Australia Cable, Talal Said Al Mamari - Omantel Chief Executive Officer said "We are proud to have been the landing partner for the successfully landed OAC, achieving another key addition in our vision for Oman to be the leading gateway to the region and beyond. Our motto in Omantel's Wholesale is Reach Further which is something we truly live, and today we see yet another demonstration of fulfilling this mission by enabling our partners in SUBCO to reach further through Omantel's extensive network". Anchor"OAC is going to contribute in changing the landscape of the Wholesale industry and take our collaboration to the next level. Omantel was the Wholesale partner of choice for OAC and has attracted more and more international partners like SUBCO to work and collaborate with us", Al Mamari further added. Bevan Slattery, SUBCO's Founder commented "I am so excited to see our vision of the first truly diverse route between Asia and the Middle East and now Europe coming to fruition and our relationship with Omantel has been pivotal in helping us to reach further. With the OAC only a few months away from RFS, having this capacity in place to extend our reach into Europe is important to further enable our capability and addressable market. Omantel and SUBCO are in the process of completing provisioning and handover of the capacity in readiness for OAC service commencement. The parties are also exploring further options to expand their collaboration and to include other upcoming systems to provide further capability and diversity for OAC. The system also leverages on being extended into the Equinix MC1 facility in Oman, which is the first carrier-neutral data center in MENA which successfully positioned Oman as the natural hosting location for major hyperscalers and tier 1 service providers in the region. This ensures open access to the OAC system and hence further increases the potential of the project. Future phases of OAC include a possible extension to the newly announced Equinix SN1 data center in Salalah and even beyond.

Omantel Along with Huawei Sign an MoU to Launch a Smart Office Solution at COMEX 2022

Omantel introduced its Smart Office solutions during COMEX with cooperation of Huawei for the first time in Oman at their booth in the Sultanate's leading ICT Show. The showcase of the Smart Office solution highlights the strong demand for advanced digital solutions in the Sultanate and aims to facilitate smarter and more efficient collaboration. COMEX, Oman's leading technology, communications, innovation, and digital transformation hybrid show, was held between May 23 and 25 at the Oman Convention & Exhibition Centre and on virtual platforms. Baha Mohamed Ridha Al Lawati, VP Enterprise Unit at Omantel said: "As Oman's leading ICT solutions provider, we understand the need of our customers to focus on their business and productivity while allowing us to digitally evolve their business with the value added ICT solutions we offer. With our partner Huawei, we bring some of the most advanced ICT tools and solutions to Oman that will transform how individuals, SME, and enterprises collaborate. During COMEX, our customers, partners and visitors experienced our smart offices solutions coupled with 5G & the seamless integration it offers among all their collaboration touch points, and the simplicity in deploying it in their office with a feasible payment structure." Chen Jianhan, Huawei Oman CEO, said: "The integrated Huawei Smart Office solution is at the forefront of ecosystem services as it creates a seamless digital experience that enables new productivity levels for our enterprise customers and enhances efficient collaboration. This partnership with Omantel extends our longstanding relationship to explore how digital transformation can enable customers to meet new demands." The Smart Office brings together the computing and mobile ecosystem to connect and share capabilities and resources. Omantel showcased various Smart Office scenarios that improve the user experience, productivity and optimize meetings at its COMEX stand. These include multi-screen collaboration with seamless interaction between the intelligent whiteboard, laptop & tablets. Our smart interactive whiteboard "IdeaHub" is a multi-platform that allows video conferencing solutions across multiple platforms and sits the heart of the Smart Office. Visitors experienced its advanced capabilities at the stand, including voice tracking and an intelligent camera that identifies and focuses on the speaker. The IdeaHub also features low latency writing, auto-correction, and multiuser writing support, while users can send whiteboard content directly to their email. The key highlight of this solution is customer can pay overtime over multiple packages to suit the various demands as they grow rather than a onetime payment.

The EU and Orange Jordan Inaugurate in Aqaba a Digital Village and a Center with JOHUD

The European Union (EU) and Orange Jordan inaugurated on Wednesday the Orange Digital Village in Aqaba, and the Women Digital Center at Princess Basma Center for Human Development, as part of "Innovation Space", marking a continuation of the EU and Orange's joint efforts to support youth in digital and entrepreneurial fields. This three-year project is co-funded by the EU's "Innovation for Enterprise Growth and Jobs" program. The event was attended by the Minister of Digital Economy and Entrepreneurship, H.E. Ahmad Hanandeh, EU Ambassador to Jordan, H.E. Maria Hadjitheodosiou, Aqaba Special Economic Zone Authority Chief Commissioner, H.E. Nayef A. Bakheet, Governor of Aqaba, H.E. Mohammad Al Rafaiah, Aqaba Representative, Obaid Yassin, Aqaba Development Corporation CEO, Hussein Safadi, Aqaba Special Economic Zone Commissioner of Youth & Entrepreneurship, Ramzy AlKabarity, President of the University of Jordan Aqaba Branch, Professor Dr. Amer Salman, and CEO of Orange Jordan, Thierry Marigny, in addition to media representatives. Moving forward towards achieving the EU and Orange Jordan's common goals of "training for employment", the digital village in Aqaba comprises a coding academy that provides training in programming languages and personal skills required in the labor market for seven months, including a one-month internship. The newly inaugurated village also includes a Fabrication Lab (FabLab) that offers training in the latest machines, tools, and programs in this field, such as laser cutting, CNC, and 3D printers, to create prototypes that will grow into entrepreneurial projects. In the context of the "Innovation Space" project in Aqaba, the EU and Orange Jordan also inaugurated a Women Digital Center at Princess Basma Center for Human Development in partnership with the Jordanian Hashemite Fund for Human Development (JOHUD), attended by PMO Director at the Fund, Dina Alaeddin. The Center is an extension of the successful program, which includes 8 centers in seven governorates, implemented by Orange Foundation and JOHUD to empower women with managerial, digital, and marketing skills needed to support their projects. The expansion of Orange digital programs in Aqaba will empower more youth, as it is expected to reach around 1000 beneficiaries/certificates, as it will cater not only to Aqaba, but also the surrounding villages and nearby southern cities. Additionally, Orange Jordan and the EU launched an incubator and startup accelerator to support entrepreneurs in Aqaba and enable them to scale up. EU Ambassador H.E. Maria djitheodosiou stressed the importance of mainstreaming digital entrepreneurship and innovation culture across the Kingdom, which are key to creating employment opportunities for Jordanian youth. "The core of the "Innovation Space" project is about increasing the opportunities for employment, creating local value and enhancing the capacity of small and medium enterprises and entrepreneurs to innovate. Reaching out to youth, students and entrepreneurs all across the country in order to enhance their digital skills is an essential element of this project." CEO of Orange Jordan, Thierry Marigny, expressed his excitement about the extended digital programs at the Orange Digital Village in Aqaba and the new digital centers executed in partnership with JOHUD, as they will offer youth in the southern governorates the opportunity to benefit from free digital programs in the most in-demand skills in the labor market, as well as the support provided to launching and growing startups. Marigny said that this step aims to enhance innovation culture on a larger scale in Jordan and enable more beneficiaries, noting that the "Innovation Space" project seeks to increase the number of beneficiaries to more than 20,000 in 29 locations across the Kingdom. He also noted that these projects fall under Orange Jordan's comprehensive social responsibility strategy, and its role as a responsible digital leader, seeking to curb the unemployment rate, and increase employment opportunities for youth across the Kingdom, while supporting entrepreneurial and ambitious projects that will drive economic growth. The "Innovation Space" project supports the expansion of Orange's digital programs to include 9 Community Digital Centers, in addition to 5 new coding academies, 5 FabLabs, 8 startups accelerators and incubators, in addition to an "Innovation Hub" at the Orange Digital Village in Amman. The EU-funded "Innovation Space" is a pioneering initiative in Jordan and a one-stop shop for digital innovation and entrepreneurial support. It introduces digital culture, fosters digital skills, especially among women and youth, and promotes and nurtures entrepreneurship by identifying key opportunities for digital economic growth.

Orange Jordan Launches a Unique Digital Experience Through "jood Orange" App

Orange Jordan launched an integrated, digital experience focusing on ease, quality and customer choice of services provided through its new app, "jood Orange", a new model in the Jordanian market offering a wide range of the company's digital services to its subscribers, to be the first of its kind in the Kingdom, and an added-value driven solution from the company, in a press conference held on Wednesday, June 1, attended by the Secretary-General of the Ministry of Digital Economy and Entrepreneurship, Samira Al-Zoubi, deputizing for the Minister, Ahmad Al Hanandeh, CEO of Orange Jordan, Thierry Marigny, Chief Consumer Market Officer at Orange Jordan, Naila Al Dawoud, partners and media representatives. Marigny said that the idea of bringing all the company's offers and services into an integrated, easy-to-use, application stems from the company's keenness to harness its advanced solutions and its role as a responsible digital leader in the Kingdom's digital transformation, in addition to attentively listening to what its customers really want. The CEO of Jordan noted that the design of "jood" stands out as the fruit of all the studies conducted through Orange channels, to better understand the needs and interests of customers, adding that the new application will start by serving prepaid lines local subscribers, and enabling Jordan's visitors and tourists to subscribe to the internet and mobile services needed during their stay even before arriving. The press conference featured a presentation that highlighted the use and offerings of the unique digital experience provided through "jood" that ensures ease and speed, to build on the great success that Orange achieved through its previous and current applications. The application offers a wide range of services including easy, digital self-registration, choosing the mobile number, the choice to look for a mobile number, special prepaid mobile offers, and purchasing bundles to cater to their needs and preferences. The new SIM card will be delivered to the subscriber's doorstep as they choose from either the regular delivery or the express delivery feature to save time and effort, with several payment options upon delivery including cash, visa or Orange Money e-wallet. "jood" is fully digital and connected to the Orange Money e-wallet, to bring various services and benefits using a safe, fast digital payment method, in line with the application's all-digital spirit. The application also offers subscribers the option to modify services and pay for the subscription, as Orange Jordan seeks to enhance and enrich customer experiences across the Kingdom. The "click to chat" feature in "jood Orange" app provides users an instant, direct communication channel available 24/7 with customer services, as subscribers can chat to inquire or ask for help in the application's services, to ensure fast, easy support in all possible ways. The company also offers discounts for subscribers who invite others to join the application. Al Dawoud affirmed that the most prominent advantage of "jood Orange" is granting full freedom to new subscribers to choose based on their needs and preferences, stressing that the application is digital in every sense, with many exclusive features for "jood" subscribers such as up to 100% discount on monthly line subscription when their friends subscribe to "jood Orange" lines using their promo code, reflecting the company's commitment to continuously enhance customer experiences and keep users and subscribers connected to all that matters to them in the easiest and most efficient ways possible. "The application is an extension of Orange Jordan's successful apps, amid the growing number of smartphone users, which has reached 6 billion globally, and the rising significance of smart applications in various fields, evident by the number of applications on Google Play and the App Store, which has reached around 7 million," she added.

Zain Awarded 'Best Telco Operator', ZainTech Wins 'Best Digital Service' at 2022 Telecom World Middle East Awards

Zain Group, the leading mobile telecom innovator in seven markets across the Middle East and Africa, announces that it has been awarded the 'Best Telco Operator' accolade for 2022 at the prestigious Telecoms World Middle East Awards event held in Dubai, UAE on 24 May. Impressively, ZainTech, Zain Group's one-stop digital and ICT solutions arm driving the transformation of enterprises and governments across the region, was recognized with the 'Best Digital Service' award. ZainTech provides a center of excellence and managed solutions across multiple ICT verticals including cloud, cybersecurity, big data, IoT, artificial intelligence, smart cities, drones, robotics, and emerging technologies. These latest awards were bestowed on Zain by a panel of expert judges assembled by Terrapinn, the organizers of the prestigious annual Telecoms World Middle East Conference and Awards. The event recognizes outstanding performance in key telecom-related areas throughout the Middle East and shines a spotlight on leading players who have contributed to making the sector one of the most dynamic globally. Zain's selection as this year's 'Best Telco Operator' is a result of a combination of factors related to the successful implementation of its value-creative '4Sight' strategy that among many advances, has resulted in the company's brand valuation by the Brand Finance Middle East reaching USD 2.4 billion, an increase of 9.6% (over USD 211 million) year-on-year in its AA+ brand rating. Zain's value creation has been driven by tangible developments, including talent development incorporating its Diversity & Inclusion program; heavy investment in 4G, 5G and Fiber network upgrades; and digital innovation including the creation of ZainTech, Zain Global Connect, Dizlee API platform, Zain Esports, ZainCash, Tamam and Yaqoot (Saudi Arabia) and Oodi (Iraq). Notably, the company's corporate sustainability programs including climate initiatives, eye-catching marketing, and social media campaigns have continued to capture hearts and minds across the region. Commenting on the 'Best Telco Operator' and 'Best Digital Service' recognition, Bader Al-Kharafi, Vice-Chairman and Zain Group CEO said, "The successful implementation of our '4Sight' strategy is creating value for all stakeholders and fulfilling our brand promise of unlocking opportunities for customers, enterprises, and the government entities we serve. This recognition rewards the dedication and passion of every Zain employee who despite the challenges of the pandemic, have remained professional and focused on continuing to offer exemplary service throughout." Al Kharafi added, "It is a great honor for ZainTech to be recognized at such an early stage of its regional expansion strategy. The ZainTech team have an explicit mission to support enterprises and government entities in their digital transformation and performance journeys, offering the best expertise, products, and services in the business." Zain's successful '4Sight' strategy continues to gather momentum. It is centered on evolving the company's core telecom business to maximize value and build on its many strengths. The company is selectively investing in growth verticals beyond traditional mobile services to support Zain's vision of becoming a leading ICT and digital lifestyle provider. ZainTech is a key pillar in the evolution of Zain Group's core telecom business, empowering Zain Business

in key markets with a comprehensive range of quality enterprise offerings, expertise as well as wide partner relationships. ZainTech leverages Zain's global reach, unique regional footprint, and infrastructure across operations in Kuwait, Saudi Arabia, Bahrain, Jordan, Iraq, and the UAE, as well as in other key markets in the Middle East. Group-wide, Zain's B2B offerings witnessed 19% year-on-year revenue growth during 2021. As Zain evolves into a leading digital lifestyle provider to create lasting value for society, it remains committed to delivering positive results for shareholders and other stakeholders. The company is also consistently investing significantly in improving customer experience, providing more digital channels than ever before and allowing customers greater accessibility, simplicity, and freedom to manage their accounts, buy new services, pay bills, and more. From a corporate sustainability perspective, Zain has transitioned the business to advance its agenda and set in place key performance indicators with the aim of developing a more structured and measured approach for all its markets. In January 2022, for example, Zain was upgraded to A- in the 'CDP Score Report – Climate Change 2021', becoming the highest ranked and only telecom operator in the Middle East and Africa to achieve this positive rating with respect to its efforts to address climate change.

stc's CEO Maziad Alharbi Awarded Top CEO for the Year 2022 in the Kuwait's Telecom & Tech Sector

Kuwait Telecommunications Company – stc, a world-class digital leader providing innovative services and platforms to customers, enabling the digital transformation in Kuwait, announced that engineer Maziad Alharbi, stc CEO, was selected as the TOP CEO in Kuwait within the Telecom & Tech Sector during Top CEO Awards and conference for the year 2022 and honored among the Top CEOs in the GCC. The TOP CEO Awards and Conference was held in Dubai on May 18th where the top 100 CEOs in the GCC were selected from different sectors. Alharbi was selected among more than 700 CEO's of listed companies in the GCC Stock Markets. He was honored alongside the top 10 CEOs in each of the 10 different business sectors in the region who have contributed to the profitability and tremendous growth of their companies, in addition to the transparent communications with the investment community and have demonstrated outstanding corporate governance over the past year. The awards were based on guidelines developed by the Dubai-based Institute for Corporate Governance in collaboration with INSEAD business school for global entrepreneurship and supervised by the accounting firm KPMG. Alharbi was awarded the Top CEO in Kuwait for the year 2022 and shortlisted alongside the top 10 CEOs within the Telecom & Tech sector in the Gulf region, considering stc's exceptional financial and operational performance during 2021 where stc's total revenue grew by 4.6% and the net profit increased by 40% in 2021. The results of 2021 were exceptional due to the company's advanced strategy and the dedication of its employees to deliver their best in order to achieve the company's desired goals, meet the individuals and enterprise customers' needs, as well as to create an added value and achieve better returns for its shareholders. In this regard, the digital transformation strategy that was developed and implemented by stc, with the support and leadership of stc CEO Maziad Alharbi, over the past few years has also been a key success factor that helped the company in its many contributions to the local economy, government initiatives and the growing demand for digital solutions and information technology. In addition to this, stc plays a pivotal role in its relationship with the investors and investment community incorporating the industry's global best practices and ensuring to maintain the highest level of transparency with the current and potential investors. With the executive management led by Alharbi, stc has achieved numerous milestones, introduced new concepts to market, and strengthened its role as a pioneer enabling digital transformation in Kuwait that was reflected in the various prestigious awards that stc has received in recognition of its initiatives and smart investments. And in 2021, stc has launched the latest FULL 5G upgrade exclusively for the first time in Kuwait and the MENA region, through SA autonomous communication technology, to upgrade the 5G networks to a new level of exceptional speeds and improved coverage. Another milestone included obtaining the approval from the Communication and Information Technology Regulatory Authority (CITRA) to launch the first-of-its-kind mobile virtual network operator (MVNO) license to launch Virgin Mobile Kuwait in partnership with Virgin Mobile Middle East & Africa. Through this license, Virgin Mobile Kuwait will be able to operate using stc's network, with stc acting as a Host Facilities Based Provider "FBP" with Virgin Mobile Kuwait, offering prepaid plans to users, which makes it the first company to provide a virtual telecommunications service in the country. Towards the end of 2021, stc announced signing a binding agreement to fully acquire e-portal Holding Company and its subsidiaries that was completely acquired in April 2022. This acquisition of e-portal, one of the most prominent ICT companies, would enhance stc's internal ICT capabilities to cope with the recent rapid global changes. This comes in line with the company's corporate strategy that focuses on expanding its activities and shifting from the traditional telecommunication services to the digital services as well as the advanced integrated communications information solutions and advanced technical solutions, which saw stc acquiring Qualitynet back in 2019, now rebranded as solutions by stc.

stc Awarded by The World Economic Magazine as "Best Telecommunications Service Provider" and "Most Innovative Digital Transformation Telecom Company"

Kuwait Telecommunications Company – stc, a world-class digital leader providing innovative services and platforms to customers, enabling the digital transformation in Kuwait, announced that it has received the "Best Telecommunications Service Provider Kuwait 2022" and "Most Innovative Digital Transformation Telecom Company Kuwait 2022" awards from the globally recognized World Economic Magazine. stc was awarded in recognition of the Company's exceptional achievements & initiatives in 2021 in enabling and empowering digital transformation across Kuwait's private and public sectors. The recognition from the World Economic Magazine reflects stc's continuous pursuit to elevate customer experience and their journeys through providing a wide range of innovative solutions in the field of Information and Communications Technology and digital products. The awards also reflect stc's strategic vision of enabling digital transformation in Kuwait in line with Kuwait Vision 2035, whereas it focused on developing and enhancing its 5G infrastructure. This in return allowed stc to provide individual customers and corporate clients with reliable high-speed connectivity, custom tailored solutions, and advanced technology all under one umbrella. Commenting on the awards, stc CEO, engineer Maziad Alharbi said, "In a year full of challenges due to COVID-19 pandemic, the telecom sector continues to play a significant role in enabling the digitization strategies and digital transformations of corporate and government entities, with the introduction of advanced solutions and tools that can accelerate the path towards those objectives. stc has moved forward to implement its corporate strategy with the aim to position stc as a digital pioneer, where our vision is focused in implementing its sustainable business growth and expansion strategy, while switching from providing traditional services to offering digital, cloud, internet of things (IOT), Data Center as well advanced IT solutions within the integrated communications technology sector, in line with Kuwait's digital transformation journey." He added: "Throughout the past couple of years, stc has successfully optimized its operations, invested in developing the largest 5G network in Kuwait and enhanced its digital channels to provide its customers with an unrivalled experience. In 2021, stc was the first operator in Kuwait to launch the FULL 5G (standalone 5G) providing better customer experience" Alharbi added, "stc's future plans focus on gaining market leadership and being a pioneer through providing an effective model based on its digital platforms where stc seeks to enter strategic partnerships within the ICT sector and explore more smart investments to address the challenges in the market" He added: "We at stc carefully consider the diverse needs of our customers to provide them with custom tailored solutions that fit their requirements. Our progressive drive and pioneering digital solutions played a significant role in the exceptional year stc has had in terms of introducing new concepts to market. Our range of digital solutions provided start-ups, SMEs, and enterprises with innovative products, such as a 5G Dedicated Line, 5G Live Bus, cloud-based surveillance, and artificial intelligence, as well as other solutions that provide a well-rounded experience, designed to enhance the efficiency of their existing operations through digitized concepts. In terms of our individual customers, we worked effortlessly in enhancing their journey with stc by upgrading our network, expanding our offering line, as well as other initiatives that aim to enrich their lifestyles." Alharbi added, "These two awards not only reflect stc's leading position in the local telecom market, but also acknowledge the long-term investment stc made a few years back to focus on enabling its own digital transformation strategy in line with Kuwait Vision 2035. I would like to take this opportunity to thank all our employees at stc for their commitment and dedication which played a key role in achieving these recognitions. I would also like to thank the World Economic Magazine team for their diligent assessment process and cooperation." It is worth mentioning that World Economic Magazine is a US-based publication that is committed to promoting the understanding of financial literacy and economic multi-polarity in today's global economy and international trade, particularly for its global audience. The editorial provides insights, comprehensive studies, and best practices in the areas of resistance change, people, leadership, products, services, communication, and other critical aspects of the present economy. The publication is determined to offer an honest and engaging platform for companies and businesses as they continuously reengage with their partners and consumers while focusing on agility, innovation, flexibility, speed, and value through people. These awards add to the many local, regional, and international awards, which stc Kuwait has won including "Best M2M Technology Solutions Provider – Kuwait 2021" and "Best Corporate Governance Telecom Company – Kuwait 2021" from International Finance ("IFM"), "Corporate Governance and Stakeholder Protection award by CFI.co, as well as the "Outstanding Leadership and Growth" award from "MEA Business" magazine, and the Best Leading Corporate for Investor Relations for the year 2021 from MEIRA.

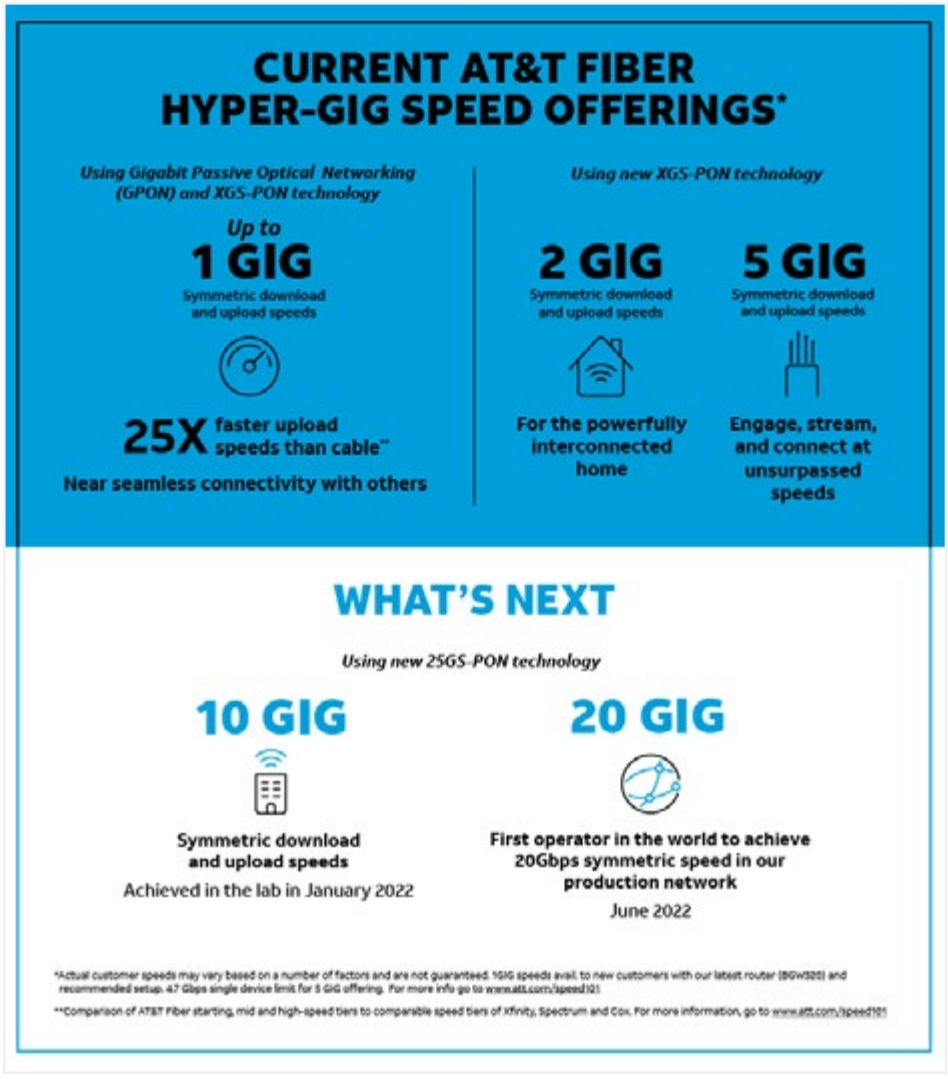
Zain Kuwait Claims National Vo5G Launch

Zain Kuwait has announced the launch of voice-over-5G (Vo5G), claiming a global first in terms of a commercial Vo5G service with 'nationwide coverage'. The operator says Vo5G is now available in 'all areas' of Kuwait, initially on the Samsung Galaxy S22 range of devices. Zain's press release says that the Vo5G technology offers customers 'an unprecedented experience with ultra-fast internet while making crystal-clear voice calls on compatible smartphones without interruption', with the launch proceeding after extensive tests to assess the readiness of its network and its technical capabilities to operate the service 'at the highest quality on a nationwide level.' Vo5G is provided for compatible device owners without any additional fees, enabling high-quality voice calls simultaneously with usage of high speed internet, streaming services and data-hungry apps. The service is hosted on Zain's 5G Standalone (SA 5G) network, deployed earlier this year.

AT&T Powers 5G Smart Warehouse Demos for Navy

US operator AT&T put its private 5G network through its paces during demonstrations with the US Navy to prove the potential of low latency, high throughput smart warehouse services. The demonstrations were conducted at Naval Base Coronado in San Diego. The US Department of Defense is exploring the use of smart warehouses by using 5G for shipments between shore facilities and naval units, among other use cases. The trials were one element of the Department of Defense's $500 million initiative that was announced in 2020 for using 5G across five military test sites. The goal of the San Diego demonstrations was to increase the efficiency of naval logistics including identification, recording, organization, storage, retrieval and the transportation of supplies by using AT&T's private RAN. Lance Spencer, Client Executive Vice President – Defense, AT&T Public Sector and FirstNet, stated to Mobile World Live (MWL) the demonstrations combined AT&T spectrum, RAN, transport, private core, multiple operator core network (MOCN), roaming capabilities and cybersecurity that included zero trust architecture. The private 5G network at the base delivered throughput speeds of 3.9 Gb/s with less than 10 milliseconds of latency. The demonstrations included 5G-enabled virtual reality (VR) and augmented reality (AR) capabilities to support military training, operations, and maintenance as well as prototyping applications. Artificial intelligence (AI) and machine learning (ML) technologies were also used to connect a cloud to the network edge for high throughput and low latency capabilities.

AT&T Hits Industry-First 20 Gigabits Per Second Symmetrical Speed on Production Fiber Network



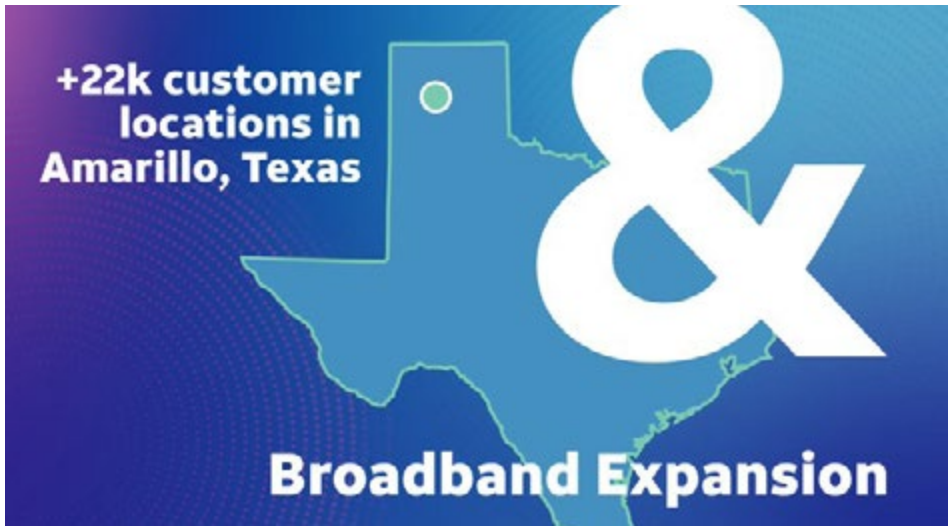
Today, the internet powers nearly every facet of human and machine interaction. From augmented reality and virtual reality applications and cloud gaming; to connected cars and smart cities; to the video conferencing tools that connected us all through the pandemic – those increasingly sophisticated apps and services require connectivity that advances just as quickly. We are laser-focused on making AT&T the best broadband provider in America, pushing the envelope of faster speeds, greater capacity, lower latency, and increased reliability and reach. While we've racked up plenty of accolades over the last few years for both our fiber internet product and our fiber-powered 5G wireless network, no one is resting on their laurels. We're all about building for what's next. We are the Fastest Major Internet provider offering Hyper-Gig, symmetric speeds of up to 5 Gbps to consumers and businesses1. Earlier this year, we announced that we have achieved up to 10 Gbps broadband in our Labs. Now, AT&T has reached 20 Gbps symmetric speeds in our production network, the first operator in the world to achieve this milestone.

Why are symmetric speeds so important? Consumers and businesses are increasingly both content consumers and creators. We are uploading and sending videos and other massive files. For example, if you're an online gamer, you are exchanging tons of data with other players in real-time, perhaps teaming up with your friends in VR or livestreaming your exploits to millions of fans. For businesses, sharing video and VR streams across the network enables near-real-time data analytics, metaverse communities, increased worker safety, robotic manufacturing, and more. The internet isn't just a two-way street. It's a two-way mega highway.

Journey to Hyper-gig

AT&T began deploying fiber to homes and businesses around 2010. Built on Gigabit Passive Optical Networking (GPON) technology, that initial service gave customers shared capacity of 2.5 Gbps downstream and 1.25 Gbps upstream. Being "passive" minimizes the need for active electronics in our outside plant facilities, which means lower maintenance costs and much higher reliability than legacy copper twisted pair or coaxial cabling. AT&T used GPON technology to become one of the first companies to offer symmetrical 1 Gbps internet service to businesses and consumers, in the form of our AT&T Fiber service. Whether it was customers sharing videos with friends or helping small and medium businesses connect franchises or branch offices across regions, this service was a huge stride forward in making uploads as seamless as downloads. Ten years later, in 2020, AT&T began testing and deploying new XGS-PON technology in line with our plan to hit 30 million households and businesses connected with fiber by 2025. With XGS-PON, we increased our network fiber capacity by 4x in the downstream and 8x in the upstream at roughly the same economics as our prior GPON investment. AT&T was an early adopter of XGS-PON with the largest deployment in North America. We had our first trial in North Carolina in late 2021, with a wider, Hyper-Gig speeds customer launch in 2022 featuring industry-leading 2Gbps and 5Gbps symmetrical broadband services.

AT&T Plans for Fiber-Powered Internet Access in Amarillo, Texas



The city of Amarillo announced a $24M project with AT&T to build its state-of-the-art fiber network to more than 22,000 customer locations throughout the city. The project proposes providing access to AT&T Fiber for homes, businesses and government agencies in the city center. The project is contingent upon funding approval by the city of Amarillo and a final contract between AT&T and the city. "The city of Amarillo broadband access plan is one of the more significant technological infrastructure advancements in city history," said Amarillo Mayor Ginger Nelson. "Amarillo is taking the lead in ensuring all its residents have access to the world wide web and its countless uses – from education to workforce development to health care and more. AT&T, with a longtime tradition of excellence in communication, is the perfect company for this historic project that will benefit the entire Amarillo community and serve as a template for other cities and communities to follow on how to connect their residents in the digital age." AT&T has been building communications networks in Texas for more than 140 years and is currently the nation's largest fiber internet provider.1 In 2021, AT&T made fiber available in more than 300,000 new locations in Texas. "We appreciate the leadership and foresight of the city in planning to choose AT&T Fiber, which will provide a fast and reliable internet solution for today and tomorrow. This is an important milestone for the city of Amarillo and the state of Texas to show how public-private partnerships can help close the digital divide," said Fred Maldonado, Regional Vice President, AT&T Texas. "We have a long history of connecting businesses and residents in Amarillo, and we look forward to working with the city of Amarillo on making plans to bring high-speed internet to those who need it most." Extensive planning and engineering work will begin immediately upon execution of the contract. AT&T Fiber is the fastest among major providers and offers symmetrical speeds of up to 5-Gigs on downloads and uploads.2 The faster speeds and increased bandwidth mean customers can connect multiple devices, stream multiple entertainment sources, quickly upload content to social media and experience ultra-low lag for pro-level gaming – all at the same time. Residents and businesses can learn more about AT&T Fiber at att.com/fiber and can sign up to be notified when service will be available at their address at att.com/notifyme. AT&T will also keep the community updated on the project. Affordable internet service is available for low-income households as part of AT&T's commitment to help close the digital divide. Access from AT&T offers low-cost broadband options, including free internet for eligible households when combined with federal benefits from the Affordable Connectivity Program (ACP).3 After you confirm your ACP eligibility, call us at 866-986-0963 to discuss your options and order service. Be sure to have your National Verifier application ID handy when you call.

AT&T, Verizon Agree to Phased 5G C-Band Rollout

The US Federal Aviation Authority (FAA) said AT&T and Verizon agreed to allow airlines more time to mitigate fears of interference between C-Band 5G and aircraft equipment by delaying the full rollout of their 5G networks to July 2023. The operators had offered to keep limitations on network deployments at certain airports in place until 5 July 2022, but agreed to extend this by another year following further negotiations. Acting FAA administrator Billy Nolen said a path has been identified that should "continue to enable aviation and 5G C-band wireless to safely co-exist". The two operators will turn on their equipment in "carefully considered phases" as airlines work to retrofit their planes, the FAA added. The phased approach requires operators of regional aircraft with radio altimeters most susceptible to interference to retrofit them with radio frequency filters by the end of 2022. In a statement, Verizon EVP and chief administrative officer Craig Silliman said the operator "will lift the voluntary limitations on our 5G network deployment around airports in a staged approach over the coming months". Silliman added that the latest agreement "is the result of months of close collaboration with the FAA, FCC and aviation industry, and sets the stage for continued, robust 5G deployment".

AT&T is Delivering Click-to-Play Access of Popular Games Directly to Smartphones

What's the news? AT&T is offering the hit game Control Ultimate Edition, winner of over 80 awards, to our U.S. customers to begin playing right now on a smartphone, tablet or computer. We're bringing this click-to-play access for the first time on mobile and other devices with no downloads, no subscriptions, no extra cost. Jump into the full game and try it for yourself, powered by cloud streaming technology at att.com/PlayNow! We're bringing this experience to customers using Google's Immersive Stream for Games. With the game's high performance and stunning graphics being handled in the cloud, the quality of your connection can make all difference. Our network is up to the task, especially with the low lag of AT&T 5G or AT&T Fiber. Paired with the capabilities of this impressive cloud streaming technology, our customers can play a demanding AAA game on devices they already own, including their smartphones and tablets.

How does it work? All you need is an AT&T postpaid mobility plan to start playing. It's that simple. Using your mobile device or computer, head to att.com/PlayNow, enter your phone number and billing zip code associated with your AT&T mobile account and start playing. You'll step into the role of Jesse Faden and battle the corruptive presence that has invaded the Federal Bureau of Control with transforming weaponry and telekinetic powers, all while searching for your missing brother.

Why does it matter? Click-to-play access has the potential to unlock a whole new way for gamers to experience new titles and old favorites. Our showcase of this cloud streaming technology pushes the gaming industry forward, allowing gamers to play a title first without making a big purchase, or signing up for another subscription service. This means more options for game publishers too, bringing dynamic experiences to new and existing fans without the friction of sign-ups, downloads or gaming hardware requirements. We first launched click-to-play gaming with Batman: Arkham Knight on computers last fall, powered by Google's Immersive Stream for Games. Starting today, we're taking things to a new level with Control Ultimate Edition with the ability to play on your mobile devices with just a click for the first time. We're expanding this gaming experience beyond your computer screen because networks like our AT&T 5G can deliver AAA games with high-fidelity performance to the phone in your pocket. Thanks to its low lag, faster speeds and higher capacity, our 5G and one-click-play highlights an exciting future for gaming, especially on-the-go.

Where could this lead to? In the future, we imagine publishers could utilize the combination of 5G connectivity and cloud streaming technology to offer limited time play sessions directly from a search result. This gives gamers the option to try before they buy. If they move forward with the purchase, their progress will be saved in the cloud, so they can pick up right where they left off on the downloaded version. What are people saying? "AT&T is empowering gamers to take their favorite games where Wi-Fi can't. By introducing click-to-play access on mobile, we're showcasing how high-fidelity gaming can be delivered on the go," said Matthew Wallace, Assistant Vice President, 5G Product & Innovation, AT&T. "We're thrilled to work with developers like Remedy Entertainment and publishers like 505 Games to show our customers where gaming is headed and how AT&T technology will be a driving force in getting there." "As our first Immersive Stream for Games collaborator, AT&T's continued investment in delivering games directly to their customers underlines our ability to offer advanced streaming technology, the right tools to port games easily, powerful discovery features, and the analytics necessary to optimize a direct-to-consumer business," said Dov Zimring, Head of Product, Immersive Stream for Games. "Today's launch of Control Ultimate Edition from 505 Games is proof of that ability, with Immersive Stream for Games enabling AT&T customers to click and play the full game across new devices at home or on the go with no downloads or installs."

What's the big picture? The addition of click-to-play mobile gaming is all part of our mission to be the best connectivity provider in America, whether you're at home, at work or on the move. We do this with the most reliable 5G network3 and the nation's fastest growing fiber internet in America4, so you have a seamless experience from a single source.

China Mobile Profit Grows

China Mobile's bottom and top-line in Q1 benefitted from strong demand for handsets driven by continued uptake of 5G packages. The operator ended March with 467 million 5G package subscribers, up 278 million year-on-year. The number with both compatible handsets and service plans grew 140 million to 233 million. Overall service revenue increased 9.1 per cent to CNY193.8 billion ($29.9 billion), with product sales up 61.6 per cent to CNY33.6 billion. Net profit rose 6.5 per cent to CNY25.6 billion, as operating revenue grew 14.6 per cent to CNY227.3 billion. Mobile ARPU was flat at CNY47.50, while average data usage increased 16.1 per cent to 13GB a month. Total voice usage declined 1.1 per cent to 708.6 billion minutes: SMS usage increased 6.2 per cent to 224.3 billion messages. Its total mobile subscribers increased 2.9 per cent to 967 million.

Operating Data

	As at 31 March 2022/ For the period from 1 January 2022 to 31 March 2022	As at 31 December 2021/ For the period from 1 October 2021 to 31 December 2021
Mobile Business		
Total Customers	**967 million**	957 million
Net Additional Customers *	**9.75 million**	1.19 million
5G Package Customers	**467 million**	387 million
5G Network Customers **	**233 million**	207 million
Average Revenue per User per Month (ARPU) (RMB/user/month) *	**47.5**	45.0
Total Voice Usage (minutes) *	**708.6 billion**	750.0 billion
Average Minutes of Usage per User per Month (MOU) (minutes/user/month) *	**249**	259
Handset Data Traffic (GB) *	**32.6 billion**	34.0 billion
Average Handset Data Traffic per User per Month (DOU) (GB/user/month) *	**13.0**	13.4
SMS Usage (messages) *	**224.3 billion**	239.7 billion
Wireline Broadband Business		
Total Customers	**249 million**	240 million
Net Additional Customers *	**8.99 million**	4.75 million
Average Revenue per User per Month (ARPU) (RMB/user/month) *	**32.4**	34.5

China Mobile Sichuan and Huawei Jointly Carry Out 5G 3CC CA Verifications

China Mobile Sichuan and Huawei verified the TDD+FDD and TDD+TDD 5G SA 3CC CA solution on live networks in Chengdu. The test results show that Huawei's 5G 3CC CA solution increases the physical-layer single-user peak rate to 4.52 Gbps, the highest of its kind on the sub-6 GHz band, even under complex air interface conditions. With the scaled deployment of 5G networks, HD video has become a mainstream network application. The fast rise of AR services also poses higher requirements for user experience. The carrier aggregation (CA) technology offers a way to increase bandwidth by piecing together several small carriers, which in turn maximizes the 5G user-perceived rate. What makes Huawei 3CC CA solution special is its integration with intelligent technologies to provide the optimal 5G experience, fulfilling users' requirements for years to come. China Mobile Sichuan and Huawei performed 3CC CA verification in typical networking scenarios, with one of the three component carriers on the n79 band (4.9 GHz), having a bandwidth of 100 MHz, and the other two on the n41 band (2.6 GHz) and n28 band (700 MHz), having a bandwidth of 100 MHz and 30 MHz, respectively. The single-user-perceived rate can reach 4.12 Gbps at different test spots. In order to deliver better user experience, the 2.6 GHz band will first support 5G networks in hotspot areas. Therefore, the two parties also carried out verifications that combine n79 band (4.9 GHz) with a bandwidth of 100 MHz and n41 band (2.6 GHz) with a bandwidth of 100 MHz and 60 MHz. The actual rate can reach 4.52 Gbps. This can facilitate the development of emerging services (like AR/VR) that have high requirements on network performance. Huawei's CA solutions also integrates intelligent technologies to shorten the time for enabling CA by 30%. It is estimated that the average CA user-perceived rate on the live network will increase by over 10%. The test result proves that intelligent technologies are critical for improving network performance and user experience. A representative of China Mobile Sichuan said: "CA will be important for mobile networks to improve performance. With the goal of building a nationally-leading 5G network and our best practices in 5G technologies and experience, we will continue to explore innovative solutions to provide our customers with high-quality 5G experience." Aaron Jiang, President of Huawei's Wireless SingleRAN Product Line, said, "Huawei will continue to help operators improve 5G performance by combining multi-band solutions with intelligent technologies. Our collaboration with operators will greatly help us promote user-centered mobile network development."

Cisco Launches AppDynamics Cloud to Enable the Delivery of Exceptional Digital Experiences

Cisco announced the launch of AppDynamics Cloud at Cisco Live, the premiere networking and security event. AppDynamics Cloud enables delivery of exceptional digital experiences by correlating telemetry data from across any cloud environment at massive scale. It leverages cloud-native observability to remediate application performance issues with business context and insights-driven actions. "AppDynamics Cloud delivers power and usability in a single, intuitive interface. It puts the focus where it needs to be—on 360-degree visibility and insights, and the ability to take action that leads to extraordinary application experiences every time," said Liz Centoni, EVP, Chief Strategy Officer, GM of Applications. AppDynamics Cloud maximizes business outcomes and customer experiences by continuously optimizing cloud-native applications. It accelerates detection and resolution of performance issues, before they impact the business or the brand, with intelligent operations. Investment protection is derived from continuous data integrations with OpenTelemetry ™ standards and technology partnerships with cloud solutions and providers. The platform enables collaboration across teams including DevOps, site reliability engineers (SREs), and other key business stakeholders to achieve common benchmarks like service-level objectives (SLOs) and organizational KPIs. While many organizations still run their mission-critical and revenue-generating systems with traditional applications, modern business apps are increasingly built using DevOps initiatives and must support distributed architectures and services. This pandemic-accelerated trend has spawned an end-to-end experience revolution among consumers and end users, and hybrid work is contributing exponential momentum. To deliver the consistent, reliable digital experiences that consumers and end users now demand, IT teams must monitor and manage a dynamic set of application dependencies across a mix of infrastructure, microservices, containers, and APIs using home-grown IT stacks, multiple clouds, SaaS services, and security solutions. Traditional monitoring approaches break down in this vastly complex and dynamic ecosystem. AppDynamics Cloud seamlessly ingests the deluge of metrics, events, logs, and traces (MELT) generated in this environment—including network, databases, storage, containers, security, and cloud services—to make sense of the current state of the entire IT stack all the way to the end user. Actions can then be taken to optimize costs, maximize transaction revenue, and secure user and organizational data. "Built from the ground up with cloud-native observability, AppDynamics Cloud is about real outcomes, so you can fix issues when they arise—or even before they happen—and ensure digital services offer exactly what users want," said Centoni. Current AppDynamics customers can upgrade to AppDynamics Cloud and leverage their existing application performance monitoring (APM) agents, or feed both solutions concurrently. AppDynamics Cloud supports cloud-native, managed Kubernetes environments on Amazon Web Services (AWS), with future expansion to Microsoft Azure, Google Cloud Platform, and other cloud providers. Tim Masey, Carhartt's Vice President, IT Infrastructure & Security, "The apparel industry is more complex, dynamic, and competitive than ever. Every aspect of your operation—from procurement through sales and customer service—has to be firing on all cylinders because even the slightest delay or hiccup can have wide-ranging impact on everything from manufacturing operations to customers' ability to buy products online. It's imperative to have complete visibility into every corner of the operation to make sure things are running smoothly, which is usually easier said than done." Vincent Lamonde, Director of Cloud Operations, Insurity, "We're a leader in the insurance technology market, with more than 80% of our customers operating within the cloud. Our clients might have hundreds of customers they're supporting who expect our system to work flawlessly all the time. If it takes significant time to identify and resolve an issue, it could impact their business and the customer experience. We are bound to maintain service level agreements (SLAs), so finding new ways to identify and resolve in less time can make a world of difference." Peter Hvedstrup Jensen, Head of IT Operations, Velliv, "As a pension provider, it's imperative that every system, component and application work flawlessly. Our customers shouldn't have to wait to find the information they need or repeatedly visit an application that's unexpectedly not available. A cloud-only architecture can be very complex and intricate. We needed greater visibility and control over every aspect of the environment because even an hour of downtime will negatively impact our customers."

Cisco Launches New Webex Devices and Features to Empower Hybrid Work

Cisco expanded its line-up of collaboration devices and introduced new updates designed to empower hybrid working. The three new updates joining the Webex device portfolio include the launch of the Cisco Desk Camera 1080p, Webex Room Bar and new features added to the Desk Series portfolio. As hybrid work becomes more prevalent, and employees become less physically centralized, the new solutions aim to promote a natural connection when some participants are in the office while others are at home, nurturing creativity, and reducing the workplace's environmental impact.

Personalized Hot Desking

In this new world of work, offices have a different look: more flexible desks and shared seating. In order for employees not to lose the feeling of 'personal' space, Cisco makes hotdesking a personal experience. Users can book an available Webex device with their profile, and then access their calendar meetings, whiteboards, and recent calls. The solution works across the full range of Desk Series Collaboration devices, including Webex Desk Pro (all-in-one) and in a modular way through the Webex Desk Hub. To facilitate more inclusive hybrid meetings, the previously announced real-time translation for more than 100 languages available on Webex devices is now complemented by simultaneous interpretation. Meetings are translated by a live interpreter, and companies can overcome geographic and language barriers.

Cisco Desk Camera 1080p

The new Cisco Desk Camera 1080p connects natively to the Webex Desk Hub. The camera features omnidirectional microphones and face detection to deliver the best focus, autoexposure and white balance in an affordable range that lets you see and hear clearly.

Immersive video conferencing anywhere

The new Webex Room Bar is a compact, flexible and powerful room device that can enable huddle spaces and small-to-medium sized meeting rooms with immersive, multi-platform video conferencing.

Webex Room Bar

The device uses AI to make sure everyone in the room is perfectly framed, giving all participants equal presence on the call- wherever they work. Spatial audio makes it feel like dispersed team members are in the room. AI-enabled background noise removal keeps distractions to a minimum, and ensures participants can hear clearly, without strain. The new Webex Room Bar is lighter and thinner and is made for easy disassembly and recycling. The device and its packaging use significantly fewer materials: there are no box packaging, single-use foam containers, or redundant parts.

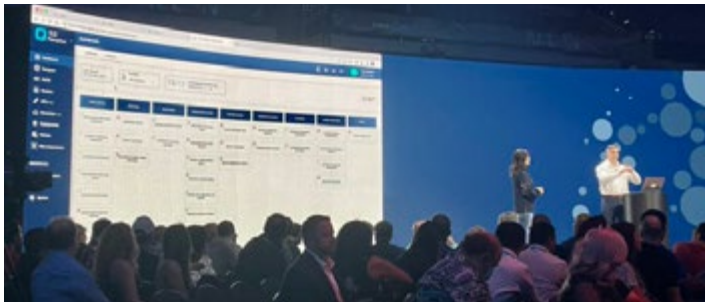
Integration and Customization

Collaboration technology should also facilitate the sharing of content between multiple teams. Webex Room, Desk and Board devices will support Airplay content sharing via RoomOS 11 and will also support Miracast wireless content sharing from Windows devices. Similarly, Webex users can now customize the interface of their devices. The Webex Desk range will support Kiosk Mode, a feature that allows businesses to replace the native user interface with their own custom web application.

Cisco's Emerging Technology and Incubation Efforts Deliver Free-Tier, API-First Developer Solutions

Cisco unveiled Panoptica and Calisti, the latest additions to Cisco's suite of API-first solutions and tools that result in faster application development cycles, and provide businesses with modern application connectivity, security, and observability that is critical for exceptional digital experiences. The announcement was made at Cisco Live, the premiere networking and security event. Panoptica and Calisti underscore the company's strategy towards managing and securing distributed application architectures, making it possible for developers to programmatically discover, connect, secure, and observe application programming interfaces (APIs), applications, and workloads across the breadth of their cloud journey from born-in-the-cloud use cases on a singular cloud, to hybrid and multi-cloud architectures that span public, private, SaaS, and edge components. Cisco is making it possible for developers to not only provision IT infrastructure, but also impact how software and software services are delivered in the API and application development space through a bottom-up adoption and product-led growth (PLG) model, allowing them to try, buy, and scale their usage of tools and solutions in the Cisco portfolio. "Applications are no longer simply an extension of the brand or an added channel to engage customers—today applications are the business. Cisco is laying the groundwork for a more immersive digital future by rethinking technology, architectures and even operating models with cloud-native, API-first solutions that can be leveraged across every area of business." said Liz Centoni, EVP, Chief Strategy Officer, and GM of Applications. APIs are behind the integration of systems, platforms and applications, making it possible to create new business models and streamline strategies for the delivery of products and services across almost every digital channel. Panoptica and Calisti, which are available for free, are part of a new class of open-source, API-first solutions from Cisco.

Panoptica—The Cisco Secure Application Cloud, Panoptica helps developers and engineers provide cloud-native security from application development to runtime. A single interface for



comprehensive container, serverless, API, service mesh, and Kubernetes security, it scales across multiple clusters with an agentless architecture, and integrates with CI/CD tools and language frameworks across multiple clouds. Calisti—The Cisco Service Mesh Manager, Calisti is an enterprise-ready Istio platform that simplifies connectivity, lifecycle management, and security for microservices in complex, multi-cloud environments. It helps application teams to focus on application logic, and site reliability engineers (SREs) to control and scale, de-risk upgrades, find root causes and monitor service-level objectives (SLOs). Cisco offers flexibility and choice for developers and software engineers and is deepening its commitment to open source as a powerful multiplier that accelerates innovation. The company initiates ventures and directed research using open-source projects including OpenTelemetry, OpenAPI, OpenInfra, Dex, Snort, and Kafka.

Cisco Helps Service Providers Build a Sustainable Internet for the Future with Advancements to Its Converged Network Solution to Lower Costs

Cisco announced advancements to its Routed Optical Networking solution, delivering on its commitment to redefine the economics of the internet and help communication service providers close the digital divide by connecting more people, places, and things. Cisco unveiled its technology strategy for the Internet for the Future in December 2019, featuring new silicon, optics, and software to help service providers reduce the costs of building and extending their networks to reach more people. Cisco later announced its ground-breaking Routed Optical Networking architecture in March 2021, featuring converged networking protocols, reduced networking layers, advanced automation tools and simplified network access to foster open networking and prepare for the rise of 5G.

Focused on Sustainability and Service Assurance

Today, Cisco introduced new private line emulation technology to transport any legacy service over a converged IP infrastructure, advanced automation software service assurance, Cisco Customer Experience (CX) advisory services, and more to help its customers reduce opex and capex and meet their sustainability goals. Cisco's enhanced Routed Optical Networking solution increases capacity and scalability, while reducing power for a lower carbon impact on the environment. The modularity and programmability of Cisco's IOS XR operating system minimizes IT needs for set-up and operation, resulting in fewer truck rolls and maintenance windows. Cisco has shifted to using recyclable material for much of its Routed Optical Networking product packaging to help achieve its customers' CO2 emission goals. "Cisco is committed to powering an inclusive future for all, where everyone has access to quality internet, and that requires fundamental changes in networking," said Bill Gartner, Senior Vice President and General Manager, Optical Systems and Optics, Cisco. "Cisco Routed Optical Networking takes a less is more approach, offering communication service providers the critical components they need to speed transitions to a more efficient way of building and operating networks, reducing legacy technology and focusing on sustainable components that will save money and save the environment."

Enhanced Capabilities for Cisco Routed Optical Networking include:

- NCS 1010 Open Optical Line System for Optimized Transport: Designed to scale for capacity at speed, the Cisco NCS 1010 leverages both C and L-band to double fiber capacity; Powered by the industry-leading Cisco IOS-XR operating system, it is an open networking platform to help customers deploy Cisco Routed Optical Networking in both green and brown field deployments.
- New Bright 400G ZR/ZR+ Pluggable Optic: The Bright 400G ZR/ZR+ pluggable optic can be deployed in any DWDM network, regardless of vendor.
- Private Line Emulation: Standardized private line emulation (PLE) will support the move of legacy bit transparent services over an IP/MPLS infrastructure.
- Cisco Crosswork Network Automation: Cisco Crosswork Automation now provides multi-layer automation for assurance and provisioning, and optical automation for Cisco's entire optical portfolio.
- Sustainability: Cisco networking analysis and modelling shows improved solution sustainability with up to 45% in power savings and up to 70% space savings.
- New Cisco Customer Experience (CX) Advisory Service: Cisco CX is providing advisory, planning, solution validation, and expanded support services to help customers with their architecture transitions.

Comviva Achieves Platinum Badge for Open API Conformation from TM Forum

Comviva, the global leader in mobility solutions announced that its BlueMarble Digital BSS solution has achieved the platinum level status for Open API Conformance certification by TM Forum, the industry association driving digital business transformation through collaboration. BlueMarble is a next-generation digital platform to simplify business complexity, drive agility and expedite monetization while accelerating the time to market and scaling new lines of business, such as IoT, 5G, cloud applications, and virtualized services. With 27 certified Open APIs, Comviva BlueMarble is now one of the leading Digital BSS solutions across the globe in the number of conformant and certified Open API implementations. Comviva's Open API certifications for its BlueMarble Digital BSS suite include – Party Management, Party Role Management, Product Inventory Management, Service Ordering Management, Customer Management, Trouble Ticket, Customer Bill Management; Service Activation and Configuration; Ordering and Management; Resource Inventory Management; Usage Management; Account Management; Payment Management; Communication Management and Party Interaction etc. Commenting on the achievement, Sachin Saraf, Senior VP & Global Head, Digital BSS Solutions at Comviva said, "This recognition is a true testament to our efforts to drive digital business transformation and create open digital ecosystems for our clients. BlueMarble presents exciting new opportunities for organizations by simplifying the technology landscape, enabling flexible offerings with ecosystem partners and designing a scalable business model. The Open API program is strongly aligned to our business and technology strategy to enable interoperability and portability and drive business agility for our clients." "Congratulations to Comviva for achieving Platinum Open API Conformance Certification. This level of certification puts them in the top five globally on our leader board, with the conformant implementation of 27 Open APIs for BlueMarble Digital BSS solution," said George Glass, CTO, TM Forum. "The Open APIs are essential in enabling new applications and digital services and to date, they have been used by 32,500 developers from 2,300 companies with 510,000 downloads worldwide. We are very grateful for the commitment of the team in Comviva to TM Forum's Open API standards which benefit the entire enterprise IT ecosystem." TM Forum Open API conformance certification recognizes solutions that demonstrate commitment to the future of the industry through open digital architecture and provide critical management functionality for digital services, underpinned by TM Forum's best practices and standards. As part of a broader digital transformation agenda, TM Forum's Open APIs enable a wide range of revenue growth opportunities for CSPs and their partners and suppliers.

Huawei OceanProtect Backup Storage wins Best of Show Award at Interop Tokyo 2022

At Interop Tokyo 2022, the largest ICT trade show in Japan, Huawei OceanProtect Backup Storage won the Best of Show special award in the Server & Storage category. This is the first world-class award won by Huawei OceanProtect Backup Storage, demonstrating its high-end and competitive advantages. Award-winning review: Unmatched backup storage performance. With fast backup speeds and high data reduction rates, the system can revolutionize applications and system designs and propel a new model of backup storage into the future. Interop Tokyo is the largest and most influential ICT exhibition in Japan. Each year, the best technology companies from around the world showcase their cutting-edge solutions and technical prowess, to compete for positive Interop reviews. Huawei OceanProtect backup storage has been praised by IT experts and reviewers for its unique, industry-leading solution and flawless on-site demonstration. The traditional Disk-

to-Disk-to-Tape (D2D2T) model for data protection faces problems such as long backup window and recovery time, while the new era of Flash-to-Flash- to-Anything (F2F2X) redefines the model as backup solutions go flash, further unlocking the value of data. Huawei OceanProtect backup storage, as a next-generation smart all-flash benchmark product, is designed for the F2F2X era, featuring fast backup and restore, efficient shrinkage, and high reliability.

Why Huawei OceanProtect Backup Storage was crowned the winner The first benefit is fast backup and restore. Upstream, OceanProtect uses a DTOE smart network interface card (NIC) to optimize protocol computation and free up CPU computing resources, doubling the array bandwidth compared to the traditional network card. Additionally, OceanProtect supports high performance SSDs on the back. The full end-to-end acceleration feature enables backup bandwidths of up to 155 TB/hour and recovery of 172 TB/hour, respectively. In terms of reduction efficiency, multi-layer inline variable-length deduplication, feature-based compression, and byte-level compaction achieve a data reduction ratio of up to 72:1, which contributed to significant total cost of ownership savings. In addition, 6-nine high reliability is based on active-active redundancy hardware architecture and RAID-TP technology, which can tolerate three disk failures and implement failover in seconds in the event of one failure. single controller, for high availability and reliability. In the F2F2X era, data protection encompasses a new ecosystem and new challenges. Huawei OceanProtect backup storage adapts to high-speed backup patterns in various industries and application environments, providing superior backup and recovery to protect your data assets in the smart world.

Huawei and Nordic Cellular IoT Enter into Licensing Deal

Huawei Technologies has entered into a patent license agreement with Nordic Semiconductor. The agreement grants a fair, reasonable and non-discriminatory (FRAND) royalty-bearing component-level license of Huawei's low power wide area (LPWA) cellular IoT standard essential patents (SEPs) to Nordic and its customers. Huawei and Nordic were able to conclude the agreement through a transparent and amicable discussion within a short period of time. With this agreement, Nordic can bring its cellular IoT customers comprehensive legal protection, and a practical and legitimate way to access and implement Huawei's valuable standardized cellular IoT technology. This agreement is set to bring greater commercial and legal certainty to the IoT industry. "Huawei owns a leading portfolio of LPWA SEPs for LTE-M and NB-IoT, a subset of the 4G standard, which creates great value for IoT," says Huawei's Head of European IPR Department, Zhang Xiaowu. "Huawei is pleased to reach this license agreement with Nordic, which will enable and support a large-scale deployment of this low power cellular IoT technology by different industries, further supporting the digital transformation of societies worldwide." "Licensing in cellular IoT is a comparably new practice in the industry, calling for flexible solutions," explains Marianne Frydenlund, SVP Legal & Compliance at Nordic Semiconductor. "This agreement with Huawei is a big step towards harmonizing the cellular IoT industry with FRAND SEP licensing practices employed throughout the global semiconductor industry." "Both sides approached the negotiation in a reasonable and practical manner and recognized that simplification would help boost market growth to the benefit of all parties involved: Huawei, Nordic, and above all else, Nordic's cellular IoT customers," says Frydenlund.

Huawei Middle East President Highlights Huawei's Commitment to the Region Telecom and Other Sectors and Industries Digitalization and Sustainable Development Through Advanced Green Technologies

Steven Yi, President of Huawei Middle East, highlighted Huawei's commitment to support governments across the region achieve their digital transformation visions with 5G networks and other advanced technologies as an enabler. This took place during an exclusive media roundtable from 10 Middle East countries held on the sidelines of the SAMENA Leaders' Summit 2022, the top telecom industry event hosted by Huawei for the 9th consecutive year and attended by industry leaders, experts and decision makers from telecom companies, regulatory bodies, industry organizations and related stakeholders from SAMENA Region (South Asia, Middle East North Africa). Steven Yi stressed on the importance of the telecom sector as an enabler for other industries' sustainable development and growth in light of the evolving 5G landscape and the immense opportunities for enterprises in the 5G era. Yi also noted that Huawei, together with carriers and partners, has signed 3,000 5G commercial contracts, and that 5G saw large-scale commercial deployment in many industries, including manufacturing, mining, steel, port, chemical, cement, power grid, and healthcare. "Middle East countries are leading globally in 5G deployment. As an end-to-end leader in 5G, cloud, AI, devices and chips, Huawei will continue its commitment to help countries in the Middle East achieve their visions with digitization and sustainable development as key drivers. Yi highlighted. Additionally, during the Summit, leading regional operators and Huawei launched IntelligentRAN, an advanced telecom network solution, which comes in line with Huawei's objective to empower the telecommunication sector with more advanced innovations and value for its own business and other sectors and industries businesses by means of injecting intelligent to wireless networks and achieve autonomous driving network in the wireless domain in the future. "The intelligentRAN architecture is constructed to develop a mobile network with intelligent service operation, intelligent network optimization, and simplified O&M. This feature helps customers and partners quickly provision services and guarantee user experience, maximize user experience, reduce energy consumption, and simplify O&M in multi-frequency and multi-mode scenarios." With digital technologies advancing rapidly, securing networks and cybersecurity continues to be Huawei's top priority. "We have a sound cybersecurity and privacy protection assurance structure which has a leading global record." Steven Yi said. "Our practices in cybersecurity have won the continuous trust of our partners including those in the Middle East. We believe that cyber security is a shared responsibility and it's crucial to have an open discussion around cybersecurity governance architecture in line of international standards like 3GPP, GSMA NESAS and others. Last year, we unveiled the largest cybersecurity and transparency center around the world in Dongguan China, and we hope that we will be able to invite you to visit there after the pandemic to experience this open collaboration platform targeted at addressing cybersecurity challenges and come up with joint innovations for improving the future of cybersecurity." Yi continued. Steven Yi also stressed on Huawei's commitment to support building digital economies in the Middle East region "We need to be united to establish unified laws and regulations so that the digital economy can be protected." "Huawei has worked with customers to deploy 5G technology and hope to see more use cases of 5G in vertical industries in the Middle East region. We are committed to openly collaborate with our customers and partners and extend our innovations and global expertise to the region players for achieving more value in 5G deployment, in-line with the ME countries socio- economic growth." Yi said. "In terms of R&D, we will continue to invest heavily to serve our smart and intelligent future. In 2021, We invested over 22% of annual revenue in R&D targeted at supporting the long-term sustainable development of the ICT industry, we will continue to invest significantly in intelligent solutions and services such as ICT infrastructure and cloud services." Yi added. But focusing and expanding the digital space comes with its own concerns over energy consumption, therefore, Huawei has made sustainability as a priority to achieve a low-carbon society through continuous technological innovation. "In the Middle East, Huawei Digital Energy is working with industry partners to develop the digital energy industry, building a low-carbon telecom sector, homes, factors, parks and smart cities, and moving from a low-carbon society to a zero-carbon one." At the moment, over 100 operators from across the world have deployed Huawei's low-carbon solutions, reducing carbon emissions by 40 million tons. On talent development, Huawei's long-term strategy in the MEA region is aimed at developing ICT knowledge for various markets by leveraging their strengths in advanced

technologies. “In the digital economy era, digital talent will be the key to digital transformation and economic growth.” Huawei has committed to develop over 100,000 ICT talents in the Middle East in the next 5 years. In the Middle East, we have set up 154 Huawei ICT academies, and over 3,000 students have participated in the flagship program Seeds for the Future, and more than 17,000 students have obtained a Huawei certification. "Huawei is committed to cultivating innovative talents for higher and vocational colleges, accelerating innovation in teaching, research, and narrowing the digital divide, and promoting balanced education development in basic education" Yi added. Steven Yi also highlighted that Huawei is committed to use its global knowledge and expertise in over 170 markets and in mega projects such as the 2018 World Cup in Russia and 2022 Beijing Winter Olympics to the benefit of the Middle East region mega events, including successfully guaranteeing Saudi Arabia's Hajj network for 16 years, accident free and offering unprecedented experiences to the upcoming 2022 Qatar World Cup. “We remain committed to collaborate with our suppliers and partners to provide customized, secure, reliable, stable and competitive solutions to our customers in the Middle East Region.” Yi concluded.

Huawei Partners with Saudi Space Commission to Launch First Technology Experience Center in KSA

In collaboration with the Saudi Space Commission, Huawei has launched Future Space, the first technology experience center in Saudi Arabia. The partnership aligns with Huawei's commitment to corporate social responsibility, developing local talent and actively contributing to the Kingdom's digital transformation journey. Future Space, the largest exhibition center outside of China, will include advanced technologies including autonomous driving, 3D printing, and brainwave robot control, among other innovations. The first exhibition of its kind in Saudi Arabia, Future Space, covers 1,500 square meters and will offer speaking opportunities for young innovators. The center will be open to the public and host an estimated 200,000 visitors over the next five years. During the launch, Eric Yang, CEO of Huawei Saudi Arabia, said: "We are honored to launch Future Space in Saudi Arabia and support the Kingdom achieve its digital ambitions as part of Saudi Arabia's vision 2030. Imagination will determine how far we can go in the future; action will determine how quickly we get there. We believe here at Huawei that the best way to predict the future is to create it." HE Weiqing Chen, Ambassador of China to Saudi Arabia, said, "The firm relations between China and Saudi Arabia have brought immense benefits to both countries. As Saudi Arabia pursues digital transformation as part of its strategic national goals, public/private partnerships between technology companies such as Huawei and public agencies adds new value to the local tech ecosystem. We, therefore, congratulate the Saudi Space Commission on the launch of Future Space and look forward to more success." HE Dr. Mohammed Altamimi, Saudi Space Commission CEO, said, "Future Space is one of the most advanced technology experience centers in the world. We want to expose young people to the most cutting-edge technologies and inspire them to imagine technology in new ways. Partnering with a global technology leader such as Huawei enables us to bring real-world and proven technology solutions that can positively impact society.” Adnan Alsharqi, Deputy Minister, Ministry of Investment, said, "Building a knowledge-based economy is a key pillar of Vision 2030. Initiatives such as Future Space help enrich our digital ecosystem and attract investment from other digital companies. As a ministry, we are keen to support public and private partnerships that have proven highly successful in accelerating innovation and boosting our talent pipeline." A digital-led future will bring improved quality of life, sustainable and green production, more comfortable living spaces, reduced traffic congestion and pollution in cities, fully green energy, and a wide range of new digital services. Huawei will work with partners to help accelerate this transformation, aligned with its vision and mission of bringing digital to every person, home, and organization for a fully connected, intelligent world.

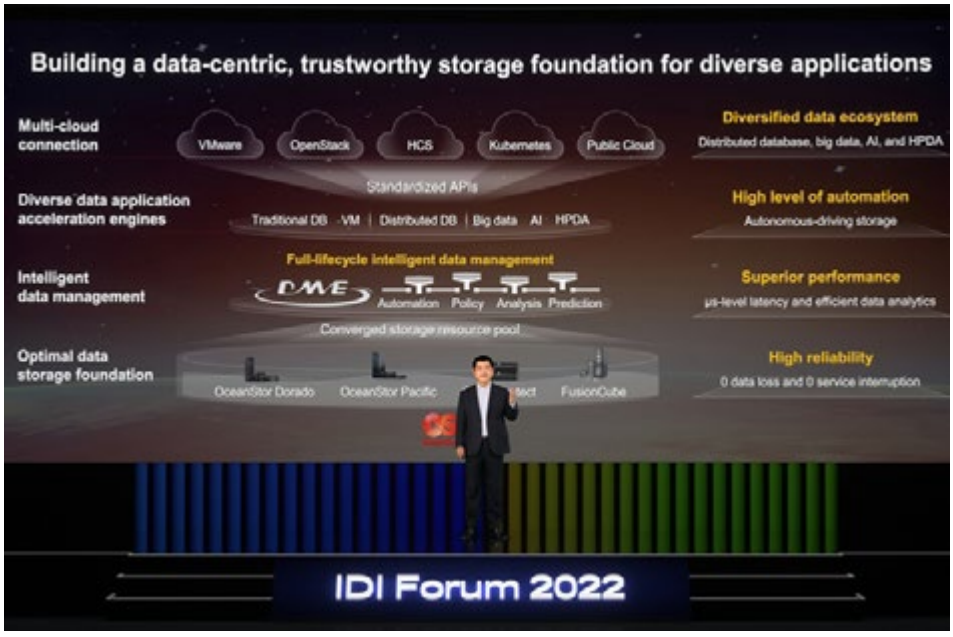
Huawei Launches New Intelligent Cloud-Network Solutions to Accelerate Middle East Digital Transformation

With an aim to empower Middle East enterprises with super computing power and intelligence, and accelerate digital transformation across industries, Huawei unveiled three new IP networking solutions at their annual regional flagship event, held at Atlantis, the Palm, Dubai. On day one of the Huawei IP Club Carnival MENA 2022, Huawei noted the need to keep up with ever-changing customer scenarios and launched CloudFabric 3.0, Huawei SD-WAN and CloudCampus 3.0 solutions. Held under the theme of 'Cloud-Network Synergy, Build a Deterministic Experience Network', the event saw Huawei's global and regional experts, industry analyst and Huawei's customers and partners come together under one roof to discuss the latest network technology trends and discover how enterprises can best prepare for the intelligent era and inject new momentum into their digital development ambitions. Pawan Jain, Director, Technology Consulting, PwC Middle East, spoke at the event about network technology trends, opportunities and key enablers and added - "Adapting to the wave of emerging technology is key to drive differentiation in IT strategy, optimize cost and compete effectively in the future. True potential of these innovative technology solutions can only be realized with intelligent & cloud-ready network infrastructure." Launching the new solutions at the event, Faisal Ameer Malik, CTO, Huawei Enterprise Group, Middle East said: "Intelligent IP networks - connecting things on one end and applications on the other end - have now become the cornerstone for digital transformation across industries. As enterprise digital transformation picks up speed, IP networks need to keep pace with the evolving cloud technologies and enterprise demands. Our new solutions aim to address these challenges; with its launch, we are reaffirming our relentless efforts to develop scenario-tailored solutions for partners and customers, creating new drivers for digitalization across industries."

The following three new solutions were rolled out at the event:

CloudFabric 3.0, Hyper-Converged Data Center Solution, which has "Fast" and "Stable" key characteristics, is ideal for building best-in-class data center networks, helping enterprises usher in a service center with super computing power. This feature-rich solution offers the industry's only L3.5 autonomous driving network, which is needed to propel enterprise data centers towards multi-clouds and multi-DCs. Another highlight Huawei's unique AIFABRIC technology, enabling data center switches to ensure zero packet loss high reliability, low latency, and high throughput, facilitating convergence to an all ethernet Datacenter. Software-Defined (SD)-WAN is an obvious choice in the cloud era, interconnecting enterprise branches, headquarters, and multiple clouds. Huawei's SD-WAN Solution provides powerful networking, a superior user experience, and simplified O&M capabilities, meeting WAN interconnection requirements of enterprises of all shapes and sizes, as well as carriers and service providers. CloudCampus 3.0 Solution draws on continued innovations in the WLAN, LAN Switch and SD-WAN fields and introduces an extensive range of all-new products, including AirEngine 6761 Access Points, CloudEngine S8700 switches, and NetEngine AR6710 routers. As such, CloudCampus 3.0 stands out by offering "300 Mbps @ Everywhere" access experience for enterprises and doubling the cloud access efficiency. With these strengths, CloudCampus 3.0 can be widely used in industries like education, healthcare, finance, and energy, helping enterprises shorten time-to-market and improve operational efficiency. Huawei also showcased its HiSec 3.0 Solution, the solution performs network monitoring and drills down network behavior data to detect threats as early as possible and resolve problems in a timely manner. First, traditional signature-based static analysis methods cannot effectively detect new threats. Huawei introduces big data analytics to security and uses the deep neural network algorithm and machine learning technology to transform from reactive defense to proactive defense. Second, to prevent horizontal diffusion of threats on the intranet, Huawei integrates security into the network and puts forward the industry's first network + security network-wide defense solution, achieving the transformation from single-point defense to network-wide defense. Taking place on 8th and 9th of June at Atlantis, the Palm in Dubai, Huawei IP Club Carnival MENA 2022 is the company annual regional flagship event dedicated to the IP networking industry and showcases Huawei's new groundbreaking IP products and solutions.

Huawei Proposes a New Data Storage Concept



At the 2022 Innovative Data Infrastructure Forum, Huawei proposed a new, innovative storage concept of "building a data-centric, trustworthy storage foundation for diverse applications." To continuously build highly reliable and performant fundamental storage technologies., the company has announced it will prioritize the development of decoupled storage-compute architectures and diverse data application acceleration engines. Such solutions will be ideal for helping enterprises accelerate digital transformation and cope with diverse data applications. As data volumes continue to grow exponentially, storage technologies have struggled to keep up. There are four primary challenges facing the storage industry. First, there are insufficient workloads solutions for emerging applications, such as distributed databases, big data, AI, and High-Performance Data Analytics (HPDA) applications. Second, data service acceleration will require faster and real-time data analysis and processing to improve production efficiency and user experience. Third, higher data protection standards will be needed to mitigate increasingly frequent data attacks that could cause huge economic loss. Finally, innovative green solutions will be needed in data storage to increase energy efficiency. Dr. Peter Zhou, the President of Huawei's IT Product Line, explained at the forum that Huawei already offers a full series of enhanced competitive storage products that proactively addressed these changes, including OceanStor Dorado All-Flash Storage, OceanStor Pacific Distributed Storage, OceanProtect Backup Storage, and FusionCube. While these offerings are suitable for many industries and enterprises, advancements in three areas will be needed for them to serve as a fully data-centric, trustworthy data storage foundation for all applications. First, they will need a decoupled storage-compute architecture. As enterprises continuously accelerate their digital transformation, emerging data applications are gradually becoming production applications, demanding higher data reliability. Furthermore, the lifecycle gap between computing and data is expanding, requiring flexible and independent management and maintenance of computing and storage resources. A decoupled storage-compute architecture would better utilize elastic, reliable, and cost-effective storage to facilitate faster, more reliable, and efficient services at lower costs. Second, there needs to be more data application acceleration engines within storage systems. To cope with diverse data applications, future-oriented storage is expected to house data persistently while also providing a way to build data infrastructure that combines a data persistence layer with the application acceleration engine. Emerging data applications, such as distributed databases, big data, and AI applications that produce mass data, are continuing to grow. And so, future storage systems should be built with metadata management and intensive data processing to form diverse data application acceleration engines, improving end-to-end processing efficiency by up to 10 times and significantly improving customer experience and operational efficiency. And finally, a green design system will be needed to fundamentally improve the product development process. Such a design would cover three aspects: green production, such as renewable materials; green products with low-carbon components, like NAND flash, high-density hardware design, leading data reduction, and resource pools for less space occupied and better resource efficiency; and green enablers, that is, supporting enterprise services that optimize production operations for higher energy efficiency. Zhou also noted that, over the past three decades, data storage has evolved to become the optimal foundation of high-value data in line with the data application development: "We are ushering in the yottabyte era. Data applications are growing faster than ever. This forum's theme is Green, Acceleration, and Innovation, and this is also the development orientation of Huawei Storage. Together with our partners, we will provide high-quality storage products and solutions to create more value for customers."

Microsoft Expands Operations in Qatar with New Facility

Microsoft has expanded its operations in Qatar with the opening of a new Lusail City facility, the company's fourth and largest in the country, part of a significant investment in Qatar. This includes the soon to be launched Microsoft Cloud Datacenter Region. The launch of the new offices reinforces Microsoft's commitment to establish Qatar as a knowledge and innovation hub, and will enable Microsoft to better serve its customers, collaborate with its technology partners and attract and develop top talent. Microsoft was joined by Mohammed bin Ali Al-Mannai, Minister of Communications and Information Technology, as well as high ranking officials from the US Embassy in Qatar, to celebrate the official opening of its new state-of-the-art office in Burj Al Fardan, Lusail City.

Deeply rooted

The inauguration ceremony was live-streamed on Microsoft Teams to allow the company's employees in the wider Middle East and Africa region to be part of the celebrations. "Microsoft has been deeply rooted in Qatar and our commitment to help grow Qatar's innovation economy has never been stronger," said Lana Khalaf, General Manager at Microsoft Qatar. "With the launch of our new offices and our Customer Innovation Centre, customers and partners will have the opportunity to co-innovate, ideate and envision ground breaking solutions that will revolutionize their industries"

Fueling innovation

With one side of the office overlooking the Arabian sea and the other facing the desert, the eye-catching space fuses Microsoft's global corporate identity with local Qatari flavor to capture the forward-looking, agile and resilient nature of Qatar. The new Microsoft facility includes a Customer Innovation Centre that will host innovation and ideation workshops aimed at inspiring groundbreaking solutions that spur transformation across industries in Qatar. The office will play a vital role as an innovation hub for leading technology startups, students, and community organisations from across Qatar. It will also serve as a regional hub for the company's talent, servicing Qatar and the wider Microsoft Middle East Cluster region. Work done at the facility will support the company's efforts to grow, retain, and recruit the most talented people to build the most cutting-edge solutions. The new office was designed with the evolution of work in mind, presenting an inclusive hybrid workplace that empowers employees to better serve customers and collaborate with partners, whether they are in person or remote.

Future of work

Leveraging the company's latest future of work technologies, the sustainable, smart space facilitates seamless hybrid work that offers employees flexibility to divide their work time between the office and offsite locations, leading to increased productivity, higher employee satisfaction and enhanced team collaboration. The office incorporates a Team Based Space design that pairs the latest technology with modern and collaborative workplaces and is fitted with the latest Microsoft Teams-enabled hardware and software to facilitate seamless hybrid work. "In designing the new office, we were guided by two main principles. The first was our determination to provide the best workplace for our employees, offering a highly engaging, inclusive, and flexible environment that leverages the latest modern work technologies to create future proof smart workspaces. The second was sustainability, to deliver the first office to be certified on the highest sustainability standards in the Middle East. I am extremely proud to say that we delivered on both of those objectives – while prioritizing the focus on customers with our Customer Innovation Centre," Khalaf says.

Further recruitment

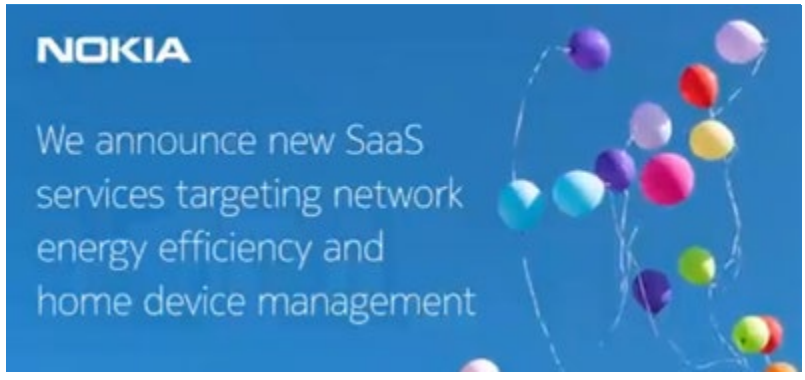
"I look forward to welcoming customers, partners, visitors and Microsoft's team members to our new office, and I am confident that this expansion will drive further recruitment and retention of the brightest talent who will be inspired to build cutting-edge solutions for organizations and people in the country." In 2020, Microsoft announced ambitious commitments to become carbon negative by 2030 and remove more carbon from the environment than it has emitted since its founding by 2050. In line with these sustainability goals, this new facility is fitted with the latest green technologies to drive energy and water efficiency and is the company's first office in the Middle East to reach Level 1 on Microsoft's Global Sustainability Standard. The premises have also achieved a C-Grade Global Microsoft Accessibility Standard for extending equal opportunities for all employees to access their workspaces with features such as easily accessible parking spaces, automatic doors, room signs with Braille, and audible and visible alarm systems.

Nokia and Proximus Deliver 5G Network Slicing Innovation to Support Demanding Network Conditions

Nokia and Proximus have announced that they have successfully enhanced the performance of 5G network slicing in demanding network conditions through the use of radio software-defined networking and radio resource allocation technologies. During a live trial at Proximus' 5G Innovation Lab in Brussels, real-life applications were used to demonstrate how a consistent customer experience can be ensured under congested network conditions. New 5G RAN slicing functionality brings benefits to a wide range of use cases such as Industry 4.0, IoT and enterprise applications such as public safety and drone inspection as well as virtual and augmented reality and cloud gaming. The solution is available now for trials and will be commercially available in Q3 for 5G standalone. The trial was performed on the Proximus 5G innovation platform using 50Mhz of spectrum in the 3600MHz band based on Nokia's 5G AirScale base station. It combined new advanced RAN slicing functionalities in the base station with radio software-defined networking (SDN) technology to enable the real-time management of slices and network performance. Three devices were configured on three end-to-end slices configured respectively with 60, 30, and 10 percent of available bandwidth resources. Each device reached the maximum bandwidth when connected individually and reached the assigned capacity when connected simultaneously. The successful trial assigned specific radio resources per slice which were complemented with further radio capabilities to reduce latency for slices with time-sensitive applications. It also highlighted how an operator can control and dynamically adapt slice parameters in general and in particular set the radio resources per slice. Radio resource allocation technologies can be used in a radio network shared between multiple operators. Nokia's slice-aware radio resource allocation can be applied for 5G SA slices and 5G NSA traffic. It also complements the capabilities already available in LTE providing seamless continuity between 4G and 5G networks. Radio software-defined networking enables real-time management of RAN resources, schedulers, quality of service, security, traffic isolation, and routing required especially to customize a slice to the specific need of the business applications and/or use case. It can be applied for 4G/5G slicing and edge slicing. Nokia is the industry leader in 4G/5G network slicing and was the first to demonstrate 4G/5G network slicing across RAN-Transport-Core with management and assurance. Nokia's network slicing solution supports all LTE, 5G NSA, and 5G SA devices, enabling mobile operators to utilize a huge device ecosystem and provide slice continuity over 4G and 5G. Several live network deployments and trials have already taken place with Nokia's global customer base including deployments of new slicing capabilities such as edge slicing in Virtual Private Networks, LTE-NSA-SA end-to-end network slicing, Fixed Wireless Access slicing, Sliced Private Wireless as well as Slice Management Automation and Orchestration. Proximus delivers a quality mobile network and nationwide mobile coverage to its customers in Belgium. This trial supports the company's ambition to be a leading mobile network innovator. In addition to its comprehensive expertise as a leading 5G player in Belgium, Proximus offers additional support, together with its affiliates, in complementary fields ranging from security and intelligent cloud solutions to artificial intelligence and IoT. Geert Standaert, CTO, Proximus, said: "We are delighted to have completed this network slicing trial with Nokia which will support our customers with enhanced network slicing capabilities that will keep key services running smoothly even at demanding or busy times. Our advanced 5G network supports our customers' business by enabling new kinds of services and making the network more efficient. We will continue to develop innovations and the latest applications, as our mission is to bring the opportunities of 5G to our customers." Tommi Uitto, President of Mobile Networks at Nokia, said: "This trial with our partner, Proximus, is the latest development in our pioneering network slicing story. We have focused on delivering a consistent slice-specific customer experience that performs under any circumstances or network conditions. We have achieved another key milestone with this project and delivered innovative new functionality that helps our customers create compelling new services."

Nokia Announces New SaaS Services Targeting Network Energy Efficiency and Home Device Management

Nokia announced two new Software-as-Service (SaaS) offerings that help communication service providers (CSPs) and enterprises strengthen their energy efficiency efforts and optimize the management of home devices. The announcement is the latest push by Nokia to provide its customers with faster time-to-value in operating their telecom networks and delivering new services. Using AI, Nokia AVA ("Analytics Virtualization and Automation") for Energy SaaS closely monitors multi-vendor network traffic patterns to reduce connectivity resources during low usage periods. Through constant monitoring of network traffic patterns and making adjustments in real-time, this software tool can realize two- to five-fold energy savings compared to non-AI systems that perform temporary network resource shutdowns based on fixed schedules. Nokia AVA for Energy SaaS also helps CSPs spot anomalies and benchmark the energy efficiency of passive infrastructure, such as batteries, power supplies, and air conditioning units that can account for up to 50 percent of overall energy consumption. Nokia AVA for Energy SaaS, commercially available today, reflects Nokia's broader commitment to cut emissions by 50 percent between 2019 and 2030 across its value chain, including its own operations, products in use, logistics, and final assembly supplier factories. Nokia Home Device Management SaaS is a vendor agnostic, automated, secure and scalable device management platform capable of managing millions of home devices, like smart home thermostats and connected refrigerators. The new SaaS service enables operators to remotely manage Customer Premise Equipment (CPE), such as residential gateway, 5G fixed wireless access devices, Wifi extenders and IP set-top boxes; and provides ultra reliable secure broadband connectivity to the smart home. By standardizing and automating the data recollection process, Nokia Home Device Management SaaS provides a single, integrated, standard base platform that supports home devices from any vendor. This new SaaS service is also commercially available, as is Nokia Anomaly Detection SaaS. Announced in November 2021, Nokia Anomaly Detection SaaS is a machine learning service aimed at finding and remediating network anomalies before they affect network customers. Nokia has a leading position in the home device management market, with over 150 million home devices globally that are managed by the company's software solution. Similarly, in analytics, Nokia is rated #1 by Appledore Consulting for market share in "AI Ops" and "Network Data Management." Michael Soper, Senior Analyst, at TBR, said: "Nokia's new SaaS offerings represent a significant change in the telecom market, as SaaS is the acceleration engine for the telecom industry to realize the full potential of 5G and beyond." Hamdy Farid, Senior Vice President, Business Applications at Nokia, said: "The convergence of cloud native software, hyperscaler collaboration, and 5G makes the business case for SaaS very compelling. These latest Nokia SaaS services reflect the path Nokia is leading to help our customers accelerate their time to value; reduce complexity; and automate the services lifecycle through software consumed purely on demand."



Nokia, Elisa and Qualcomm Partner to Achieve 2Gbps 5G Uplink Speed on mmWave

Nokia, Elisa, and Qualcomm Technologies have achieved what they claim are 'record-breaking' 5G uplink speeds of 2.1Gbps, doing so in a live demonstration at the Nokia Arena in Tampere, Finland. In a press release regarding the development Nokia said that for the trial it had provided its AirScale base station in 26GHz mmWave spectrum over Elisa's commercial 5G network. Additionally, Nokia confirmed it had deployed its carrier aggregation (CA) technology to make the best use of the available spectrum assets, with the CA setup including four component carriers of 100MHz each. Meanwhile, it was noted that the network was connected to a 5G device powered by a Snapdragon X65 5G Modem-RF System featuring fourth-generation Qualcomm QTM545 mmWave antenna modules. Commenting, Sami Komulainen, Executive Vice President, Production at Elisa, said: 'Elisa is leading in the development of 5G services in Finland and this is yet another important step in our efforts to bring the fastest speeds and best 5G experiences to our customers. We previously announced reaching 8Gbps downlink speeds with Nokia, and Qualcomm Technologies and now we have pushed the possibilities of 5G technology even further with this new trial reaching over 2Gbps uplink speeds. This will deliver incredible and enhanced services to visitors of the Nokia Arena.'

Nokia Launches in France the 5G Innov Lab Platform to test and Integrate Future 5G Use Cases

Nokia announced the launch of the 5G Innov Lab platform as part of the France Recovery plan. The Nokia-led platform has the objective of testing and integrating 5G industrial uses, using an open and transversal approach; and brings together various entities, including Airbus Secure Land Communications, Augmented Acoustics, Digital Immersion, IMT, SNEF Lab, Nokia Bell Labs, and Paris-Saclay Hardware Accelerator. With a diversity of partners, the 5G Innov Lab platform will make it possible to better understand and anticipate new 5G use cases. The open and scalable platform is designed to accommodate new use cases and new partners. The 5G Innov Lab platform will rely on a 5G private network comprised of different frequencies (2.6GHz TDD, 26GHz, and the 3.8 – 4.2GHz band, with three major focus areas:

Research and Innovation

The work will focus on the future uses of the "Smart industry" and "Smart mobility". With the aim of presenting experimental results, field testing proof of concepts, and developing advanced prototypes, the implementation of future use cases will be based on:

A call for innovation led by the Garage Nokia Paris-Saclay, with the support of IncubAlliance and La French Tech Paris-Saclay

Nokia Bell Labs' robotic services software platform

Industrial demos with the Paris-Saclay Hardware Accelerator 4.0 factory, covering topics such as robotics and predictive maintenance

Industrial and vertical use cases

Thanks to Nokia LaaS (Lab as a Service), which is based at the Paris-Saclay site, companies in the sector of rail, urban and energy transport and local authorities will be able to test future use cases in an operational 5G and private wireless (4.9/LTE and 5G) environment. Testing will be based on the deployment of 5G infrastructure at the Nokia Paris-Saclay campus or at customer sites for each type of industrial use; and at SNEF group Lab for railways, industrial, and mining applications.

5G experiments in 26GHz band

The objective is to coordinate the first experiments on the 26GHz band as part of the allocation of these experimental frequencies by ARCEP and to deploy the 26GHz infrastructure on each concerned site. The experiments cover sectors as varied as the connected port with the Port of Le Havre; the connected stadium with the National Vélodrome; the connected city with Paris La Défense; and the connected museum with the Cité des Sciences. These experiments will make it possible to validate the technological relevance of 26GHz, the emergence of new use cases and services, and new business models integrating new players. Pierre-Gaël Chantereau, President of Nokia in France, said: "5G will play a critical role in the transformation of the industry and verticals and this Nokia-led platform will enable the development in France of new use cases, with the support of all partners. France has many assets, supported by both historical and new players, and the cooperation of these actors is essential to accelerate developments and guarantee our competitiveness at the European and global levels." The Innov Lab 5G platform will make it possible to demonstrate in real conditions the power of 5G for all these new use cases and support the work of other 5G platforms launched by the BPI (Banque Publique d'Investissement) as part of the 5G Call for Projects, including 5G Open Road, 5G Living Lab, 5G mMTC, and 5G Maritime Perf platforms.

Nokia Secures Ten-Year Extension of Orange Poland Contract

Orange Poland has awarded Nokia a ten-year extension to an existing contract for radio network modernization and the deployment of 5G infrastructure. The deal, which now runs until 2036, covers 50% of Orange's national network, concentrated on northern Poland. The vendor will supply equipment from its latest AirScale portfolio, including future support for 3.5GHz C-band spectrum. As well as rolling out 5G infrastructure, Nokia will also be supporting Orange as it phases out its 3G services and uses the freed spectrum to improve 4G connectivity.

Nokia, LS ELECTRIC Sign Memorandum of Understanding to Develop ICT Solutions and New Service Models

Nokia announced that Nokia and LS ELECTRIC, one of South Korea's biggest providers of electric power equipment and automation solutions, have signed a Memorandum of Understanding (MoU) to develop Information Communications Technology (ICT) based solutions for new service models. The two companies will collaborate to develop a model for factory automation, data center and Electric Vehicle (EV) charging services. Nokia and LS ELECTRIC will also explore 5G private wireless networks business opportunities as part of the agreement. The collaboration will enable LS ELECTRIC to modernize its infrastructure to provide market-leading solutions to its customers. Industrial-grade Nokia private wireless solutions, Data Center Fabric and EV charging solutions with Nokia Data Marketplace, will be used by LS ELECTRIC to acquire new operational competencies. As part of the MoU, Nokia will provide technical information and solutions related to smart factory infrastructure, data center business and EV charging businesses to support implementation strategies. Nokia has deployed mission-critical networks to more than 2,200 leading enterprise customers in the transport, energy, large enterprise, manufacturing, webscale, and public sector segments around the globe. It has also extended its expertise to more than 450 large private wireless customers worldwide across an array of sectors, and has been cited by numerous industry analysts as the leading provider of private wireless networking worldwide. Jong-Woo Kim, President and COO, Global Services at LS ELECTRIC, said: "We are excited to work with Nokia to develop new competencies and modernize our infrastructure, to provide market-leading solutions and leverage new business models. Nokia is our existing partner and we are confident that its proven expertise and industry-leading solutions will help us realize our business vision." Josh Lee, Head of Enterprise at Nokia Korea, said: "The emerging business models for Industry 4.0 demand close collaboration between the enterprises and ICT-based global communication equipment companies to be better placed to leverage the market opportunities. We are pleased that LS ELECTRIC has reiterated its trust in our capabilities and solutions by extending the existing partnership."

Nokia, NS Solutions to Deploy 5G SA Private Wireless Network at Nara Institute of Science and Technology to Advance Research Capabilities

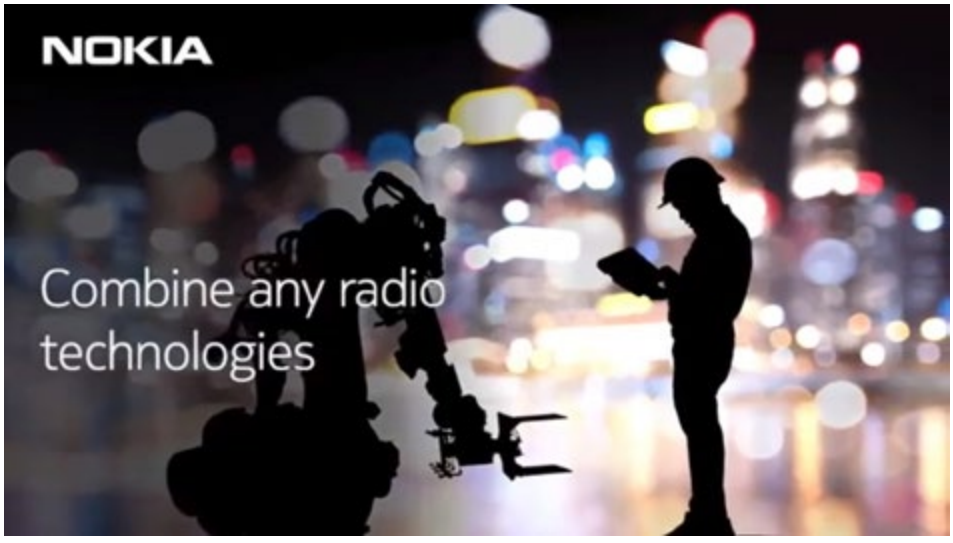
Nokia announced that NS Solutions deployed Nokia Digital Automation Cloud (DAC) and 5G Fixed Wireless Access (FWA) technology as part of a Local 5G network for Nara Institute of Science and Technology (NAIST) at Nara prefecture in Japan. The 5G private wireless network will allow NAIST to strengthen its research capabilities, enable high-definition live streaming of lectures and research videos and contribute to research on next-generation mobile communication systems. The new local 5G network will enable NAIST to collect vast amounts of data in real-time and use Artificial Intelligence (AI) and Machine Learning (ML) to generate actionable insights. Local 5G networks will also allow high-definition live streaming to enable NAIST to provide a more immersive education experience. It will also improve rainfall prediction accuracy by using 5G and GPS positioning functions. Nokia Digital Automation Cloud (DAC), an end-to-end private wireless networking and edge computing platform, is designed to empower enterprises from different industry verticals to leverage 5G-powered automation for greater efficiencies. The Nokia solution also includes the Japanese model of FastMile 5G Gateway, which was developed especially for local 5G use cases in Japan. Takashi Oshiro, Executive Director and Senior Vice President, at NS Solutions, said: "Our expertise coupled with field-proven Nokia solutions allow us to deploy best-in-class Local 5G networks for enterprises from different industry verticals. Nokia DAC will enable us to quickly deploy Local 5G for NAIST to help them gain new research capabilities and allow them to use the network to conduct research for upcoming technologies. In addition, Nokia Fastmile CPEs allow the users to deploy 5G Fixed Wireless Access (FWA) quickly and easily." Donny Janssens, Head of Customer Team Enterprise Japan, at Nokia, said: "Nokia Digital Automation Cloud will allow NAIST to benefit from a highly reliable local 5G network to better manage its data assets and provide a superior learning experience. In addition, our FastMile 5G Gateway allows NS Solutions to offer high-speed, reliable wireless connectivity for the local 5G network at NAIST. These solutions enable enterprises to leverage 5G technology in order to acquire new capabilities and gain a business edge. We are pleased to work with NS Solutions on this project and look forward to helping other enterprises benefit from innovative 5G use cases." Nokia has deployed mission-critical networks to more than 2,200 leading enterprise customers in the transport, energy, large enterprise, manufacturing, webscale, and public sector segments around the globe. It has also extended its expertise to more than 450 large private wireless customers worldwide across an array of sectors and has been cited by numerous industry analysts as the leading provider of private wireless networking worldwide.

Nokia Enables stc to Launch Managed SD-WAN Services for Enterprises

Nokia and stc have announced the launch of a managed SD-WAN solution, stc SD-WAN, based on Nuage Networks from Nokia Virtualized Network Services (VNS) platform. stc SD-WAN solution is a key element in stc's cloud portfolio providing automated, dynamic, programmable and more efficient network services to its enterprise customers. It will enable rapid ordering and automated configuration of network services as well as an increase in visibility and control based on the individual requirements of the enterprise. As enterprises embrace cloud services, stc is transforming its digital services infrastructure to support them. Realizing the potential and benefit of cloud-based and software-defined technologies, stc had launched stc SD-WAN services. The program aims to enable its enterprise customers' digital transformation journey and transition to cloud. stc SD-WAN based on Nuage Networks from Nokia VNS will provide the ideal enterprise branch service using x86-based CPEs. Transport agnostic, it offers fast, secure deployment of cloud-based WAN services with intelligent traffic steering, full application visibility and end-to-end security. Enterprises benefit from the auto-provisioned plug and play services with quick and simple move, add and change requests. Paired with Nokia Virtual Networks Orchestration (VNO) and Service Orchestrator (SO), an orchestration layer for service abstraction, stc will be able to simplify, easily manage and enhance time to market of new functions and connectivity models for its SD-WAN enterprise customers. Badr Al-Lhieb, Infrastructure Sector VP at stc, said: "We are excited to partner with Nokia to provide SD-WAN services to our business customers. SD-WAN will provide our enterprise customer the flexibility to connect their branches quickly, securely, effectively and will enable us to offer a differentiated service and experience to our enterprise customers. The solution will further enhance stc's position as a leading digital solutions company in Saudi Arabia and the Region." Khalid Hussain, Head of stc Customer Business Team at Nokia, said: "We are pleased to be partnering with stc to introduce this disruptive technology to its enterprise customers. With this project, stc is taking a leadership role in this fast-changing market. The Nuage Networks from Nokia SD-WAN solution will help stc enterprise customers gain the flexibility and functionality they need to drive their business into the cloud era."

Nokia Launches MX Boost for Private Wireless to Optimize Reliability and Performance for the Most Demanding Industry Use Cases

Nokia announced it is introducing MX Boost for private wireless which combines disparate radio technologies and spectrum to achieve the best possible reliability and performance for demanding Industry 4.0 use cases. Using MX Boost, organizations can aggregate radio technologies, such as Wi-Fi and 4.9G/LTE, as well as spectrum, to optimize throughput and improve determinism, which is the ability of the network to guarantee performance, even in challenging radio conditions for real-time applications. Adoption of private 4.9G/LTE and 5G is growing, allowing industries to gain new insights and capabilities from their operational data through reliable, secure low latency connectivity of assets. In parallel, legacy assets will continue to be in operation and enterprises need to retain existing wireless connectivity solutions like Wi-Fi. Industries also seek additional options in terms of spectrum use as they ramp-up asset connectivity and need more data capacity. Nokia has developed MX Boost for private wireless, a Nokia Bell Labs patented innovation, to allow enterprises to combine and use different radio technologies in the most effective way, while at the same time enhancing network performance in challenging radio conditions such as typical in ports, metal factories and mines. The MX Boost routing applications run on connected devices and at the Nokia MX Industrial Edge (MXIE) on-premises solution. Leveraging unique algorithms and real-time link testing, MX Boost automatically selects the strongest radio link and delivers the combined radio stream to either boost throughput in challenging radio conditions, or determinism. Nokia MX Boost allows industries to choose how they combine connectivity paths to meet their specific needs. Some examples include:



Enhancing private 4.9G/LTE data rate and capacity for operational technology (OT) applications by aggregating 4.9G/LTE and Wi-Fi, while keeping the reliability of 4.9G/LTE.

Improving reliability, using two radio technologies simultaneously such as two 4.9G/LTE bands, for very deterministic uses cases requiring very stable low latency

MX Boost functions at the IP layer, meaning it is very easy to aggregate very different connectivity technologies without complexity, such as combining terrestrial technologies with satellite connectivity, ultimately offering endless combination

possibilities. For industrial sites, MX boost also functions with brownfield non-Nokia Wi-Fi or other wireless technologies, allowing enterprises to combine it with private 4.9G/LTE for increased determinism and increased capacity. Leo Gergs, Senior Analyst, ABI Research, said: "While the appetite for enterprise connectivity – and private networks - is growing steadily, potential implementers are often overwhelmed by having to choose from an array of different technologies. The key to fostering enterprise connectivity, therefore, is to offer an easily deployable solution that takes away this complex decision and lets enterprises focus on what they can do best. Nokia MX Boost, presents the industry with the 1st instantiation of a simple technology that breaks the boundaries between Wi-Fi and 4G/LTE & 5G technologies. It means enterprises no longer need to worry about having to choose the right technology for their use cases, thanks to the ability of MX Boost to combine different connectivity technologies – including legacy Wi-Fi - into a single wireless connectivity system. With MX Boost offering 2 different modes and the ability to operate with any wireless technologies, it offers many opportunities to combine technologies and address heterogenous use-cases, while always keeping the determinism and deep coverage of private wireless. This gives enterprises the opportunity to tweak connectivity characteristics exactly to their requirements: For example, enterprise could leverage private wireless 4.9G/LTE as a coverage layer and combine it with Wi-Fi 6 or 5G with millimeter wave spectrum for additional capacity. Alternatively, they could combine two 4.9G/LTE bands for even more stable low latency and 0ms hand-over, if required." Stephan Litjens, Vice President, Nokia Enterprise Solutions, said: "As a leader in private wireless we want to deliver the most innovative solutions to meet the connectivity needs of all our customers. The capabilities of private 4.9G/LTE and 5G allow it to support demanding applications, and in many cases, deployments leveraging multiple layers and frequency bands. Nokia MX Boost can aggregate and integrate those layers to super-charge performance and reliability. It operates over any Wi-Fi network, as well as with the new Nokia DAC Wi-Fi, to allow companies the greatest choice in the way they support their digital transformation." As part of this new offering, the MX Boost routing functions will be made available as an application running on Nokia MX Industrial Edge and will launch new field routers as part of a new range of industrial devices that also support the new MX Boost capabilities. MX Boost is a proven technology that is used in the Nokia Train-to-Ground solution to meet the challenges of mission-critical urban and metro rail communications. The solution uses multipath connectivity to ensure reliable, seamless performance in challenging situations, such as when traveling at high speed, through tunnels, handing over between two service provider networks and at busy stations. Nokia will be exhibiting at Hannover Messe 30.5-2.6.2022 in Hall 5, Booth E48. Company executives will be on-hand to discuss Industry 4.0 transformation with industrial grade wireless connectivity solutions, built for factory operations. Nokia will also have industry solution experts available to demonstrate the Nokia MX Boost. To arrange an interview with a Nokia executive please contact martha.oliver_vargas@nokia.com.

Nokia and Taiwan Mobile Ink Energy-Efficient 5G Coverage Expansion Deal

Nokia has announced its selection by Taiwan Mobile (TWM) to enhance the latter's 5G coverage across Taiwan. In a press release detailing the development, the Finnish vendor said that under the deal it would provide its latest energy-efficient AirScale portfolio supporting TWM's commitment to reaching 100% renewable energy by 2040. Further, Nokia claimed the work it will undertake will also provide a smooth network evolution path following the completion of TWM's proposed merger with Taiwan Star. Nokia will provide equipment from its AirScale portfolio, including base stations and massive MIMO antennas to boost network performance and capacity. The deal also covers the introduction of 4G/5G dynamic spectrum sharing to maximize the advantages of TWM's spectrum assets, which include 700MHz and 2100MHz bands. Nokia will also help the operator to modernize its LTE infrastructure, as well as consolidate the network management and optimization under a centralised tool for a superior 4G/5G RAN network performance. Further, it will expand its existing 5G Standalone Core at TWM to enable the operator to provide advanced 5G applications, such as network slicing for enterprises and businesses and Edge Cloud deployments for low-latency services. The deployment will include Nokia AirFrame server hardware with Multi-access Edge Computing (MEC) capabilities, IMS Voice Core capacity expansion, and Voice over New Radio (VoNR).

Cable Bahamas Selects Nokia for XGS-PON FTTH Rollout

Finnish vendor Nokia has been selected by Cable Bahamas (REV) to deploy XGS-PON equipment for its new fibre-to-the-home (FTTH) network. The project aims to pass 99% of the homes in New Providence by 2026. Nokia will be the sole FTTH equipment vendor for the rollout, and will provide Cable Bahamas with its complete solutions portfolio. Stephen Curran, chief technical officer at the Cable Bahamas Group, stated: 'I am very happy to be working with Nokia to allow us to provide our customers with an upgraded user experience. At the end of this exercise we will boast the most advanced FTTH network in the entire region with XGS-PON technology.' New Providence – the Bahamas' most populous island – is understood to be home to around 80,000 residential properties and business locations.

Tech Mahindra Inaugurates Innovation and Technology Development Center in Oman

Tech Mahindra, a leading provider of digital transformation, consulting and business re-engineering services and solutions, inaugurated an Innovation and Technology Development Center, in Muscat, Sultanate of Oman, that will cater to the Telecom, Oil and Gas, BFSI (Banking, Financial Services, and Insurance), Energy & Utilities and Public Sector by leveraging Artificial Intelligence, Big Data & Analytics, Cloud and 5G technologies on Sunday, June 5. This is in line with Tech Mahindra's commitment to invest in upskilling and reskilling of the local Omani talent to take on projects in Oman and around the world. The inauguration ceremony was attended by H.E. Dr. Ali Al Shidhani, Undersecretary for Communications & Information Technology MTCIT, Mr. Amit Narang, Indian Ambassador to the Sultanate of Oman, Senior Oman government officials, along with Senior executives of key enterprises in Oman and the top management team of Tech Mahindra led by its MD & CEO Mr. CP Gurnani. H.E. Dr. Ali Al Shidhani, Undersecretary for Communications & Information Technology MTCIT, said, "Oman Vision 2040 prioritizes a future with a knowledge-based society where education and research play a vital role for the citizens. Being ahead of important developments in information technology is encapsulated in our vision statement, and this innovation and development center by Tech Mahindra is a step in that direction. Developments like these are milestones in achieving the success we envision of being a competitive nation and one of the top countries in Digital Economy in the region. It also supports our talent, upskilling to compete in the job market." CP Gurnani, MD & CEO, Tech Mahindra, said, "I believe the vision of Oman based on the pillars of "People and Society", "Economy and Development", and "Governance and Institutional Performance" will transform and enhance the country's economy. Tech Mahindra is pleased to play a part in this strategic narrative and support in building a resilient tomorrow for Oman, that thrives on growth & innovation, with a keen focus on empowering women. As a global organization, we are committed to honing talent across geographies, and our initiatives have been warmly embraced in Oman. This innovation and development center will grow Omani talent in the technology industry and will enable us to leverage it for markets globally." Ram Ramachandran, Senior Vice President & Head of Middle East and Africa at Tech Mahindra, said, "Across the world, the IT industry has been revolutionary — it has become an archetype of how economic liberalization combined with entrepreneurial spirit builds an industry that today contributes significantly to the GDP of any country. Tech Mahindra has a significant footprint in Oman and we have the confidence of the local industries which we have partnered with through the years. The newly inaugurated innovation and development center is one more significant development in our contribution to the country as we tap the huge young talent in the country." Tech Mahindra also inaugurated Maker's Lab (Center for R&D) at the center, which will have strategic focus on creating IPs, solutions & services that harness the power of technology to make continuous advancements that will enable digital transformation, smart enterprise solutions, cloud transformation, Big data & Analytics. Tech Mahindra believes in DigitALL philosophy for comprehensive Business Transformation. As part of NXT.NOWTM framework, which aims to enhance 'Human Centric Experience', Tech Mahindra focuses on investing in emerging technologies and solutions that enable digital transformation and meet the evolving needs of the customer.

Telecom Egypt Records 12% Revenue Increase in 1Q22

Telecom Egypt has posted a double digit revenue increase for the opening three months of 2022, with the company saying that growth had been 'mainly fueled by higher data revenue constituting 74% of top line growth, followed by higher cable and voice revenues'. In the three months ended 31 March 2022 it recorded a total turnover of EGP9.417 billion (USD506 million), representing a 12% increase from the EGP8.399 billion reported for Q1 2021. With regards to a breakdown of revenue, the lion's share – EGP5.001 billion, up from EGP4.191 billion – was attributable to 'Home & Consumer' operations. Strong growth was also recorded in the 'International Customers & Networks' unit, meanwhile, which saw revenues rise by almost 20% year-on-year to reach EGP797 million. EBITDA, meanwhile, reached EGP3.578 billion in 1Q22, up from EG3.235 billion in the corresponding period a year earlier. Net profit was, however, down 36% y-o-y at EGP1.366 billion, a drop that the company said was 'due to non-operational items'. According to Telecom Egypt, excluding such items including Vodafone Egypt's one-offs, provisions, impairments and FX impact, net profit was EGPY1.7 billion, broadly flat on an annualized basis. In terms of operational highlights, Telecom Egypt reported that its mobile subscription total had surpassed a notable milestone, topping ten million in the period under review to reach 10.162 million as of 31 March 2022, up from 8.519 million a year earlier. Fixed broadband subscriptions also remained on an upward trajectory, increasing to 8.295 million at the end of 1Q22, up 14.3% y-o-y, while fixed voice subscriptions rose to 11.174 million from 10.045 million. Commenting on the results, Adel Hamed, Telecom Egypt's Managing Director and CEO, said: 'I am very proud with Telecom Egypt's operational and financial performance during this quarter on all fronts despite encountering some challenges from global headwinds.'

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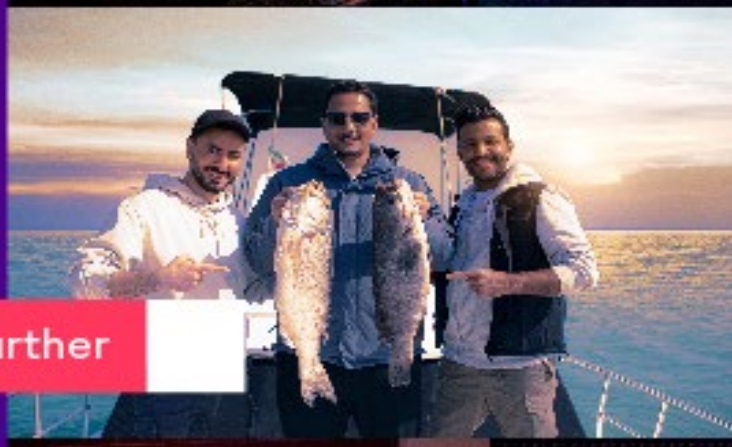

stc

ARTICLE

stc Kuwait Deploys Fully Converged Core Network - First Full-Scale Deployment by Any Operator

Eng. Fahad Al Ali
Chief Technology Officer - CTO
stc Kuwait

Kuwait Telecommunications Company – stc, a world-class digital leader providing innovative services and platforms to customers, enabling the digital transformation in Kuwait, announced the successful deployment of first fully 2G/3G/4G/5G NSA & 5G SA converged core "5GC" network in the region. All 2G/3G/4G/5G NSA & 5G SA services will be carried on the converged core network. stc has yet again solidified its position as the most technologically advanced operator in the region after being the first operator to launch 5G standalone network and announced readiness for Vo5G in the region as well one year ago. So far, only 3 operators from china in the whole world have successfully deployed a fully converged core network in their network and with this announcement, stc has become the first global operator to successfully deploy such a solution outside china.

> *All 2G/3G/4G/5G NSA & 5G SA services will be carried on the converged core network. stc has yet again solidified its position as the most technologically advanced operator in the region after being the first operator to launch 5G standalone network and announced readiness for Vo5G in the region as well one year ago.*

In order to transform the digital services in the country, deployment of converged core by stc is a major development, as it will enable new innovative capabilities to serve the consumers and enterprises in Kuwait.

In 5G era, different core networks for 5G SA, 5G NSA as well as legacy networks such as 4G & 3G create complex network structures for operators. A complex web of internetworking between different core networks may result in not full utilization of operators' capabilities in serving the customers. On the other hand, a fully converged core helps reduce inter-system communication between two generations of mobile networks. This means less number of handover are required which results into achieving significantly lower latency for end users and also improves the handover success rates thus ensuring an

uninterrupted service experience. Also, as a latest core technology converged core allows 2G, 3G, 4G & 5G micro services to share hardware resources resulting in making new innovative services more affordable for end customers.

Today's announcement of successful deployment of fully converged core network has opened new avenues and will bring new services to consumers and opportunities to enterprises to serve their customers in innovative ways. The converged core solution deployed by stc KW provides us with new capabilities to serve the customers looking towards a path of digital transformation. With this new deployment, stc can provide consumers with ultra-reliable high speed connectivity over 5G, offer new charging models as suitable and demanded by customers. For enterprises, stc will now be able to provide advanced slicing offers, which can provide priority differentiation based on customers' requirements.

For deploying the converged core, stc has chosen a solution, which is based on micro service architecture which ensures that the network is scalable and always ready to accommodate an ever growing number of users. The solution has built in infrastructure & link fault redundancies built into it making it ultra-reliable. stc's converged core network solution not only supports 5G SA & 5G NSA architectures but also 2G,3G & 4G networks making it capable to deliver growing digital transformation demands from customers while delivering an excellent user experience and reducing the time to market for new digital services. In addition to launching 5G one Core and Vo5G, stc has also enabled next generation of encryption of user identity on its network using Subscription Concealed Identifier (SUCI). Every user on mobile network has unique identity knowns as IMSI (International Mobile Subscriber Identity). Under previous generations, the identity is concealed with a temporary identified, which may be prone to malicious attacks. With SUCI, stc network will encrypt all user identification before it leaves the device making it much more secure from advanced cyber-attacks.

"Having launched first ever commercial end to end 5G SA network in MENA region last year and now becoming first to deploy first fully converged core network which supports secured Vo5G with latest releases of secured SIM/eSIM technology shows our relentless pursuit to offer cutting edge digital services to consumers and enterprises in Kuwait. I am confident that today's launch will serve as a major step towards enabling a digital Kuwait of future and towards realizing vision 2035" said, Eng. Fahad Abdul Rahman Al Ali, CTO, stc Kuwait.

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>
> ***Eng. Fahad Abdul Rahman Al Ali, CTO, stc Kuwait***

stc being the 1st operator in the region in adopting a fully converged core has shown its commitment towards development of telecommunications in the state of Kuwait & assisting the government in realizing the vision of a digitally transformed Kuwait.

China Mobile | International

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The complete suite of high-quality iConnect products and services, ranging from global Voice, SMS, Data, Mobile to IoT and professional services, is built on one of the world's largest and most technologically sophisticated networks. iConnect is your connect-all carrier solutions that empower you to strive for even greater success in the journey of global connectivity.

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CUSTOMER **VOICE** CARING **IOT** INNOVATION

iCONNECT

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REGIONAL NEWS

UAE Maintains Global Lead in Fiber to the Home Penetration

UAE is ranked number one for the highest Fiber to the Home (FTTH) penetration among all its counterparts, maintaining consistent leadership since 2016, according to the leading industry body FTTH Council. The council published its annual report that showcases the countries with the highest fiber optic network penetration globally. The report highlighted UAE as the number one country with its fiber network coverage surpassing Singapore, China, South Korea and Hongkong. The data from the report showcases 20 countries that have achieved penetration rates higher than 50 percent. The global top 5 ranking is led by UAE with 97 percent, followed by Singapore (95.8%), China (94.9%), South Korea (91.1%) and Hong Kong (86.2%). Etisalat UAE, the telecoms pillar of e&, has always led with its network as a backbone to its long-term strategy to enable and drive digital transformation. Today's announcement is a testament to the fact that it has maintained consistent leadership in FTTH penetration setting a benchmark in the global telecom industry. This achievement was only possible due to the continuous support and vision of the UAE leadership in the development and modernization of the infrastructure. Etisalat UAE has continuously invested in digital transformation, the mobile and fiber network. This has led to the launch of innovative services meeting the growing demand and changing requirements of Etisalat UAE's customers. Masood M. Sharif Mahmood, CEO, Etisalat UAE, said, "Our commitment to staying aligned with the UAE leadership's digitalization ambitions has empowered us to provide best-in-class innovative solutions, harness advanced technologies such as 5G, and maintain our cutting-edge telecom infrastructure offerings. "We are in the era of the 'connectivity renaissance' – the prime time to take advantage of the limitless possibilities ahead of us so that we can imagine, innovate and implement ideas that will drive smart connectivity and maximize value creation for our customers in all segments. The network forms a significant component of this digital transformation journey. Etisalat UAE has also continuously focused on investing in innovation and next-generation technologies and services to expand its infrastructure." In today's connected world, with the greater need for computing and connectivity capabilities, such an advanced network is required as it also enables the implementation of futuristic technologies like augmented reality, robotics and artificial intelligence. Consumers are able to experience high performance and capabilities required in advanced gaming, streaming, applications and entertainment with a high-speed network. For enterprises, digital transformation will play a pivotal role in enabling the support of advanced use cases, applications and technologies. This will be key to bring success and next level of development leading Etisalat UAE to play a greater role in digital lives of consumers and enterprises. This forms the backbone of a robust and one of the most advanced networks in the region and the world. Etisalat Group has changed its brand identity to e&, effective from 23 February 2022. Its strategy aims to accelerate growth through the creation of a resilient business model representing the Group's main business pillars. The Telecoms business currently continues to operate led by Etisalat UAE in e&'s home market and by existing subsidiaries for international operations, upholding the Group's rich telecoms heritage, bolstering the strong telecoms network and maximizing value for the Group's various customer segments. Ramping up the digital services for individual customers to elevate their digital-first lifestyle, e& life brings next-generation technologies through smart connectivity platforms in entertainment, retail and financial technology. To enable the digital transformation of governments, large-scale enterprises and corporates, e& enterprise focuses on maximizing value through its end-to-end solutions in cybersecurity, cloud, Internet of Things (IoT) and Artificial Intelligence (AI), as well as deploying mega projects. e& capital allows the Group to focus its efforts on driving new mergers and acquisitions while maximizing shareholder value and strengthening global presence.

With 41% Increase in 5G Towers, CITC Announced Full ICT Readiness to Serve Hajj Pilgrims

Saudi Arabia's digital regulator, the Communications & Information Technology Commission (CITC), has announced that communications and ICT infrastructure in Makkah and Medina are fully operational and running to the highest standards ahead of this year's Hajj and Umrah. With a million worshippers expected to make the pilgrimage this year, the Commission has done everything to ensure that digital infrastructure in and around Makkah and Medina are ready to connect pilgrims with millions of loved ones around the world. CITC has ensured the smooth functioning of more than 5,900 towers and more than 11,000 Wifi access points in the Two Holy Cities. It has also overseen a 41% increase in 5G towers to reach more than 2,600 5G towers. "The Kingdom's infrastructure readiness will not only help smooth the passage of fulfilling a lifelong dream," said Dr. Mohammed bin Saud Al-Tamimi, "it will significantly enhance their digital experience." With some of the fastest mobile download speeds on the planet (203 Mbit/s in Makkah and 223 Mbit/s in Madinah), this year's pilgrims will have an unprecedented experience. The first overseas worshippers to make the Hajj since the start of the COVID-19 pandemic, this year's worshippers will benefit from the fastest connections the Two Holy Sites have ever had. "With worshippers traveling to Saudi Arabia from every part of the planet, we are ensuring that this year's pilgrims have the most innovative and interactive Hajj experience in history," Governor Al-Tamimi said. "That's why the ability to seamlessly communicate this life-changing experience is so important."

Hajj Pilgrims Consumed 36,000 TB of Data, Equivalent to Watching 14.83 Million Hours of 1080p HD Video Clips

The governor of Saudi Arabia's digital regulator, the Communications and Information Technology Commission, has congratulated King Salman and Crown Prince Mohammed bin Salman on the conclusion of another successful Hajj season. Speaking on behalf of all CITC employees, Mohammed Al-Tamimi also extended his congratulations to the Minister of Communications and Information Technology and CITC Chairman, Abdullah bin Amer Al-Swaha, saying that his efforts were key to ensuring this year's pilgrims had the best internet and connectivity support and services available. "There is no way we could have achieved such a feat of communications without the robust cooperation of various levels of

government and the private sector," Al-Tamimi said. "Hundreds of the Kingdom's most dedicated individuals and experts spent months ensuring this would go off smoothly, and our high expectations have not been disappointed." CITC has ensured the smooth functioning of more than 5,900 towers and more than 11,000 Wi-Fi access points in the two holy cities. It also oversaw a 41 percent increase in the number of 5G towers, with the number rising to more than 2,600. With a large number of pilgrims taking part for the first time since the start of the COVID-19 pandemic, total voice calls reached more than 159 million for local and international connections, with a total success rate exceeding 99 percent, CITC said. During the Hajj season, pilgrims consumed 36,000 terrabytes via telecom networks in Makkah, the equivalent of streaming 14.83 million hours of 1080p HD video clips. The average daily consumption was 851.13 megabytes per user, more than three times the world's average of around 200 megabytes per user. CITC said that mobile internet download speeds reached 251.06 megabits per second, which is 44 percent higher than last year, while upload speeds reached 32.9 Mbit/s, 27 percent higher than last year in Makkah and the holy sites. "It's not merely the scores of dedicated IT professionals and government ministers that made this huge increase in communications possible," said the CITC chief. "It's the pilgrims themselves. I want to congratulate them, too, for making this historic journey. May they return safely to their loved ones after taking part in this life-changing event."

CITC Approves Salam's Plan to Sell All Fiber Assets

Riyadh-based Integrated Telecom Company (Salam) has revealed that it's been given the green light by Saudi Arabia's Communications and Information Technology Commission (CITC) to sell its fiber assets to Technical Links Services (TLS). The fiber-optic network will be sold to TLS on a three-phase implementation plan basis, with the process expected to extend until the end of 2024. In addition, Salam will lease parts of the fiber-optic network's infrastructure from TLS based on its needs.

UAE's Thuraya is After Saudi Satellite Communication Market

Thuraya, UAE's mobile satellite services company, is looking to seize new opportunities and expand its activities in the Saudi market. Thuraya has been operating in the Saudi market for more than 20 years and provides the Kingdom's military sectors with all services related to mobile satellite communications Thuraya's Chief Executive Officer (CEO), Sulaiman Al Ali, told Asharq Al-Awsat that the company wants to boost its partnership with the Saudi government and defense sectors. The current communications developments seek to provide services that include capabilities, information security, and equipment development, said Al Ali. He noted the importance of the Kingdom's orientation to localize the military sectors after years of experience during the past years. The CEO stated that the current generation is familiar with technology and capable of taking the next step, stressing that his company is working with its Saudi partners to localize specific areas to support local industries, especially since investors are interested in the local market. The company continues to look for new investment opportunities in the Kingdom and other countries, especially in communication services and solutions, according to Al Ali. He pointed out that the company is engaged in promising discussions with several Saudi institutions to achieve its goals. Al Ali said that the World Defense Show, recently held in Riyadh, constitutes an important platform that brings regional and international operators together to create significant opportunities for dialogue. Several new devices that serve the military and defense sectors are being developed, said Al Ali, noting that the company primarily focuses on helping government agencies and international relief organizations. He indicated that satellite communication devices are widely used, noting that they are also required in the commercial sector that suffers from poor communication networks. Defense institutions are always looking for reliable partners to obtain comprehensive solutions based on interoperability, said Al Ali, stressing that Thuraya provides safety, security, and flexibility. It can add a variety of solutions and applications that meet customer needs, including voice and data communications and push-to-talk (PTT), remote monitoring and disaster recovery, and border control. Thuraya expanded its current commercial activities regionally and globally and provided new services. It is preparing to launch top solutions, including next-generation satellite internet devices, said Al Ali, adding that it is cooperating with new distributors, such as Cobham, to provide satellite internet services in Libya, the Philippines, and Sudan. He touched on Thuraya's new PTT radio communications over the Internet, indicating that it will interest the Saudi market as it supports many in need sectors. Al Ali added that the service would achieve a fundamental transformation in the sector and enable users to extend their voice communications to wherever their equipment or teams are.

TDRA Signs MoU with University of Strathclyde

The Telecommunications & Digital Government Regulatory Authority (TDRA) and the Scottish University of Strathclyde have signed a memorandum of understanding, providing for joint cooperation, support and experience-sharing. The MoU provides for skills assessment and building practical cognitive abilities based on the trending future needs, followed by making recommendations that help TDRA achieve its goals and strategic objectives. TDRA and the University will collaborate in designing appropriate training solutions and devising development plans for the various job levels, provided that such solutions are to be practical, experimental and in line with global regulations and best practices. Commenting, Eng Mohammad Al-Zarooni, Deputy Director General of the Information & Digital Government Sector at TDRA, said: "As digital transformation accelerates, and radical technologies emerge, creating new features for an unprecedented world all around us, collaboration between government, private and academic sectors is vital. Today we are on the cusp of an era of which skills, techniques and tools will be different from what we have ever known. This collaboration with Strathclyde comes under the context of working together to explore prospects for cooperation in skills development and innovation promotion." He added: "TDRA's vision is reflected in its endeavor to make the UAE a world leader in the ICT sector by regulating the telecommunications sector and enabling digital transformation by relying on national competencies to apply best global standards and practices in supervising the sector and encouraging relevant innovation and investment. In achieving this vision, TDRA is keen to extend coordination and cooperation with key global institutions, with the aim of sharing experiences and knowledge, which positively impact the industry and service provision to the UAE community." The MoU stipulates the importance of strengthening cooperation between both sides to raise awareness within the UAE community through training courses, in-person seminars and webinars that equally combine the academic expertise of the university and the working practices of TDRA. It allows TDRA's employees to attend and benefit from the university's keynote lectures given regularly online. The university, represented by its professors and experts, is responsible for directing the employees to pursue the most sought-after topics in the labor market.

E-banking in Pakistan Continues Steady Growth

The e-banking sector in Pakistan kept on showing a steady growth trend in the third quarter of the current fiscal year, the State Bank of Pakistan (SBP) said. The Pakistani central bank's payment system review, covering January-March 2022, "presents an overall viewpoint of growing digital adoption in the country as SBP continues to promote robust and efficient payments ecosystem in the country," the SBP said in a statement. The SBP's report said that customers' inclination towards the use of e-banking continued to rise as shown in both volume and value of transactions. Total e-banking transactions witnessed a growth of 2.6 percent in volume and 6.5 percent in value on a quarter-on-quarter basis, the SBP said. The e-banking involves transactions conducted via electronic channels including real-time online branches, ATMs, mobile banking, Internet banking, call center banking, POS (point-of-sale), and e-commerce, according to the SBP.

Saudi Arabia Forges Ahead with Health Service Digital Transformation on Back of COVID-19 Pandemic

The coronavirus pandemic has inadvertently provided the springboard to spur on the digital transformation of Saudi Arabia's public healthcare sector. The strain placed on the Kingdom's health services by the COVID-19 outbreak highlighted the need for more robust apps, such as booking platforms for vaccinations and remote access to patient records. As a result, the Saudi Ministry of Health has been forging ahead with the introduction of multi-cloud solutions, built on VMware Cloud Foundation, to boost provision to the country's growing population of more than 35 million people. The Ministry can now offer secure, cloud-based services to a range of public healthcare providers including hospitals, clinics, and pharmacies, significantly boosting their efficiency, and enabling them to grow and innovate. Health officials have simplified the ministry's information technology infrastructure by deploying VMware Cloud Foundation as the unifying platform for its cloud environment, spreading workloads across the clouds of service providers including STC and Mobily. Ministry Information Security General Director, Khalid Al-Medbel, said: "The Ministry of Health seeks to achieve the highest levels of excellence in healthcare in line with the aims of Saudi Vision 2030. This means having the best multi-cloud foundation to optimize operations, raise efficiency, and drive innovation across the country's healthcare providers. "Thanks to our digital transformation with VMware, all public healthcare providers will have access to best-in-class cloud services that will improve operations and boost healthcare provision for citizens and residents." By utilizing VMware, the Ministry has gained access to a complete set of highly secure software-defined services for compute, storage, network, security, Kubernetes, and cloud management. Once fully deployed, Saudi Arabia's public healthcare system will benefit from the resiliency, agility, and efficiency offered by the shared cloud platform. Each healthcare facility will have access to virtual infrastructure and as-a-service apps and will also be able to design and deploy apps from the cloud, giving them the freedom to innovate and provide world-class services to patients. Saif Mashat, Saudi Arabia country director for VMware, said: "The Ministry of Health's transformation with VMware shows the power of multi-cloud to re-invent healthcare with the highly efficient use of resources, and unleash new levels of agility and innovation. "We look forward to working in partnership with the ministry as it continues to move workloads to the new environment and offer more cloud-enabled services to healthcare providers across the country." Over the coming months, ministry officials plan to deploy more VMware solutions — including for additional cybersecurity and secure distributed working — to bring additional app development capabilities to the Kingdom's public healthcare providers.

Bahrain iGA Discusses $4.5m Procurement Requests at Key Meeting

Bahrain's Information & eGovernment Authority (iGA) has announced that procurement requests by government entities valued at BD1.7 million ($4.5 million) were discussed at the second meeting of the Information and Communication Technology Governance Committee (ICTGC) held via videoconference. The meeting, chaired by iGA Chief Executive Mohammed Ali Al Qaed, covered a wide range of topics, including several strategic government projects and procurement requests. It also included a discussion on ways to make taxi services more accessible to citizens, residents and visitors and help improve customer satisfaction. This will contribute to stronger transportation and tourism services nationwide, the members said. The meeting was attended by ICTGC Vice Chairman and iGA Deputy CE of Electronic Transformation Dr Zakareya Ahmed AlKhajah; Ministry of Education Undersecretary for Policies, Strategies and Performance, Nawal Al Khater; Deputy CE, Operations and Governance Dr. Khalid Ahmed Almutawa; Ministry of Finance and National Economy Director of Financial Systems Development, Abdullah Ahmed Abdullah Dhaif; Director of Services and Information Technology at the Prime Minister's Office, Ahmed Al Qayem; University of Bahrain Dean of the College of Information Technology, Dr. Hessa Jassim Al Junaid; and Information Technology Project Management Consultant, Ali AlSoufi. The committee later reviewed an Information Management System (IMS) project for the Ministry of Works, Municipalities Affairs & Urban Planning, which will streamline the updating and management of data at testing laboratories and improve their output, in line with the requirements of the testing and calibration laboratories (ISO 17025). In addition, the Committee covered other projects, policies, strategies, and their performance. It also reviewed implemented decisions from previous meetings.

TDRA Strengthens Its Virtual Academy with Three New Learning Paths

The Telecommunications & Digital Government Regulatory Authority (TDRA) announced the launch of three new training pathways in its virtual academy, as part of TDRA's plan for 2022. These pathways or tracks are centered on the qualification and training of government entity employees to strengthen their capacity in digital service delivery and working under the digital transformation system, in addition to leveraging digital skills among the various segments of UAE's community in the sphere of digital transformation. The new tracks include the Digital Government Track, which comes in collaboration with the Prime Minister's Office. It consists of a number of training programs, such as the Basic Digital Skills Program, the Digital Enablers Program and the Digital Service Designer Program. The Digital Government Track aims to increase the adoption of digital enablers through smart integration of technology, digital processes, and training modules. The track is also features the Digital Enablers Program for capacity building and honing the skills necessary for digital transformation. Furthermore, the tracks comprise the Emerging Technologies Track and the Digital Skills Track, which are made up of a variety of programs spanning short, flexible 1-1 workshops and intensive virtual camps for school students and fresh graduates of the UAE who are poised to work in various sectors, especially the private sector. Commenting on this initiative, H.E. Eng. Mohammad Ibrahim al-Zarooni, Deputy Director General of the Information & Digital Government Sector, said: "The TDRA Virtual Academy plays an active role in spreading a culture of digital transformation and building competencies to deal with today's tools and concepts, in preparation for the future. The Academy is a manifestation of TDRA's interest in social responsibility, as well as of UAE's interest in the human and global dimension through the establishment of the Center of Digital Innovation in cooperation with the ITU. We believe that the rapid pace of digital transformations requires staying ahead to acquire skills and knowledge that enable different segments of society to adapt and develop themselves." He added: "We in the UAE are moving at an accelerated pace in the context of strengthening the foundations of a holistic digital life that promotes the well-being of everyone in the UAE. Hence our interest in boosting the performance of all sectors, as reflected in the private sector engagement in the digital government enablers training program. This program comes under TDRA's responsibility to organize and empower digital transformation in the UAE, as directed by the wise leadership and the country's strategies in this regard." The new training plan launches the Digital Enablers Training Program, which aims to build the skills of government and private sector employees on the enablers of digital transformation, strengthen needed competencies in this area, provide digital services that meet the needs of customers, and promote a holistic digital life in the UAE. The Digital Enablers Training Program targets government and private sector employees, ranging from beginner to advanced, to reach a deep understanding of digital enablers and ways to use the same in reinforcing the proactive approach in delivering services that go beyond customers' expectations in a secure, reliable digital environment. The program will cover several digital enablers, including UAE Pass, Digital Vault, APIs Marketplace, Government Service Bus, FedNet, UX Lab, Digital Services Designer Program, DigitalTransformation Assessment, NCRM, Unified Digital Platform (UDP), and the Digital Government Maturity Model. Each digital enabler's training program contains interactive and detailed explanations about the enabler, along with its different use case scenarios in the systems and services of the public and private sectors. The program is available over the TDRA Virtual Academy, where federal entities and selected partners can register via the Academy's website prior to their joining the program. This program is part of the TDRA Virtual Academy's strategy, which aims to promote the adoption of digital technologies to accelerate digital transformation in the UAE, train employees to be able to develop and provide digital services, and create an ecosystem that induces citizens to use digital services. The strategy also aims to create effective partnerships to assess digital capabilities of the UAE and enhance its reputation in digital transformation and digital knowledge. This program is in line with the TDRA-adopted digital transformation action plan, which includes 6 priority areas, each with a number of initiatives that all serve the strategic objective of achieving a 100% digital transformation. The priority areas are namely: provide a unified digital platform and common digital enablers; provide a world-class digital infrastructure; enable simple and customer-centric integrated digital services; leverage digital capabilities and skills; ensure readiness of legislation for a smooth and comprehensive digital transformation, and increase efficiency of government action. The TDRA Virtual Academy is one of the digital enablers contained in the comprehensive digital transformation roadmap, and has contributed, over the past years, to the training of more than 300,000 persons from 50 countries. Digital Enablers are key digital government tools developed to actualize a comprehensive digital transformation in the UAE, including but not limited to the UAE Pass, Digital Vault and the UAE API Marketplace.

NAVYA Signs MoU with Ministry of Transport and Telecommunication Bahrain

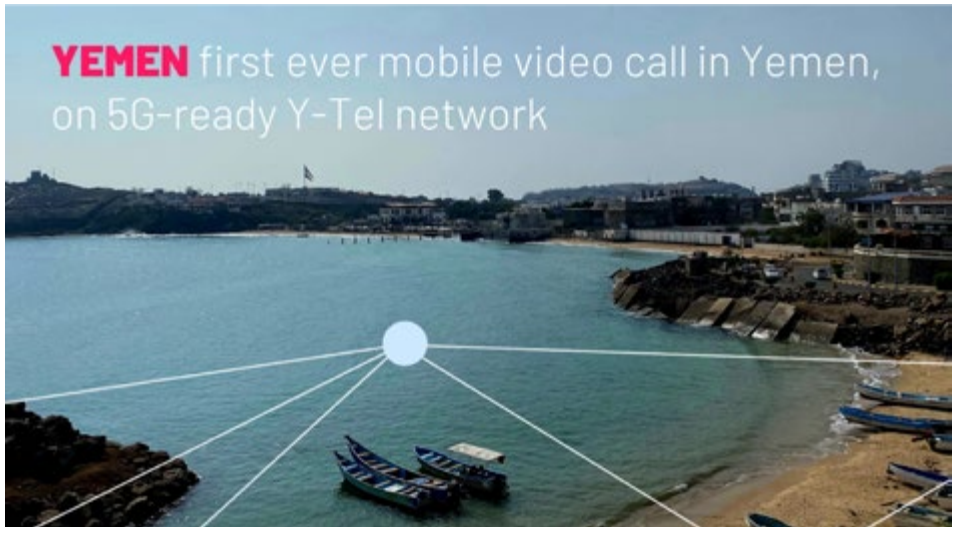
NAVYA, an autonomous mobility systems leader, has signed on the 23/06/2022, at the Bahraini Ministry of Transport and Telecommunications in Manama, an agreement with the Ministry of Transport and Telecommunication of the Kingdom of Bahrain, to support the implementation of autonomous vehicles in Bahrain. Bahrain's Ministry of Transportation and Telecommunications (MTT) is the government body responsible for the development and regulation of the Kingdom's transportation and telecommunications infrastructure and systems. The MTT covers development for Land Transport, but also for Civil aviation affairs, along with Ports and Maritime Affairs. MTT responsibility is to enhance and regulate affairs in these areas, propelling the Kingdom through leading projects such as the Bahrain Metro Project, or the Bahrain Airport Modernization Program. The agreement was signed by Ms. Sophie Desormière, CEO of Navya, and Nada Yousif Deen, Assistant Undersecretary for Land Transportation, under the supervision of H.E. Mohammed bin Thamer Al-Kaabi – Bahrain Minister of Transportation and Telecommunications. The agreement between NAVYA and the MTT has for goal to help the Ministry to diversify the modes of public transport in the country, by facilitating the implementation of Autonomous vehicles for the transportation of people, in order to enhance Bahrain's economic position and regional standing. Navya will support the MTT by sharing its experience, and best practices used on projects conducted worldwide, toward implementation of regulation and policies for Autonomous vehicles. Moreover, Navya will support on the feasibility study of use cases identified through the Kingdom, focusing mostly on smart city use cases, airports, industrial sites and campuses. Navya will provide value-added analyses and support, suggesting plans for implementation, to facilitate the breakthrough of Autonomous and electric vehicles in the Kingdom. NAVYA's share of the autonomous mobility market for people stands at 75% in the GCC countries, including 6 shuttles in operation in the Kingdom of Saudi Arabia, and 6 shuttles in the UAE. The current discussions and agreement in the Kingdom of Bahrain will strongly contribute to the company's region leadership position, and global leadership with more than 200 shuttles in operation across the world.

Saudi Arabia, Greece Eye Fiber Optic Data Cable to Link Europe with Asia

Greece and Saudi Arabia agreed on the main terms to set up a joint venture to lay a fiber optic data cable that will link Europe with Asia, Greek sources said recently. The "East to Med data Corridor", an undersea and land data cable, will be developed by MENA HUB, owned by Saudi Arabia's STC and Greek telecoms and satellite applications company TTSA. Greece's power utility Public Power Company (PPC) and Cyprus' telecoms operator CYTA, will also hold a stake in the project, pending final corporate approvals, a Greek diplomat said, speaking on condition of anonymity. The final closing of the deal is expected by July, for the project to launch in autumn and be completed by the end of 2025, the diplomat said. Another person close to the deal said the cable, which will connect users from Italy to Singapore, will cost about 800 million euros ($857.68 million). Greece's conservative government has made digital transformation a priority since taking office in 2019, a year after Greece exited the biggest financial bailout in history. A big part of about 30 billion euros in grants and cheap loans allocated to Greece from European Union's post-pandemic Recovery Fund will be spent on 5G and fiber optic infrastructure.

Y-Tel Hails Yemen Mobile Data Milestone

Yemen operator Y-Tel completed what it claimed was the country's first mobile video call, employing a new 4G network to deliver what it branded a major technical milestone and departure from its legacy 2G infrastructure. In a statement, Y-Tel explained it previously operated a 2G network for voice and SMS only, but its network suffered from patchy coverage and significant instability. The Yemeni government granted 4G telecoms licences to the company in line with reconstruction projects across the Middle Eastern country following a civil war. Y-Tel stated the video call marks the commencement of operating a network which will deliver stable voice services along with mobile data capabilities. The operator plans to debut the 4G service in the city of Aden before a phased national deployment over the remainder of 2022 and into 2023. It claims its new network is also "5G-ready," although 5G licenses have not yet been awarded. According to GSMA Intelligence the operator is the smallest player in a four-carrier market. Market leader Yemen Mobile has 6.9 million connections compared to Y-Tel's 3.1 million. The Y-Tel 4G network is the culmination of an eight-month long network transformation project overseen by system integration and consultancy company Digis Squared. Digis Squared COO Ahmed Zain said "the connectivity we are delivering will truly transform lives and improve the functioning of society".



Pakistan e-Commerce Startup Raises Record US$37 Million Series A

Pakistan's Dastgyr Technologies Pvt., which aims to create an e-commerce platform similar to Alibaba Group Holding Ltd. for emerging markets, raised $37 million in the country's largest-ever Series A funding. The venture arm of telecommunications operator Veon Ltd. led the fundraising by contributing about 40% of the investment. The Dutch-domiciled giant serves more than 217 million customers in nine countries and is the largest mobile phone service provider in Pakistan. Dastgyr's funding is a bright spot for the South Asian nation that has suffered from the global tech downturn after a breakout year in 2021. Uber Technologies Inc.'s Careem Inc. unit has suspended food deliveries in the country, Dubai-based Swvl Holdings has paused operations and Airlift Technologies Pvt. has fired a third of its workforce. "Pakistan's startup ecosystem is at a critical juncture and only startups focused on addressing key challenges and adopting local solutions will survive and thrive," said Aamir Ibrahim, chief executive officer at Jazz, Veon's local unit. Pakistan is mostly a cash-based economy but startups are looking to change that. Dastgyr, which means "helper," is a one-stop platform that connects retailers such as grocery stores with multiple suppliers such as Nestle SA and Reckitt Benckiser Group Plc. Most traditional stores currently meet 100 suppliers a week or physically browse different markets to stack its shelves. The online marketplace that started less than two years ago has been used by about 100,000 retailers in the five cities it operates. It seeks to keep costs low by connecting buyers and sellers over a digital platform, rather than buying and storing everything in physical warehouses. It plans to expand into 15 new markets in Pakistan and expand into a new country in 2022. The company continues "to work relentlessly toward our vision of building an Alibaba for emerging markets worldwide," said Zohaib Ali, co-founder of Dastgyr. The round also included Zinal Growth Fund, DEG, Khwarizmi Ventures, Oman Technology Fund, Cedar Mundi Ventures, Reflect Ventures, Century Oak Capital, Haitou Global, GoingVC, Astir Ventures, K3 Ventures, and Chandaria Capital. Existing investors SOSV, Edgebrook Partners, and EquiTie also participated. Dastgyr has started a Buy Now Pay Later offering and plans to introduce lending products for its sellers as well. It aims to become a unicorn in the next few years, Muhammad Owais, another co-founder, said in an interview. While the company started by catering to grocery stores, it's now venturing into new business-to-business categories, including cement, steel and other building materials. It is also looking at electronics, pharmaceuticals and other retail sectors, said Owais. The funding marks another step in Veon's evolution beyond traditional telecommunications. It has also applied for a digital banking license in Pakistan. "As part of Veon's transformation into a digital operator that delivers a growing range of services to our customers we are investing in leading digital companies like Dastgyr in the countries where we operate," said Mohammad Khairil Abdullah, CEO at Veon Ventures. "These investments are the building blocks of the digital ecosystem that will enable us to deliver on our strategy."

Over 46 Million Mobile Phones Assembled in 11 Months in Pakistan

Chairman, Engineering Development Board (EBD) Almas Hyder disclosed that a record number of 46 million smart and feature mobile phones were assembled in Pakistan in 11 month of current fiscal year. He said during the period under review, 20 millions smart mobile phones were assembled of which 99 percent so far sold in markets while 26 million feature mobile phones were pieced together of which 97 percent were purchased, said a press release. He said mobile phone parts valued $1.9b were imported to Pakistan by the assemblers. He said a total of 31 local and foreign mobile phone companies were awarded licenses of which 21 are operational while remaining are in process of setting up plants for production including Nokia. Almas said only one foreign company imported 3.8 million feature phones during this period which is also now going to establish plant in Pakistan. Almas Hyder said the best quality locally assembled smart and feature mobile phones equipped with ultra modern technology has restored the confidence of buyers in Pakistan which he added is much cheaper and most economical than foreign assembled mobiles. He said the moments mobile phones are assembled and immediately absorbed in the market which speaks of good governance and transparent policy being pursued by the EDB for luring local and foreign investment in Pakistan. He said Pakistan engineering industry has a large potential to grow and contribute a significant role towards national development for robust economic activities. He said he is fully committed to strengthen engineering base by attracting foreign direct investment in this sector. He said we have one of the best liberal investment regimes in the region coupled with plenty of natural resources and manpower. The EDB is endeavoring to harmonize and align all standards to have a better and favorable business environment for all businesses in Pakistan especially foreign investors. The EDB is also making all out efforts to facilitate investors to materialize their commitments into reality with a focus to simplify the procedural hassle to maximum extent through various initiatives, he concluded.

Pakistan's IT Exports Likely to Surpass US$3 Billion This Year

Pakistan's Information Technology exports are expected to surpass $3 billion target during the current financial year due to the congenial investment atmosphere provided by the government. "In the first nine months, ICT exports' remittances, including Telecommunication, Computer and Information Services for the period July 2021 to March 2022 have surged to US$ 1.948 billion at a growth rate of 29.26 % in comparison to the US $ 1.507 billion during the same period of FY 2020-21," said an official of the ministry of IT and Telecom. In March 2022, he said the ICT export remittances were the US $259 million at a growth rate of 23.92% as compared to US$ 209 million reported for the month of March 2021. The official stated further that the net exports for the period July 2021 to March 2022 during FY2021-22 are US$ 1.472 billion, which was 75.56% of US$ 1.948 billion in exports. Last year, he said that for the same period the net exports were US$ 1.126 billion, which was 74.72% of US$ 1.507 billion in exports. To a question he said, the investments of Pakistani start-ups grew by almost five times as compared to 2020 and MOITT through Ignite has been providing both local and international networking platforms to the country's start-ups to pitch their business ideas and products to potential customers and investors. National Incubation Centers (NIC) in Islamabad, Lahore, Peshawar, Karachi and Quetta have not only facilitated many youngsters to work and build on ideas which promote and encourage the investment infrastructure in the country but also towards an accelerated economy. These National Incubation Centers were the platform and Ministry was the facilitator. "The newly established incubation centres of Hyderabad and Faisalabad would help people to expand and tap into the potential of Sindh and Punjab, we wish to provide the youth of a forum to bring your ideas into reality" he added.

Bahrain Honored at ITU WSIS Forum 2022 for Digital Policies

Bahrain's Information & eGovernment Authority (iGA) has been honored for its Digital Policies project at the World Summit on the Information Society (WSIS) Forum 2022. Held by the International Telecommunications Union (ITU) in Geneva and sustainability as one of its objectives, the event is the largest annual gathering of Information and Communication Technology (ICT) community members. iGA Chief Executive, Mohammed Ali Al Qaed congratulated His Majesty King Hamad bin Isa Al Khalifa and His Royal Highness Prince Salman bin Hamad Al Khalifa, the Crown Prince and Prime Minister, on this recognition for Bahrain, which highlighted the Digital Policies project as a pioneering initiative at the Forum. He praised HRH the Crown Prince and Prime Minister's vision and directives towards advancing digital transformation and building a digital culture and society. The iGA was tasked with drafting the policies as per directives of the Supreme Committee for Information and Communications Technology (SCICT) and the Cabinet's approval. The launch of the policies affirmed the kingdom's digital readiness and ability to keep pace with technological developments. Al Qaed said that this global recognition, which adds to the iGA's growing list of accomplishments, was made possible thanks to the support of Minister of Interior, Lt Gen Shaikh Rashid bin Abdulla Al Khalifa, who helped the authority implement government directives and draft the policies in record time. He thanked the participating committees and Bahraini talents for their role in helping the kingdom make this achievement. The Digital Policies include a set of procedures that regulate digital transformation at various government entities, establish organizational foundations for providing eServices, and support creativity in digital fields. The policies where about Digital-First Policy, which reaffirms the kingdom's commitment to providing new eServices while digitizing traditional ones. It showcased the Digital Government as a right policy, which stipulates that government entities which provide services to the public must adopt digital solutions and offer eServices to beneficiaries, and the Once Only Data Policy, which eliminates the need to present additional documents when conducting transactions in cases were beneficiaries' data is already available at government organizations and can be accessed through biometric fingerprinting. Al Qaed participated in a number of sessions at the Forum, which covered topics such as ICT in entertainment, and flexibility in cooperating with the WSIS to advance the United Nations (UN) Sustainable Development Goals (SDGs). In parallel he also held a meeting with ITU Secretary-General, Houlin Zhao to discuss opportunities for cooperation and learn about the latest developments in ICT. The iGA had won several accolades at the local, regional, and international levels, including more than 20 for its IT projects and initiatives, over 13 regional awards and 11 local ones. ITU, the United Nations Educational, Scientific and Cultural Organization (Unesco), the UN Development Program, and the United Nations Conference on Trade and Development (Unctad) co-organized the Forum. Al Qaed held a number of meetings in parallel to the forum with ministers, senior officials, representatives of international organizations such as the UN Department of Economic and Social Affairs (Undesa), and experts. ITU, which held the WSIS Forum 2021 via videoconference, honored the winning nations for their projects in 2021 and 2022. The summit enhances the exchange of information and best practices and helps forge partnerships between stakeholders with the aim of achieving the SDGs.

Iran's MCI Expands 5G to Kish Island

State-owned Mobile Communication Company of Iran (MCI) has expanded its 5G coverage with a launch on the island of Kish, off the coast of southern Iran. A report from Ebinews says the launch coincided with the KITEX 2022 International Exhibition which has been taking place this week on the island. MCI first introduced 5G services in Tehran in March 2021.

Bahrain 'Ready to Compete Globally in e-Commerce Sector'

Bahrain is ready to compete regionally and globally in the field of e-commerce, said Sadiq Abdul Rasool, Chief Digital Officer of Bahrain's leading E-commerce platform Homiez.me. According to Rasool, this is dependent on several factors, including the availability of a fast, reliable, and widespread internet service, the orientation of more citizens and residents for digital shopping, the availability of banking services and digital financial transfer services, and the presence of national competencies capable of creating and developing more stores and digital platforms.During his participation at the recently concluded Seamless Middle East 2022 in Dubai, Abdul Rasool pointed out that this development witnessed by Bahrain in the field of e-commerce is part of the development of the GCC states in this field. "Individual e-commerce experiences in the GCC states are now similar to those in major developed countries in terms of infrastructure, logistical network, advanced FinTech, turnout, and other elements, as the difference in the e-commerce index between the six Gulf countries and the first six countries globally, decreases to less than 17% in 2021, from more than 35% before 2019," he said. Rasool explained that the habits of Bahraini consumers differed as a result of the Corona pandemic and the orientation of digital solutions, those transformations that were imposed on many large markets and brands that quickly turned into digital solutions, the most notable of which was the significant increase in the number of applications for stores and stores, and e-commerce platforms that serve as a mediator between merchants and consumers. "Many consumers today interact with brands in novel ways. Today's Bahraini consumer is more interested in value than in brands. Every Bahraini household now has access to e-commerce. Bahrainis today value speed, performance, security, and the ease with which they may find consumer goods. It formerly concentrated on intangible values such as appearance and brand personality," Rasool said. In his speech during the conference Abdul Rasool addressed more technical topics, such as meeting user needs in the shadow of technology and the basic engines of the market, even in the retail and distribution sectors, emphasizing that the digital experience today is very different, and it has its own identity that affects consumer feelings and desires. He stated that the "Homiez" platform seeks to support national efforts aimed at revitalizing markets and commercial movement in Bahrain, as well as encouraging more Bahraini business owners and merchants to take advantage of the benefits of this type of shopping, in addition to providing consumers, citizens, and residents with a variety of options in one place. Abdul Rasool pointed out that the "Homiez" platform, which was launched in Bahrain in 2018, is now providing more than 50,000 products from 400 Bahraini vendors and 1,000 brands, noting that this expansion was based on many factors, including the pre-emptive vision of the future of e-commerce and innovation.

Lebanon's Struggling Cellcos: Mobile Tariff Increase 'Urgent and Imperative'

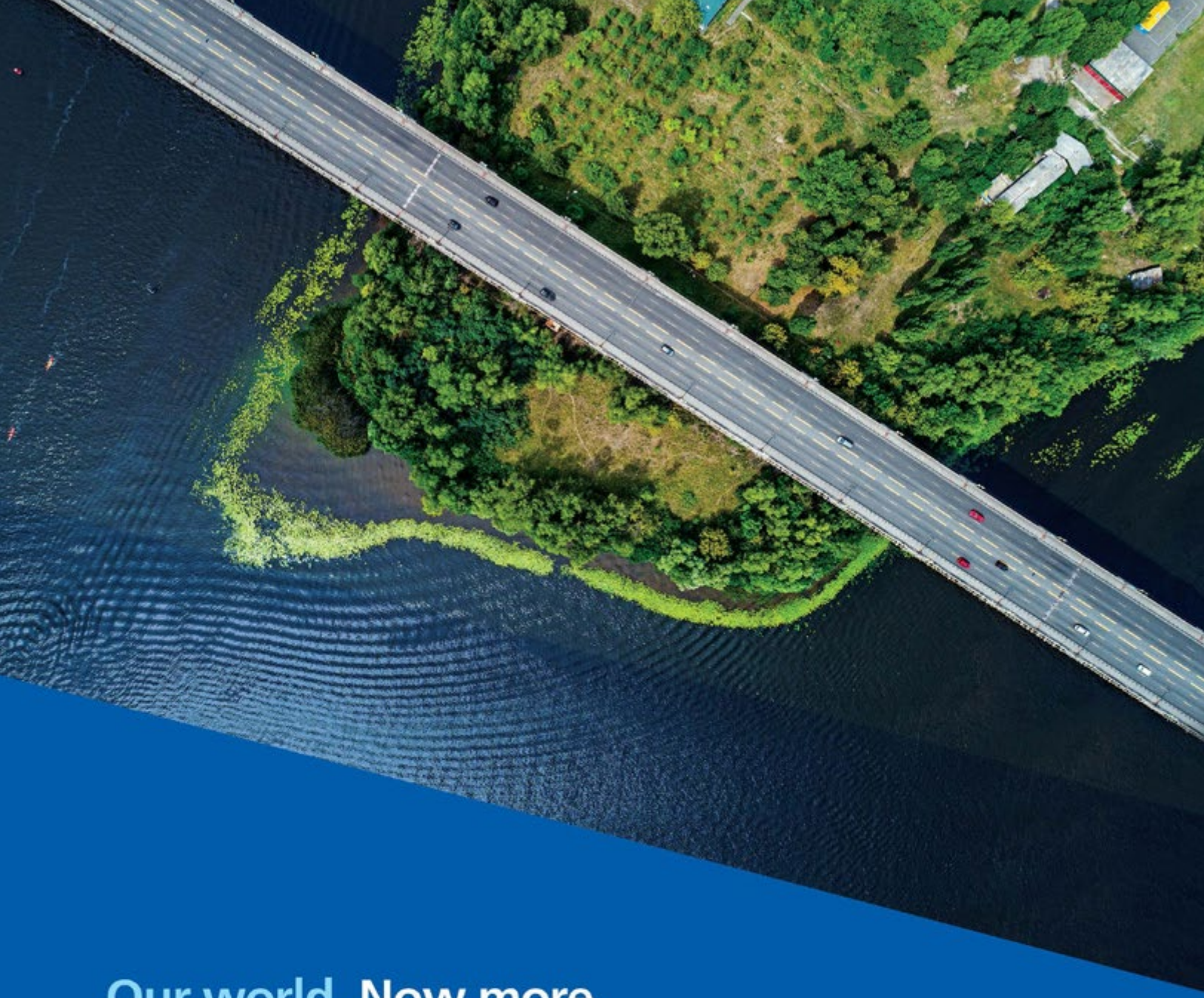
Lebanon's two state-owned mobile network operators Touch and Alfa have issued a joint statement arguing for an urgent increase in mobile service tariffs to be implemented via government decree. The cellcos stated that 'the adoption of the decree to amend the prices of mobile telecommunications has become an urgent and imperative need to ensure the continuity of the sector, otherwise the future of the two companies and the sector in general will be in danger, which will also be reflected in the future of all public and private sectors, including hospitalization and banks, factories, hotels and various companies, as they depend in their operating systems on the telecommunications sector.' According to the two companies' combined figures, their annual income in dollar terms 'declined from USD1.4 billion in 2018 to only USD75 million currently, as per the black market exchange rate' due to the economic crisis afflicting Lebanon since 2019. Touch and Alfa point out that although they collectively reduced annual expenses from USD560 million in 2018 to approximately USD255 million, this figure in addition to USD40 million annual suppliers' dues i.e. totaling USD295 million, represents roughly four times their current yearly income, hence the requirement to adopt an amendment decree to alter mobile tariffs 'as soon as possible, to curb this decline in revenues and be able to maintain the viability of the mobile telecommunications sector'.

Minister Highlights Morocco's Public Service Digitization Strategy in IMF-WB Meetings

Minister of Digital Transition and Administrative Reform Ghita Mezzour highlighted Morocco's public service digitization strategy, which focuses on inclusion and trust between citizens and the administration. Speaking at a panel held as part of meetings between the International Monetary Fund (IMF) and the World Bank (WB), Mezzour said that "Morocco's New Development Model advocates digitization for all public services." This digitization will allow citizens "to access [public services] in a simple and transparent way without having to physically visit administration offices," she explained at this virtual event on digital revolution. The Moroccan minister further highlighted the major role of digital transformation in the socio-economic development of the Kingdom, in accordance with the enlightened vision of HM King Mohammed VI. She added that her department works closely with various administrations to accompany them in the development of their digital vision, simplify their procedures and achieve a digital transition that places the citizen at the center of its action. Mezzour also highlighted the progress of the Kingdom in terms of infrastructure of information technology and communication (ICT), indicating that Morocco is in the Top 3 of African countries with the best ICT infrastructure. The event, which was attended by the Spanish Secretary of State for Digitalization and Artificial Intelligence, Carme Artigas Brugal, and the Minister of Education and Science of Mongolia, Enkh-Amgalan Luvsantseren, focused on the contribution of digital technologies to growth dynamics, productivity, inclusion and resilience. According to the World Bank, developing economies have adopted innovative digital solutions that enable economic transformation and put them on a path to green, resilient, and inclusive growth. Private and public investments in digital solutions bring essential services to the poorest, create jobs, strengthen small and medium-sized enterprises, facilitate trade and services, and build resilience to shocks. The IMF-World Bank Spring Meetings bring together finance and development ministers, central bankers, private sector leaders, civil society organizations, and academic experts in the U.S. capital April 18-24. Discussions will focus on global issues such as the world economic situation, poverty reduction, economic development and aid effectiveness.

Bhutan Confirms Import of 10Gbps Bandwidth from Bangladesh

Bhutan has confirmed the import of 10 Gbps (Gigabits per second) of internet bandwidth from Bangladesh. "The discussion has been going on for the last few years. Today, Bhutan has accepted our proposal; a formal process will begin soon," Posts and Telecommunications Minister Mustafa Jabbar told The Financial Express. Talks are on to export bandwidth to a number of countries, including Malaysia, said the Minister. Bhutanese media earlier reported that a technical team had carried out a survey on the economic feasibility of importing internet bandwidth. The team has identified an economically feasible route to import the bandwidth - starting from Bangladesh's Akhaura, the optical fiber cable will enter Bhutan's Samdrup Jongkhar through Guwahati in India. In this process, Bangladesh's job is to bring the cable up to Akhaura - the rest is Bhutan's responsibility to take the bandwidth to their country, added Mr. Jabbar. About the price, Managing Director (MD) of Bangladesh Submarine Cable Company Ltd, AKM Habibur Rahman, said his company had offered a "friendly price" to Bhutan. However, he refused to disclose the price for now. Currently, Bhutan is importing bandwidth from India. As India is charging too high a price, Bhutan has turned to Bangladesh. India also has taken 10 Gbps of bandwidth for the Northeastern state of Tripura from Bangladesh through the Akhaura-Agartala point. India has decided to double the import of the 10 Gbps internet bandwidth from Bangladesh to boost internet connectivity in its north-eastern states. Earlier, Bangladesh Submarine Cable Company started to export 10 Gbps of bandwidth to Tripura on February 08, 2016, under a four-year contract. Bangladesh used to earn around Tk100 million per year by exporting bandwidth to India. However, India discontinued the import in February 2020. Later, in November last year, Bangladesh resumed the export of internet bandwidth to Tripura. At present, Bangladesh has a total capacity to provide 3,345.65 Gbps of bandwidth whereas the domestic demand is 2,496.48 Gbps. Bangladesh would be able to export bandwidth despite increasing demand at home as Bangladesh is going to launch a third submarine cable with more than 13,000 Gbps capacity.



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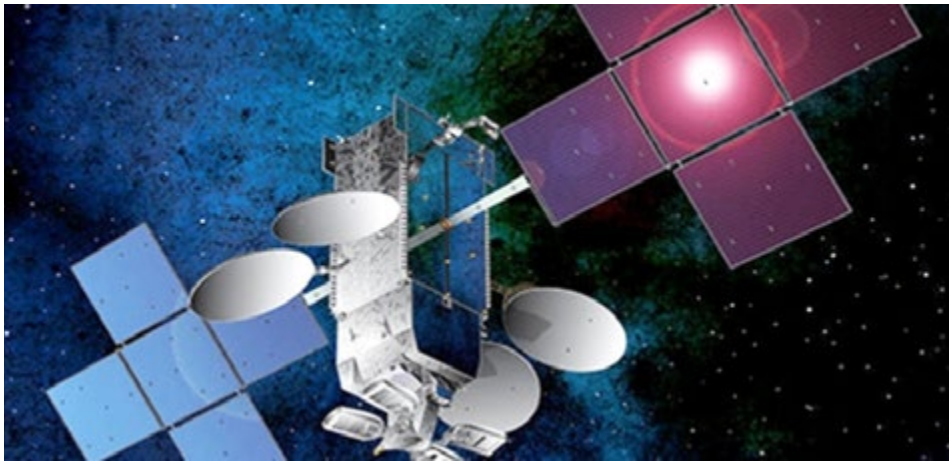
SATELLITE NEWS

UAE-Made MBZ-SAT to be Launched in Late 2023

Salem Humaid Al Marri, Director-General of Mohammed Bin Rashid Space Centre (MBRSC), said the center is drafting strategic plans, in line with the visions of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai, and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, aimed at establishing a knowledge-based economy in the UAE. In a statement to the Emirates News Agency (WAM), Al Marri stressed that this vision is helping advance the national space and technological innovation sectors, noting that a specialist team was sent to South Korea 17 years ago, which led to the establishment of the current Emirati space program and the launch of locally-made satellites. Emirati companies are working on international projects, including the UAE-made MBZ-SAT, which will be launched by the end of 2023 as the second operational Emirati satellite, he said, noting it was made by Emirati engineers after KhalifaSat, and will play a pivotal role in supporting the Emirati space sector, being the most advanced satellite in the region in the field of high-resolution satellite imagery. He also highlighted the ongoing cooperation with regional and international companies in establishing a local space industries center, adding that related projects have helped train Emirati professionals, who now occupy in new and advanced positions, and who are also an inspiration to Emirati and Arab youth, such as Emirati astronaut Hazza Al Mansoori.

Hughes Selected for Mexican Satellite Initiative

Hughes Network Systems has announced that its JUPITER System platform has been selected by Stargroup, Apconet/Aitelecom, Eutelsat and Globalsat to power satellite connectivity at more than 7,200 sites across Mexico. Additionally, Stargroup says it has secured Ka-band capacity from the Hughes JUPITER high-throughput satellite fleet. The aforementioned companies were selected to connect community internet access sites by state utility firm Comision Federal de Electricidad (CFE), which is overseeing the government's 'Internet para Todos' ('Internet for All') initiative. The project will see broadband access extended to schools, health clinics and community centers in rural and hard to reach areas of Mexico.



China Successfully Launches Gaofen 12-03 Satellite

China has successfully launched the Gaofen 12-03 satellite, aboard a Long March-4C carrier rocket, from the Jiuquan Satellite Launch Center in Northwest China. The satellite will be mainly used in a variety of fields including land surveys, urban planning, rural land rights confirmation, road network design, crop yield estimation and disaster relief. This launch marks the 425th flight mission of the Long March series of carrier rockets. The Long March-4C carrier rocket used on this mission is a normal temperature liquid three-stage carrier rocket with excellent performance and wide application. It has the ability to launch various types of satellites with different orbital requirements. It has a carrying capacity of 3 tons to typical sun-synchronous orbit with an altitude of 700 kilometers. This is the first time that a Long March-4C model has applied fully autonomous alignment technology. Verified by measured data from multiple launch sites, the fully autonomous alignment relies on inertial unit measurement data to calculate azimuth in real time, and computer automatic binding reduces the risk of personnel transmission. It is also not affected by climate conditions such as blowing sand, strong wind and showers, thus improving the universality and adaptability of rockets compared with the traditional optical alignment technology that can transmit azimuth deviations. This mission is the sixth of the Long March-4C model this year. The proportion of young people in this rocket model team is more than 70%, but most of them also have rich experience in testing and launching.

SpaceX Signs First Airline for Starlink

SpaceX signed its first deal to add Starlink satellite internet to an air carrier's fleet of planes with semi-private charter company JSX, as Elon Musk's firm moves into the in-flight Wi-Fi market. JSX CEO Alex Wilcox told CNBC on Thursday that the agreement with SpaceX covers service on up to 100 airplanes. JSX currently has 77 30-seat Embraer jets in its fleet. "We'll be the first to have [Starlink] on an airplane," Wilcox said. The co-founder of JSX, Wilcox was the former head of product development at JetBlue Airways. SpaceX's Starlink service on JSX flights is pending regulatory approval, but Wilcox said he expects it to be available by the fourth quarter, if not earlier. Currently, a Starlink aircraft antenna is installed on a JSX airplane for testing purposes. "The SpaceX engineers are unbelievable," Wilcox said. Wilcox declined to provide financial details about JSX's contract with SpaceX. He noted that JSX will provide Starlink service to passengers free of charge, with no login screens required to access the network. Starlink on JSX "will be just like home, only faster," Wilcox said. In-flight connectivity is a market that SpaceX has talked about disrupting since the company began offering its satellite internet service, with Starlink vice president Jonathan Hofeller recently emphasizing that the aviation Wi-Fi market "is ripe for an overhaul." SpaceX began testing an aviation-specific version of its Starlink antenna, or terminal, more than a year ago. To date, SpaceX has launched about 2,000 Starlink satellites to support its global network. The company has about 250,000 total Starlink subscribers, which includes both consumers and enterprise customers. Users pay $110 a month for the standard service and $500 a month for the premium tier.

Zimbabwe Close to Launching Its First Satellite

Zimbabwe is the latest African country planning to set to launch its first satellite into orbit. Next month, or possibly in August, ZimSat-1, a nanosatellite, will be launched from the Japanese KIBO Module – Japan's science module for the International Space Station (ISS). More precisely, this is a CubeSat, a class of miniaturized satellite based around a form factor consisting of 10 cm cubes or units. Each unit typically weighs less than 1.33 kg. The plan is for a launch between July and August depending on weather conditions. The launch had been planned for February, but Covid-19 has caused a number of delays. ZimSat-1 is described in some reports as a major milestone expected to enhance mineral exploration, monitoring of environmental hazards and droughts, and mapping of human settlements and disease outbreaks, among many other capabilities. However, details of the precise projects it may support are not too clear. The TechZim site suggests it could be used for mapping to support the Zimbabwe National Geospatial and Space Agency (ZINGSA) National Wetlands Masterplan, which involves a comprehensive map of the country's wetlands across all 10 provinces. The launch continues the country's recently established space program, which began in 2018 with the launch of ZINGSA. ZimSat-1 was built by local engineers working with the Kyushu Institute of Technology in Japan. It will be launched by the Japan Aerospace Exploration Agency. The Bulawayo 24 website says that, with ZimSat-1 in orbit, Zimbabwe will become the 14th African country to have a presence in space. The Economist newspaper has reported that at least 20 African countries now have space programmes.

Telecom Italia, Eutelsat, Broadpeak Test Multicast Streaming Over Satellite

Telecom Italia (TIM) has joined forces with Eutelsat and Broadpeak to trial multicast signal distribution over satellite. The trial employed the TIMVision box in Adaptative Bit Rate (ABR) multicast mode, Eutelsat's Konnect satellite, which provides internet services in Europe, and Broadpeak's nanoCDN solution for content distribution. Multicast functionality enables broadcasting and media companies to stream live events without needing to duplicate transmission flows. According to the companies, this means the same content can be distributed simultaneously to connected users without taking up additional network and transmission resources, while also ensuring the simultaneous availability of adequate bandwidth for all other satellite services. "The testing has shown that the benefits of multicast transmission in terms of quality and network resource savings," said Crescenzo Micheli, TIM's head of technology and innovation, "This means that live content can be streamed, even at 4K resolution, with the same quality as a fiber connection, without restrictions linked to the number of simultaneous viewers." "Satellite has a clear potential in the distribution of video streaming technology, especially for large areas with limited internet connections," added Damien Sterkers, video solutions marketing director at Broadpeak. "Based on the multicast principle, it can totally offload from the network the peaks of streaming traffic typically generate by highly popular live events and secure a virtually unlimited quality to an unlimited number of users in the covered area."

Orange Egypt Taps Vendor for Satellite Connectivity Boost

Ericsson was chosen by Orange Egypt to supply antenna products for the building of the operator's 2,600MHz network, a move for the operator to proceed with its extensive rollout plan. In a statement, the Swedish vendor stated the move comes after Egypt's regulator awarded Orange Egypt 2,600MHz TDD spectrum. The operator will deploy the Ericsson Antenna system to construct the network, boosting coverage, capacity and throughput. Ericsson noted the antenna product has better wind load, less weight and high port count integration to aid Orange Egypt in "significantly" reducing operational expenses. Orange Egypt CTO Ayman Amiri said: "We always strive to provide the best mobile connectivity services to our customers in the most efficient and effective manner. With residents in Egypt becoming ever more reliant on mobile technology and communications, having an optimal network that offers super-fast speeds and meets user demands becomes crucial." Ericsson VP and head of the Saudi Arabia and Egypt division Mathias Johansson added: "The antenna system is a fundamental pillar of an operator's network infrastructure and is of vital importance in ensuring quality network communications. With the telecom industry having a huge responsibility keeping people and businesses connected in the region, we are committed to offering operators our state-of-the-art network technology and infrastructure."

Viasat Introduces Its Fastest Satellite Internet Service Plans

Viasat Inc. is elevating the home satellite internet experience in the U.S., giving customers in select markets new residential plans that will offer blazing high-speed connections, allowing customers to do more, faster – from downloading and streaming more movies, videos and content to enjoying a snappier web browsing experience. Viasat's New Choice home internet plans will give U.S. consumers more options in selecting the right internet service to meet their speed and data needs by offering five enhanced service plans that will deliver download speeds up to 25 Mbps and 150 Mbps in select areas. Viasat's New Choice home internet plans are available today, in select markets, with plans to roll out nationwide. Steven Mesnick, general manager of U.S. broadband at Viasat, commented, "With the launch of these New Choice home internet plans, we are introducing a new satellite internet experience to help meet the evolving needs of residential consumers. By optimizing our satellite network, we expect to deliver more data at faster speeds, more consistently. These speeds will enable us to provide the experience that our customers desire. Our new service plans demonstrate a technological achievement that we are proud of: delivering 100 times the speed compared to the first service plans we offered when we entered the residential internet market ten years ago with the launch of ViaSat-1. We are committed to innovation so that our customers can do more, faster." In a recent survey from Gallup, nearly half of all U.S. adults said they would prefer to live in a rural area or small town. This desire highlights the importance of high-speed satellite internet as people move into suburban and rural parts of America. Viasat's New Choice home internet plans can help meet this demand for high-speed connectivity even in the hardest-to-reach locations, by offering packages that will deliver download speeds of up to 150 Mbps in select areas. Viasat is committed to delivering more bandwidth, speeds and data to its residential customers. The Company's next-generation satellite constellation, ViaSat-3, is expected to be capable of delivering even greater bandwidth capabilities that will result in more speed, data and streaming options. Viasat has received various accolades from consumer outlets including being named the 'Fastest Satellite Internet Provider' among U.S. rural internet service providers (ISPs) by CNET and receiving the Best for High Speeds designation by ZDNet.

SES-17 Begins Delivering Satellite Connectivity Services Across Americas

SES announced that its newest geostationary Ka-band satellite, SES-17, is now fully operational over the Americas, the Caribbean and the Atlantic Ocean at 67.1 degrees West. The all-electric propulsion satellite has reached orbit per schedule after months of in-orbit raising and successful in-orbit testing. The very high throughput SES-17 satellite built by Thales Alenia Space is ready to provide unparalleled connectivity services to customers across aeronautical, maritime, enterprise, and government markets whether on land, at sea, or in the skies. SES-17 anchor partner, Thales InFlyt Experience, will leverage SES-17 for FlytLive, a next-generation aviation connectivity solution enhancing Wi-Fi experiences onboard commercial aircraft across the Americas and the Caribbean. Moreover, key enterprise customers in Brazil, Argentina, Colombia, Mexico, Canada, including SSi Canada and COMNET, will now expand the reach and capability of their broadband networks to more remote areas. With a fully digital payload powered by the most powerful digital transponder processor in orbit, an unmatched flexibility and nearly 200 user beams, SES-17 marks not only a significant development in satellite technology, but also is a first step in the integration of SES's multi-orbit network. The spacecraft's digital payload is supported by the Adaptive Resource Control (ARC) software, making it interoperable with SES's second-generation O3b mPOWER satellite communications system in medium Earth orbit (MEO), set to launch in the coming months. "We are excited to have the highly-anticipated SES-17 satellite start delivering services, while redefining and transforming the digital landscape for many different applications across the Americas and ultimately bringing high-speed connectivity to people wherever they are," said Ruy Pinto, Chief Technology Officer at SES. "At SES, we are extremely thankful to our partners at Thales Alenia Space and Arianespace that have shared our vision at each step of SES-17's journey to orbit." SES-17 was successfully launched onboard an Ariane 5 launcher operated by Arianespace from Europe's Spaceport in Kourou, French Guiana on 23 October 2021 at 11:10 pm local time (02:10 am UTC). SES-17 is the 37th SES satellite launched by Arianespace and the 30th built by Thales Alenia Space, joining the current SES satellite network of 70 satellites.

Mexico Taps Axess Satellites for Connectivity Ambition

Mexico tapped into satellite technology to deliver ubiquitous coverage for its citizens, as part of a major scheme to connect those in extremely remote areas. In a statement, network infrastructure company Axess Networks revealed it was one of two firms chosen by government arm CFE Telecommunications (CFE TEIT) and Internet para Todos (Internet for Everyone), to launch an additional 825 satellite internet sites to complement the current level of coverage. Axess was involved in the first phase of the national plan Internet for Everyone, in which the company aided by connecting 7.8% of citizens who live in extremely remote regions with zero connectivity, by bringing online 1,650 satellite sites. Axess also received recognition from the presidency of the Mexican government for its work in connecting the remote Marias Islands, which is being primed as a tourist destination. The CFE TEIT assigned 54 cellular backhaul sites to Axess in a move to make data service more affordable.

Airbus Confirms June 22 Launch for MEASAT-3d Satellite

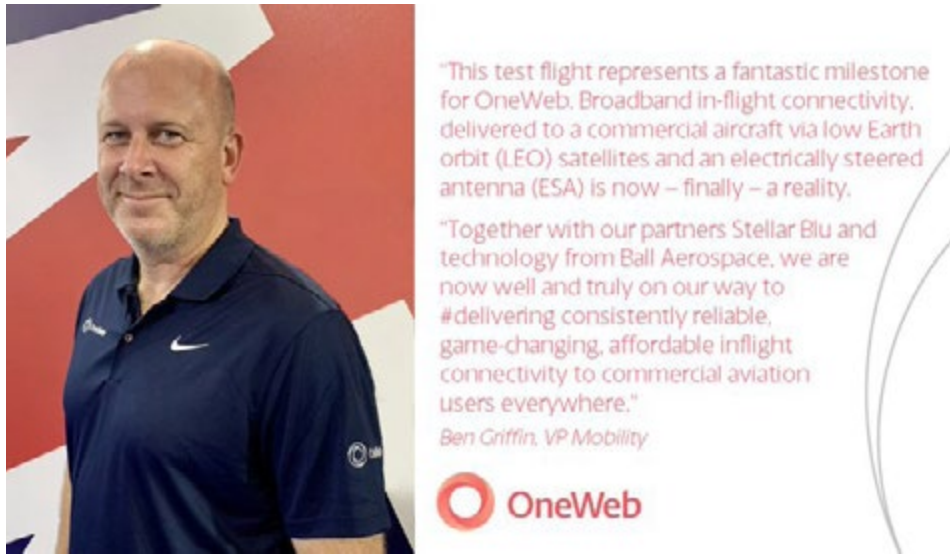
Airbus has confirmed that its MEASAT-3d telecommunications satellite is set for launch later this month. The satellite is currently in Kourou, French Guiana and is ready for its launch on an Ariane 5 on 22 June 2022. This is the 57th E3000 satellite built by Airbus. It will be positioned at the 91.5°E orbital slot and collocated with MEASAT-3b, also built by Airbus. Airbus said that the new satellite will enhance broadband speeds of up to 100 Mbps in areas with limited or no terrestrial connectivity throughout Malaysia. It will also provide redundancy and additional capacity for video distribution in HD, 4K and 8K in the Asia-Pacific region. Key features of the satellite include C and Ku-bands capacity for DTH, video distribution and telecommunication services; a HTS Ka-band mission with multiple user spot beams optimized to deliver high speed broadband communications over Malaysia to bridge the digital divide in the country; and a Q/V band payload, first of its kind in the Asia-Pacific region, allows MEASAT to study the propagation effects in high rainfall regions like Malaysia. Francois Gaullier, head of Telecom Satellites at Airbus said: "MEASAT-3d is based on our highly reliable Eurostar satellite platform, including the current E3000 series, with 58 in orbit which have notched up more than 1000 years of successful operations. MEASAT is a key customer for us and we are looking forward to this advanced spacecraft supporting their future business."

Telesat Applies to Ofcom for Spectrum License

When it comes to establishing a low Earth orbit (LEO) satellite communications network, Canada-based satellite player Telesat has some catching up to do. Elon Musk's Starlink constellation, the largest currently deployed, already has over 2,200 devices in orbit, while the UK government-backed OneWeb's revival from bankruptcy in 2020 has seen it go on to launch nearly 400 devices, around two third of its planned global constellation. Even Amazon's long-delayed Project Kuiper will begin launching prototypes later this year, as well as announcing its first launch contracts for some of its planned 3,276 satellites. Telesat, meanwhile, currently has just one LEO satellite in orbit. Launched in January 2018, the satellite has since been part of numerous trials and demonstrations, proving the viability of a larger constellation dubbed Lightspeed. Ultimately, they aim for the constellation to comprise 298 satellites, with the devices beginning to be launched in full in the latter half of 2025. Commercial services are not set to begin globally until the start of 2026. The project has considerable backing from the Canadian government, which agreed to invest $1.15 billion in the company late last year. In total, the company has received around $4 billion in investment to help advance the deployment of Lightspeed. Now, it seems the company is already beginning the paperwork required to operate beyond the Canadian borders, applying for a spectrum license in the UK from telecoms regulator Ofcom. The spectrum requested from Ofcom falls in the Ka-band (27.5 GHz to 30 GHz range), theoretically giving them the ability to deliver multigigabit-speed broadband services to enterprises, as well as supporting mobile backhaul, maritime and offshore platforms, aviation, and government organizations. Ofcom is now considering the company's application for an Earth Station Network License, which would allow them to connect user terminals directly to the orbiting constellation using the spectrum in question. The regulator is inviting comments by the wider ecosystem over the next month, with a decision expected on September 12 2022. Interestingly, this spectrum is remarkably close to that potentially used to provide mmWave 5G services, with Ofcom itself currently in the process of ironing out the details of its upcoming mmWave 5G spectrum auction. The auction will make spectrum in the 26 GHz band (24.25–27.5 GHz) and 40 GHz band (40.5–43.5 GHz) available to UK mobile operators, with the consultation period for the auction's proposed rules ends next month. The auction itself is not expected to take place until 2024.

OneWeb Lauds Successful Trial of In-Flight LEO Services

Low Earth orbit (LEO) satellites could soon be used for in-flight broadband, following a successful test by UK-based OneWeb and its partners. The test saw a Boeing 777 passenger plane connect to OneWeb's network using a specially-designed terminal made by Stellar Blu, which signed a joint development agreement with OneWeb back in November last year. The terminal is named Sidewinder – hopefully after the snake and not the heat-seeking air-to-air missile – and incorporates electronically steered antenna (ESA) technology made by another partner, Ball Aerospace. The results look promising, with in-flight downlink speeds peaking at 260 Mbps, and 80 Mbps achieved on the uplink, which is no mean feat on an object travelling at several hundred miles per hour. OneWeb said latency was "well under" 100 milliseconds, and the testers were able to carry out a 5 GB file transfer in approximately 20 seconds. It is not clear how much bandwidth would be available to individual passengers if the plane was packed with 400 Tik-Toki-ing holidaymakers all trying to get online at once, but OneWeb said the test flight crew were able to simultaneously make Teams calls, stream Netflix and 4K YouTube content, and play online VR and Nintendo Switch games. It's also worth noting that the Sidewinder terminal was able to keep the plane connected during taxi, take-off and landing as well as during the flight. This is important because airlines don't want to have to install multiple terminals on their aircraft for connecting to different networks, it adds cost and weight – which reduces fuel efficiency. "This test flight represents a fantastic milestone for OneWeb. Broadband in-flight connectivity, delivered to a commercial aircraft via low Earth orbit satellites and an electrically steered antenna is now – finally – a reality," said Ben Griffin, VP of mobility at OneWeb, in a statement on Tuesday. "Together with our partners Stellar Blu and technology from Ball Aerospace, we are now well and truly on our way to delivering consistently reliable, game-changing, affordable in-flight connectivity to commercial aviation users everywhere." The test flight itself actually took place in Texas in late May, and was the culmination of months of ground trials. OneWeb and its partners said they plan to carry out further tests this year, with the aim of achieving certification for commercial use by the middle of 2023. As for when LEO-based in-flight broadband services become available to the public, well, that's anyone's guess. Thanks to covid, the airline industry is not exactly in rude health these days. According to the International Air Transport Association (IATA), the industry made a $126.4 billion net loss in 2020, as revenue fell to $328 billion from $838 billion in 2019. The recovery is expected to be slow going: in 2021, the net loss still stood at a hefty $47.7 billion. Cash-wise, the IATA reckons the airline industry burned through $149 billion in 2020, and $81 billion in 2021. With budgets under this kind of pressure, grounding planes so they can install new broadband terminals might be quite far down the list of priorities.



Sony Joins Satellite Push with New US Unit

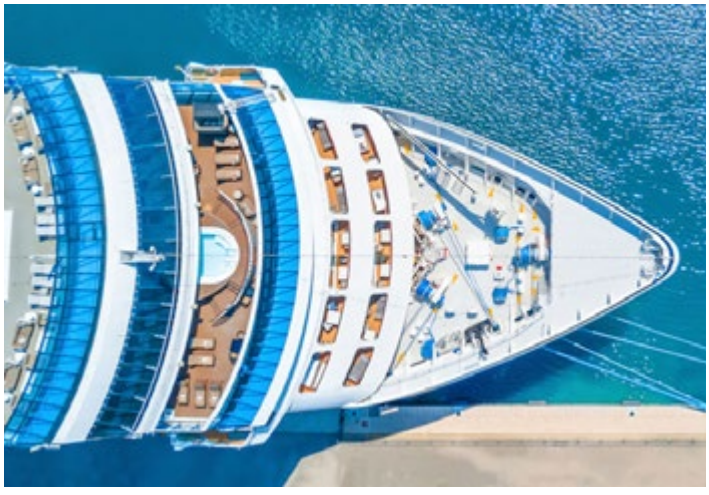
Sony Group established a new company in the US to build compact optical communications devices that allow satellites to link in real time using lasers, as the Japanese company moves into the red-hot space-based mobile broadband sector. Sony Space Communications, set up through the group's US subsidiary Sony Corp of America, will develop optical devices to connect micro satellites in low-Earth orbit (LEO) with ground stations, with the aim of providing "easy-to-use inter-satellite communications capabilities," Sony noted in a statement. Kyohei Iwamoto, president of Sony Space Communications, stated that while there are about 12,000 satellites in space, with the number growing and the amount of data used in orbit also rising, the available radio waves is limited. He added LEO satellites need to communicate with the ground, requiring a large number of communications facilities, which is problematic because each bird must pass directly over a ground station to communicate with it. The new company will focus on lowering power consumption of high-speed communications equipment for smaller satellites and addressing the need for spectrum licenses for each frequency. Over the past 18 months, a number of communications companies, including SpaceX's Starlink, OneWeb, AST SpaceMobile, SES and Lynk Global, introduced plans to work with local operators to deliver space-based connectivity to remote rural areas using LEO satellites.

Satcube to Serve LEO Constellations with New Terminals

Satcube, a Swedish technology company that develops satellite terminals to provide satellite broadband, will now serve the biggest space constellations in the race to connect the world. The company is tapping its current success providing the UN, The Red Cross (ICRC), ITV, CBS News and more, reporting on the ground in Ukraine and helping to save lives by providing critical portable communications. In the leap from GEO to LEO satellite connectivity led by Starlink and Amazon, $47bn was invested in 2021 to launch thousands of new LEO satellites. Ground segment innovation, however, saw a meagre $0.5bn invested in comparison fort the same period. "While there is enormous investment in satellite and space, there is very little investment in ground infrastructure and equipment, such as portable and mobility user terminals and viable e-commerce solutions, to satisfy the rapidly evolving LEO-market," commented Jakob Kallmer, founder and CEO at Satcube. Citing a current lack of cost effective, easy-to-use compact terminal solutions in the LEO market as well as few terminal developments and limited scale in the GEO satellite market, Satcube aims to close the gap in the LEO satellite market by creating high quality, cost-efficient portable, mobility and enterprise terminals, designed, developed, and produced in Sweden. "Reaching the full potential of LEO satellites and broadened global connectivity will not be attainable before millions of user terminals on the ground are in operations," continued Kallmer. "A supplier that can design reliable terminals at a far better price point than today will see a market for several million devices" Displaying 100% revenue growth from Q1 2021 to Q1-2022, during the global pandemic, Satcube – led by founder and CEO Jakob Kallmer – has been working actively behind the scenes to bring critical connectivity to organizations. Amongst others, Kallmer's team has around ten active projects in Ukraine alone, including media houses CBS News, ABC News, ITV News, Norwegian Television NRK and Danish TV channel TV2, plus International Red Cross Geneva, UNHCR and the US and European Governments. To compete with the best terminal developers and fill the ground segment gap, Satcube's focus is a "Terminals-as-a-service" offering with intuitive user interfaces that anyone can operate. Automated, local production in Sweden will ensure a cost-efficient and secure supply chain. In addition, employing innovative antenna design that enables the world's most compact in size, weight, and energy efficient terminals, for lowest total cost of ownership. Satcube's Nordic design will be the keystone for authentic identity.

Telenor Maritime Signs Capacity Deal with Eutelsat for Cruise Connectivity

Telenor Maritime signed a capacity agreement with Eutelsat Communications for managed satellite services for cruise connectivity. Under the agreement, Eutelsat will deliver capacity on Eutelsat 33E for coverage of the Mediterranean Sea, and on Eutelsat 65 West A satellite, together with its Eutelsat Advance managed connectivity service, for coverage of the Caribbean Sea. Eutelsat said this deal demonstrates the value of the Advanced service, and supports momentum in the Mediterranean and Caribbean connectivity markets. The company highlighted growth in the maritime sector in its most recent financial results. Teleor will receive targeted resources and services in specific sailing areas. Telenor said the agreement will improve performance, coverage, and resiliency for maritime connectivity and provide reliable connectivity to the cruise segment. "We are truly excited to be working with a leading Geostationary satellite operator, Eutelsat, to address the ever-increasing connectivity needs of cruise operators. Eutelsat's outstanding in-orbit resources, combined with its robust managed services, have enabled us to come up with an offering that can be tailored to our customer's specific demands," commented Telenor Maritime CEO Lars Erik Lunoe.



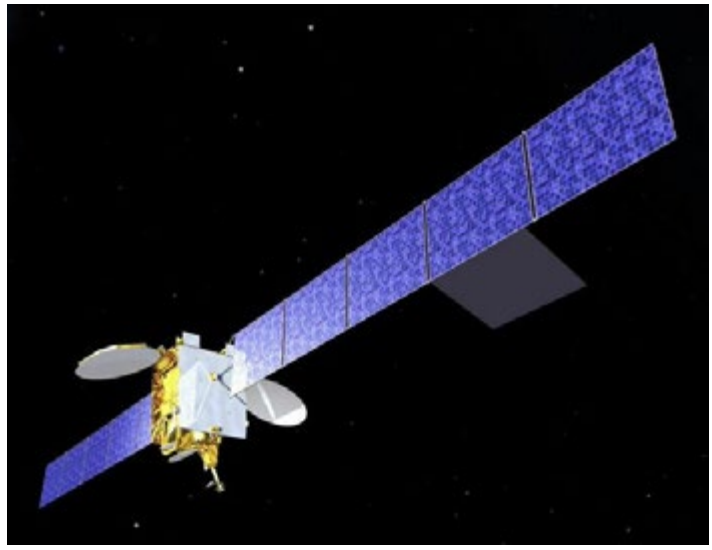
SES, Vodafone PNG Partner to Deliver 4G/5G Services Via Satellite to Papua New Guinea

Papua New Guinea (PNG) now has a new mobile service provider to choose from as Digitec Communications Limited (t/a Vodafone PNG) and SES have partnered up to provide 4G and 5G high-speed mobile broadband services. Both companies announced that the reliable high-speed data service will be delivered via SES's O3b medium earth orbit (MEO) satellite constellation, which will further enable economic opportunities and bridge the digital divide in the world's second-largest island. Under this partnership, the O3b MEO satellite constellation will provide Digitec with high-speed mobile backhaul services for 5 locations in PNG. With over 86% of its population residing in rural areas, much of PNG's population is still underserved despite an increase in internet penetration across the country at 15% and mobile connections at 34% as of January 20211. Having started services in April, Vodafone is the third largest and newest mobile operator in PNG. Its entry into PNG's telecommunications market addresses the demand among consumers and businesses for reliable high-speed connectivity and broadband Internet access. The connectivity that the O3b MEO satellite constellation brings is not new to PNG as it's been used by other mobile operators and internet service providers in the country since 2014. During the APEC 2018 summit it also helped with connectivity needs when PNG hosted this event. SES's O3b system is the world's only commercially successful non-geostationary satellite system and delivers low-latency, high-performance connectivity worldwide. The fiber-like speeds enable the delivery of cloud computing applications and services to bridge the digital divide, while connecting communities and industries regardless of the remoteness of the location. Ivan Fong, Director at Vodafone PNG said Papua New Guinea's mobile and internet market has enormous growth potential, but this has been hampered by geographical challenges, limited speed and connectivity choices. We are pleased to partner with SES to provide reliable high-bandwidth mobile connectivity of up to 5G speeds delivered through their MEO satellites. John Turnbull, Vice President Pacific, Networks Sales at SES said with our O3b constellation we've been connecting communities and industries around the world for almost a decade, positively impacting their lives and their businesses. Our partnership with Digitec brings their customers with a reliable, high-throughput and low-latency solution, underscoring the value of our unique satellite connectivity. With over 86% of its population residing in rural areas, much of PNG's population is still underserved despite an increase in internet penetration across the country at 15% and mobile connections at 34% as of January 20211. Having started services in April, Vodafone is the third largest and newest mobile operator in PNG. Its entry into PNG's telecommunications market addresses the demand among consumers and businesses for reliable high-speed connectivity and broadband Internet access. The connectivity that the O3b MEO satellite constellation brings is not new to PNG as it's been used by other mobile operators and internet service providers in the country since 2014. During the APEC 2018 summit it also helped with connectivity needs when PNG hosted this event. SES's O3b system is the world's only commercially successful non-geostationary satellite system and delivers low-latency, high-performance connectivity worldwide. The fiber-like speeds enable the delivery of cloud computing applications and services to bridge the digital divide, while connecting communities and industries regardless of the remoteness of the location.

Inmarsat Team Works to Fine-Tune PNT Satellite Navigation

An Inmarsat-led team of companies in the UK, building on national expertise and prior experience within the group, has begun broadcasting a satellite navigation signal as part of a program to explore the creation of a sovereign national capability in resilient positioning, navigation and timing (PNT) for the aviation and maritime sectors. The signal, being broadcast in coordination with the US Federal Aviation Administration (FAA), the European Space Agency (ESA) and the European Union Space Program Agency (EUSPA), is now stable and operational, enabling on-going testing and validation by industry, regulators, and users. Inmarsat, the world leader in global, mobile satellite communications, alongside British partners Goonhilly Earth Station Limited and GMVNSL Limited, is delivering the UK Space Agency-funded tests with the European Space Agency via the latter's Navigation Innovation and Support Program (NAVISP). UKSBAS – the UK Space-Based Augmentation System – generates an overlay test signal to the US Global Positioning System (GPS), fully-compliant with International Civil Aviation Organization (ICAO) standards, to enable assessment of more precise, resilient and high integrity navigation for maritime and aviation users in UK waters and airspace. It increases accuracy in positioning to a few centimetres of accuracy rather than the few metres provided by standard GPS. This is a similar system to that already under evaluation in Australia and New Zealand, supported by Inmarsat. Since leaving the European Union, the UK is not part of the Galileo satnav system and cannot use the European Geostationary Navigation Overlay Service (EGNOS) safety of life (SOL) services, which enable the use of GPS for airport approach and landing operations for aircraft. By repurposing the SBAS transponder on Inmarsat's I-3 F5 satellite in geostationary orbit at 54° west, the UKSBAS signal enables testing of this potential alternative system to begin. Built by Inmarsat's Athena partner Lockheed Martin and launched in 1998, I-3F5 covers the UK as part of its Atlantic Ocean region service overlay. This makes it an ideal candidate to participate in this test and demonstrates the commitment to sustainability of Inmarsat with a satellite that has already served the equivalent of several low Earth orbit (LEO) satellite life cycles. Todd McDonell, President, Global Government at Inmarsat, said "The Inmarsat team is inspired by delivering

solutions to new problems through technology and innovation. Repurposing a transponder on a long-serving satellite to deliver a new capability to the UK, potentially a vital and enduring one, certainly lives up to that core Inmarsat ethos. Working with our fellow British companies at Goonhilly and GMVNSL to deliver such a capability for the country is very rewarding and we look forward to reporting on the results." These tests will assess whether UKSBAS can develop into a full operational capability to support safety-critical applications such as airport approach and landing operations or navigating ships through narrow channels, especially at night and in poor weather conditions. Goonhilly provides the signal uplink for the system from Cornwall and software from GMVNSL, based in Nottingham, generates the necessary navigational data. Transport Minister Robert Courts said "The UK's thriving space sector is developing at pace, and British-led innovations like this have the potential to deliver crucial navigation services for our aviation and maritime sectors. "That's why this Government is investing millions in new technologies to make our transport network even safer while boosting high-skilled job opportunities across the nation." UKSBAS is helping to regenerate UK strategic capabilities in this domain. The establishment of this new national platform creates the opportunity to evaluate high-integrity, resilient and precise navigation across the country, in its airspace and within surrounding waters. The project may be crucial for UK users who need accurate, high-integrity navigation capabilities to enable their operations, initially covering aviation and maritime operations but with potential extension into rail and road applications. Paul Bate, CEO of the UK Space Agency, said "Congratulations to Inmarsat, Goonhilly and GMVNSL on this impressive achievement. In recent years, the UK Space Agency has invested in the development of UK expertise in Positioning, Navigation and Timing (PNT), and the government's commitment to strengthening PNT resilience is set out in both the National Space Strategy and Integrated Review, given its importance to our critical national infrastructure and economy. "This project is a great example of the innovation found throughout the UK space sector and demonstrates how we can work effectively with the European Space Agency to strengthen our national space capabilities."



Rwanda Inks MoU to Improve Satellite Communication Services

According to the GSM Association, in Sub-Saharan Africa, 206 million people are not covered by mobile networks. To allow its residents - who are not covered by mobile networks - access to digital services, Rwanda wants to rely on satellite internet. The Rwanda Space Agency (RSA) signed, Monday (June 6), a memorandum of understanding with the Global Satellite Operators Association (GSOA). Under this partnership, the two parties will explore ways to improve satellite communication services and accelerate digital inclusion in Rwanda, and Africa as a whole. The agreement covers key areas such as supporting the deployment of satellite communication services in Rwanda and preserving access to satellite spectrum. It will also contribute to preserving access to orbital slots reserved for developing countries, cooperation with African space agencies and the promotion of satellite communication services in Rwanda and Africa. According to GSOA secretary-general Aarti Holla-Maini (photo), the cooperation will facilitate the development of satellite communication services in Rwanda and provide support to the RSA to ensure that satellite spectrum are used for sustainable development. The agreement is announced two years after the Rwandan Space Agency was created, making Rwanda one of the few African countries that have space agencies. Apart from Rwanda, African countries with space agencies are notably Algeria, Tunisia, Morocco, South Africa, Angola, Egypt, Kenya, Nigeria, and Zimbabwe. In its report "The Mobile Economy Sub-Saharan Africa 2021," the GSM Association (GSMA) revealed that mobile Internet penetration was just 28 percent in sub-Saharan Africa in 2020 while the mobile penetration rate was 46 percent. So, in the region, the outstanding majority of the population does not have access to internet. But, telecom operators and governments are looking for solutions to allow access to telecom services for people, especially those living in rural areas with little or no terrestrial telecom service coverage.

Uzbekistan Woos Starlink, OneWeb to Bring Satellite Broadband

Uzbekistan is trying to woo Starlink and OneWeb to bring their satellite broadband services to Central Asia's most populous country. The overture is part of the Uzbek government's efforts to strengthen the nation's information technology competitiveness and provide better communications services to underserved remote areas. Ranking officials recently met with the Starlink and OneWeb representatives in the country's capital, Tashkent, asking for their satellite broadband services to be made available in Uzbekistan. They also called on the two companies to open an office there to explore further cooperation. The meeting between Uzbekistan's development of information technologies and communications minister and Starlink market access manager, Ben MacWilliams, took place May 10, on the sidelines of the Space Technology Conference STC-2022, according to a May 11 statement from Uzbekistan's state investment promotion agency. During the meeting, the minister, Sherzod Shermatov, called on Starlink to expand the scope of its services to include the Middle East, South Asia and Central Asia, according to the statement. The minister also suggested that Starlink open a representative office in Uzbekistan "to expand mutually beneficial cooperation." In response, MacWilliams announced his company's "readiness to implement large projects in Uzbekistan, as well as in other countries," according to the statement. SpaceNews reached out to Starlink to ask what the "large projects" are, but the company didn't respond. MacWilliams had a separate meeting May 9 with the director-general of Uzbekistan's space agency. They discussed the issue of bringing Starlink services to the country, according to the agency. On top of this, the agency signed a memorandum of understanding with British satellite broadband provider OneWeb, according to the agency's May 16 statement. OneWeb's marketing director, Ivan Zaitsev, represented the company in the signing ceremony. "The main purpose of the memorandum [of understanding] is to attract the British satellite communications company OneWeb to the Uzbek market," the statement reads. The deal set the stage for the two sides to hold a discussion of "regulatory issues and determining the main needs of the state to prioritize the use of the available OneWeb satellite capacity," it added. As part of the deal, the two sides agreed to establish a center of expertise on the use of OneWeb's satellite broadband in Uzbekistan. "The signing of a memorandum with OneWeb is a significant event in the development of space communications," the space agency's director-general, Shukhrat Kadirov, said in the statement. "The availability of OneWeb telecommunications services in the Republic of Uzbekistan will effectively implement the tasks envisaged by state programs for the development of information technologies and ensure the availability of innovative communication services even in remote regions of the republic." Uzbekistan's internet penetration rate stood at 70.5 percent of the total population of 34 million as of January 2022, according to data from DataReportal, an independent data collector.

Starlink Licensed to Operate in Nigeria, Mozambique

Elon Musk has announced that Starlink, the satellite internet service of SpaceX, has received licenses to operate in Nigeria and Mozambique. The company claims that the two countries are the first in Africa with Starlink regulatory approval, with the service now licensed to operate on all seven continents. The Nigerian Communications Commission (NCC) has confirmed that the company received two licenses – a ten-year international gateway license and a five-year ISP license – and will be trading as Starlink Internet Services Nigeria. Both licenses came into effect on 1 May 2022. The low-orbit Starlink satellites are designed to offer high speed, low latency broadband internet in remote and rural locations across the globe.

African Satellite Soars Over 40% Yearly Growth

Liquid Telecom Satellite Services (LTSS) is expecting to see strong revenue growth in 2022, thanks in particular to strong demand for connectivity in Africa, CEO Scott Mumford told Via Satellite. LTSS grew by 25% in 2021 and that speed is accelerating year-on-year, according to Mumford. The 2022 forecast could be over 40% revenue growth, based purely on orders already in the pipeline. This is because the satellite cellular backhaul market is "growing, growing, growing," thanks to a transformation in the understanding and the mindset of satellite services in Africa over the last three years, said Mumford. While selling services into Africa was always tough, things are starting to change. Once satellite's original reputation for being slow, expensive and foreign to Africa was banished, people began to see the positives and those doing the marketing for the industry say they have turned a corner. "We are seeing huge demand across Africa. We are adding services into 10 new countries, said Mumford. "We have added the whole of West Africa into our footprint. We actually lit up another spot beam recently, which was a new beam over a new region. It has been strong. Satellite will continue to gain momentum and market share." In recent years deals between TIM and Eutelsat in 2020 and AT&T and OneWeb in 2021 changed the mindset towards how satellite works. "Telecoms understands that the world is large and that terrestrial mechanisms can be very good, but they can be very expensive and time consuming to deploy. They are very inflexible by nature. As we move to cloud-based and service-based ways of working, satellite is a critical element of that provision," said Mumford. In fact, it's not a matter of choice, Africa has to adopt it, according to the satellite CEO. People expect ubiquitous service, the African continent is vast and the only way to cover that is to embrace satellite. The technologies have evolved hugely over the last five years, as have the levels of service. Regulation is the main obstacle holding it back. "There are so many rules and regulations. The correlation between internet penetration and GDP growth is extremely well-documented and evidence based," said Mumford. This makes it difficult for service providers to set up a company in any country, which makes it difficult for them to start offering useful support to indigenous businesses and communities and improving the gross domestic output of that nation. "Some of those license requirements are extremely arduous," said Mumford. In one West African nation, for example, the satellite provider is being asked to prove that Earth stations are not dangerous. Providing the relevant FCC/ITU and antenna performance data to disprove a negative is a thankless task and involves talking to officials who still believe in non-ionizing radiation effects. "I can't believe we are still having that type of conversation in 2022, but that is an example of some of the hoops we still have to jump through. They need to make it easier for us to get those services into countries," said Mumford. Corruption and officialdom aside, Zimbabwe has displayed a developing maturity and Liquid Telecom installed 200 terminals in the country late in 2021. Southern Africa and West Africa have seen increased demand. Now markets which were traditionally outside of LTSS's footprint, such as the Central African Republic, Cameroon, Niger and Mali, are moving too. "We are pumping capacity into those markets with local providers who are desperate to get access to these services," Mumford said. "With some operators, we are struggling to find enough capacity for us to be able to take and keep growing." However, Low-Earth Orbit (LEO) won't be the gamechanger for the industry. Though latency is important for certain applications it's not universally critical. Don't expect a mass migration from other technologies to LEO. "We won't suddenly see 10 million new terminals active in Africa in three years' time," said Mumford. LTSS is examining how to orchestrate service across multiple systems and then tie that into its terrestrial infrastructure. "It's all about the service, not the delivery technology," said Mumford.

Telesat, Telefonica Global Solutions Complete Brazil's First LEO Satellite 5G Backhaul Demo

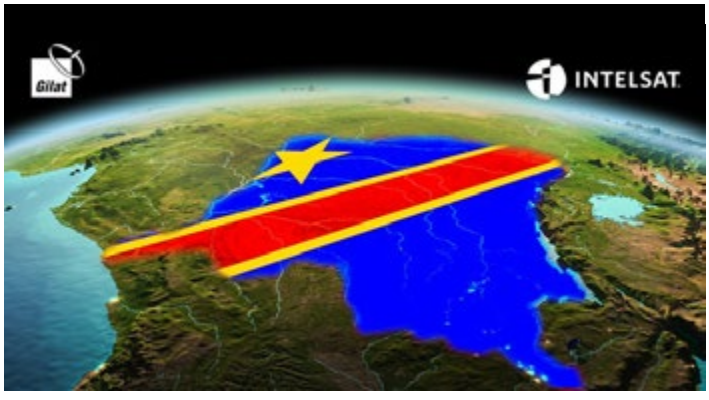
Telesat and Telefonica have announced the successful completion of the first 5G Low Earth Orbit (LEO) satellite backhaul demonstration in Latin America, with a Brazil-based trial. The testing campaign was managed by Telefonica Global Solutions (TGS), the Telefonica Group's satellite service provider. The Telesat Phase 1 LEO satellite Layer 2 backhaul link was connected to TGS's 5G test environment. Network measurements of latency, jitter and bitrate all met the functional requirements for integration with a 5G core network. Eloy Rodriguez Villa, SVP of Global Wholesale Customers at TGS, commented: 'Building on our successful LEO test with Telesat in Europe, we were eager to evaluate the performance of the Phase 1 LEO integration with a 5G network.'

InterSAT and SES Renew Partnership to Boost Digital Inclusion in Africa

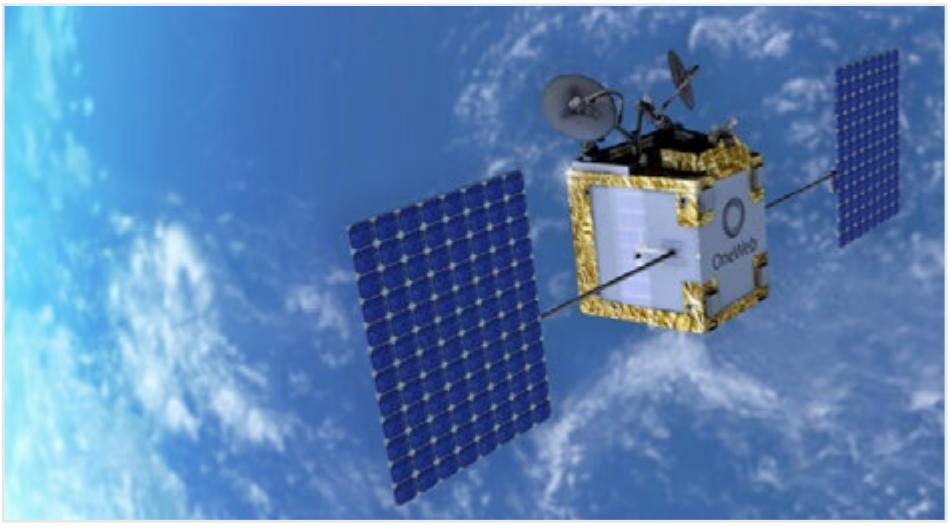
African internet provider InterSAT has renewed its agreement with SES for capacity on the latter's satellite. SES's NSS-12 satellite, located at 57 degrees East, will enable InterSat to securely and efficiently serve its government institutions and enterprises customers. The two companies first partnered in 2010, and during this time they have expanded reliable connectivity services across the African continent, reaching locations that have not previously had access to telecom services and thereby reducing the digital divide. Hanif Kassam, CEO of InterSAT said: "Together with SES, we have helped empower entrepreneurs to grow, transform and digitize their businesses through development of smart and custom-made solutions throughout the continent. SES is a reliable partner to work with, and we can always count on their support to provide the best for our customers." "Our partnership with InterSAT has enabled us to pave the way for abundant digital opportunities across Africa by connecting the unconnected in some of the continent's most underserved locations. The digital access our services provide is allowing innovative solutions such as smart agriculture and precision farming to address some of the continent's biggest challenges," said Caroline Kamaitha, Vice President Sales Africa at SES.

Gilat Selected for Satellite Backhaul in DRC

Satellite broadband service provider Gilat Satellite Networks has been selected by Intelsat to provide a satellite based cellular backhaul solution to a mobile network operator (MNO) in the Democratic Republic of Congo (DRC). The operator in question was not specified but is understood to be Vodacom, based on a previous announcement from Intelsat. According to a statement from Gilat, the deployment featured Intelsat's CellBackhaul service and Gilat's SkyEdge II-c platform and Capricorn VSATs, with a Ku-band satellite and serves nearly 1,000 underserved and unserved sites in rural DRC. The partnership between Intelsat and Gilat has helped to extend connectivity to areas where terrestrial backhaul networks are impractical, expensive or unfeasible, the provider added. Intelsat GM and VP of Networks, Brian Jakins, said of the project: 'Industry-leading know-how and cost-effective satellite technology from Gilat are key components of the solution, significantly augmenting our ability to bring together the right services, and expertise to provide customers an economical way to expand coverage into remote areas with an unbeatably low total cost of ownership.'



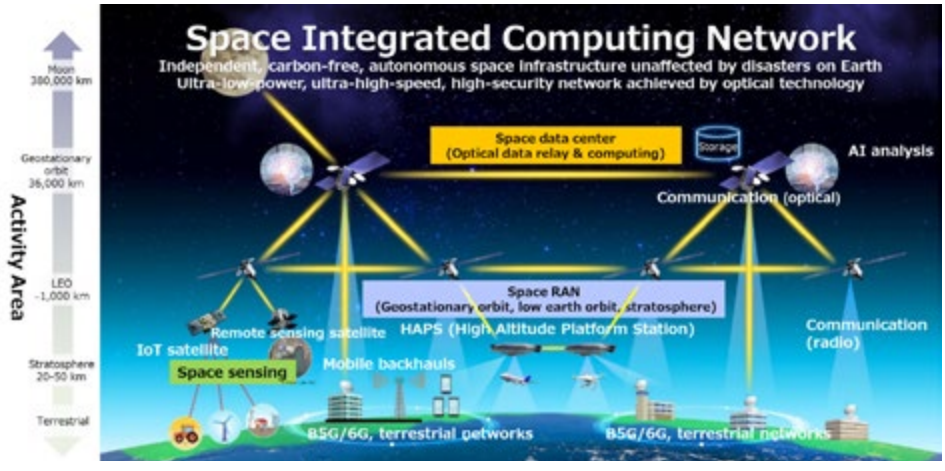
OneWeb Agrees Satellite Launch Program with New Space India



OneWeb, the Low Earth Orbit (LEO) satellite communications operator part-owned by the UK government, has sealed an agreement with New Space India, the commercial arm of the Indian Space Research Organization, to help ensure OneWeb completes its satellite launch program. The first launch with New Space India is anticipated in 2022 from the Satish Dhawan Space Centre (SDSC), adding to OneWeb's current total in-orbit constellation of 428 satellites (66% of its planned total fleet) to build a global network that will deliver high-speed, low-latency connectivity. Sunil Bharti Mittal, OneWeb Executive Chairman, said: 'This most recent agreement on launch plans adds considerable momentum to the development of OneWeb's network, as we work together across the space industry toward our common goal of connecting communities globally.' The launch contract follows a separate agreement between OneWeb and SpaceX to enable the company to resume satellite launches, announced in March. Detailed terms of the agreement with New Space India are confidential. OneWeb had cancelled an existing agreement with Russian space agency RosCosMos following Russia's invasion of Ukraine, and stopped launching satellites from Kazakhstan's Baikonur spaceport, leased to Russia. OneWeb has so far activated its network for remote parts of the globe above 50 degrees north, with early partners already initiating services.

NTT and SKY Perfect JSAT Establish Space Compass for GEO Satellite Broadband

Japanese companies Nippon Telegraph & Telephone Corp (NTT Corp) and SKY Perfect JSAT Corp have agreed to set up a new joint venture (JV) company to launch 'a novel integrated space computing network' starting with 'optical and wireless communication network[s] to be built in space and the mobile network to be built in the stratosphere'. The press release went on to note: 'In FY2024, Space Compass will launch an optical data relay service for high speed transmission to the ground via a geostationary orbit (GEO) satellite. This will carry a vast amount of diverse data collected in space by observation satellites. Existing services, which transmit data directly to ground stations, have communication capacity limits imposed by the use of radio waves as well as limits on the time at which ground stations can communicate with observation satellites. In contrast, optical transmission via a GEO will enable high-capacity, quasi-real-time data transmission.' As previously reported by CommsUpdate, in January this year NTT Corp, its mobile arm NTT DOCOMO, Airbus and SKY Perfect JSAT announced a joint collaboration on the feasibility of developing high-altitude platform stations (HAPS)-based connectivity services as part of 'a future space-based wireless connectivity ecosystem'. The parties reportedly entered into a memorandum of understanding (MoU) to identify the early deployment requirements of a HAPS-based network, and confirmed that the initial phase will involve exploring the use of the Airbus Zephyr, dubbed as a 'leading solar-powered, stratospheric unmanned aerial system (UAS)', alongside NTT's and SKY Perfect's wireless networks to test HAPS connectivity, identify practical applications, develop required technologies and ultimately launch space-based wireless broadband services.



Avanti and Free Strike Satellite Gateway Deal in Senegal

Avanti Communications has signed a five-year partnership agreement with Free which will see the latter firm build and host a new satellite gateway in Senegal for Avanti's HYLAS 4 state-of-the-art Ka-band satellite. HYLAS 4 is Avanti's latest satellite, and the new gateway will extend its coverage to Senegal and the neighboring West African countries of Guinea, Sierra Leone, Guinea Bissau, Gambia, and Liberia, as well as completing Avanti's coverage of Ivory Coast. The expanded coverage will significantly increase access to high-speed satellite internet for the countries' schools, hospitals and communities. The new gateway will also provide satellite backhaul services to Avanti's carrier customers, extending their reach to rural areas and other semi-urban locations where terrestrial networks are currently limited or unreliable. The partnership also aims to have a big impact on education, enabling e-learning services for schools across the region. Free Senegal will build and operate the new gateway from its Tier III data center facility in Diamniadio outside the capital Dakar, adding Avanti as a strategic customer to its growing enterprise business in Senegal and supporting the Government's Digital Senegal 2025 strategy. Pending approval from the Senegalese authorities, the gateway is planned to go live in December 2022. Kyle Whitehill, CEO of Avanti Communications, commented: "This strategic partnership with Free in Senegal demonstrates our commitment to working with local partners in Africa such as Free in order to increase the coverage of our satellite fleet - benefitting countries and territories that are often overlooked when it comes to high-speed broadband."

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WHOLESALE NEWS

Belgium, Luxembourg Internet Exchanges Agree Interconnection

The Belgian Internet Exchange (BNIX) and its Luxembourg counterpart LU-CIX have announced an agreement to interconnect in order to optimise the flow of internet traffic between the two countries. In addition to reducing latency times between the nations, the two bodies noted the interconnection will also ensure greater security for cross-border traffic exchanges, to the benefit of professionals and private individuals who will have a better connection on both sides of the border with their content providers.

Germany Approves New Local Loop Rates

The Federal Network Agency (FNA) has approved the rates for local loop unbundling (LLU) for the ten-year period from July 2022 to June 2032. A rate of EUR10.65 (USD11.17) per month will apply for the copper line section between the end customer and the main distribution frame from 1 July 2022, down from the existing rate of EUR11.19. From the same date, the fee for the copper line section between the end customer and the cable distribution box on the street will decrease from EUR7.05 to EUR6.92 per month. These rates are set to increase by 4% on 1 July 2027 to EUR11.08 and EUR7.20, respectively. The FNA states that the long-term determination of the fees is intended to facilitate the expansion of and migration to fiber-optic networks. The final approval of the rates followed consultation at national and EU level.

Conatel Orders Telcos to Submit Tariff Changes for Approval

Haiti's National Council of Telecommunications (Conseil National des Telecommunications, Conatel) has enacted a new decision relating to tariff changes. As of June 1, 2022 all domestic telecoms operators have been obliged to submit new tariffs for regulatory review on a quarterly basis. Non-compliance will result in companies being sanctioned with a fine equivalent to between 0.5% and 1% of their annual turnover for the previous fiscal year. The decision was announced by Jean Marie Guillaume, Director General of Conatel, on May 31.

New MTR Price Ceilings Take Effect

New rules on the price ceiling for mobile termination rates (MTRs) have taken effect, lowering the maximum MTR to USD0.00129 per minute (excluding General Sales Tax). Sector watchdog the Supervisory Agency for Private Investment in Telecommunications (Organismo Supervisor de Inversion Privada en Telecommuniciones, Osiptel) approved the new rate in April this year, following a public hearing on the matter in February. Under the new regulations the maximum MTR for rural areas was set at USD0.000090 per minute and USD0.001290 for urban areas. The rates apply to all providers. The system for determining MTRs was overhauled in 2018, when the charges were made symmetrical and an annual update mechanism was established. Under that system, urban/rural MTRs for 2021 were lowered to USD0.001620/USD0.000118.

Regulator Rejects Price Hike Claims

Congolese telecoms watchdog the Regulatory Authority of Post and Telecommunications (Autorite de Regulation des Postes et Telecom, ARPTC) has published a statement refuting claims from the Federation of Companies of Congo (La Federation des entreprises du Congo, FEC) that the nation's telcos are preparing to increase tariffs due to the introduction of new taxes on service providers. Agence Ecofin cites the FEC as saying that telcos would increase prices for the services on which the taxes are to be levied and would withdraw certain offers. In its rebuttal the ARPTC explained that operators are required to seek permission from the regulator to review tariffs and that it had not granted permission for any of the nation's providers to increase prices. Further, the ARPTC warned that any provider that illegally raised tariffs or spread misinformation on the matter would be 'severely sanctioned' by the regulator.

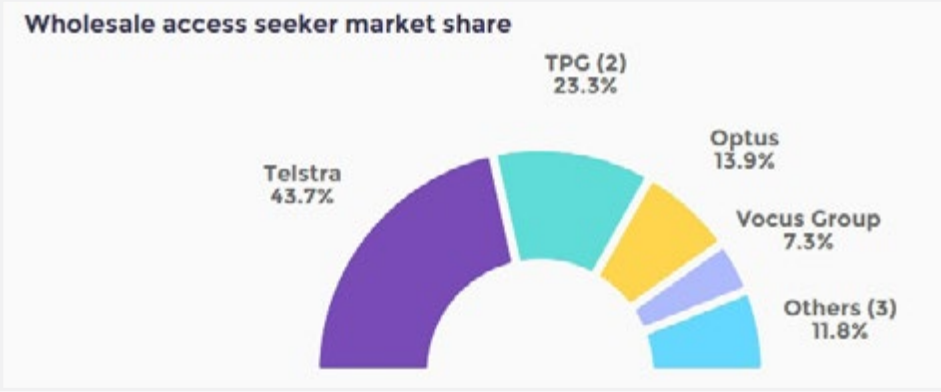
MTN and CamTel Implement National Roaming for 2G, 3G and 4G Networks

MTN Cameroon has announced the signing of a strategic national roaming agreement with CamTel (Blue), which will allow the state-owned operator to expand 2G, 3G and 4G coverage in areas of the country that are not already covered by its network. CamTel's subscribers will benefit from access to MTN's existing network infrastructure, which provides population coverage of 97% for 2G services, 90% for 3G and 70% for 4G services, allowing it to significantly improve customer experience. The move comes as CamTel is gearing up for the commercial launch of its new nationwide GSM mobile service, after unveiling the Blue brand for its operations in August last year. 'One of MTN Group's strategic priorities is to build the largest and most valuable platforms, including network as a service,' said MTN Group President and CEO Ralph Mupita, adding: 'The roaming agreement with state-owned Camtel is a significant development in our work to deliver on this: we are excited to bring our world-class services closer to the people of Cameroon.'

ACM Consults on KPN, Glaspoort Wholesale Fiber Rate Reductions

The Netherlands Authority for Consumers & Markets (ACM) has published a draft decision for public consultation in response to recent proposals from nationwide telco KPN and the latter's joint venture Glaspoort for lower tariffs and better conditions for wholesale access to their fiber-optic networks. According to ACM, the proposed commitments from KPN and Glaspoort could have a significant effect on the market for fixed internet access leading to more competition in the market in terms of price and speed, making it more attractive for households to opt for faster internet. According to ACM's calculation model, the savings for households could amount to EUR200 million (USD216 million) per year in 2026. ACM board member Manon Leijten stated: 'The proposed rate reductions improve the competitive position of access seekers, allowing them to offer more people faster and cheaper internet. The commitments of KPN and Glaspoort – if declared binding – offer market parties clarity and certainty for the next eight years, while they can take effect quickly.' ACM has submitted its draft decision for consultation for six weeks, and will take the comments of interested parties into account when adopting a final decision. If ACM declares the commitments binding, they will take effect immediately.

ACCC Says Smaller ISPs Boosted Market Share in 1Q22 as It Releases Wholesale Indicators Report



Smaller Australian broadband providers increased their market share in the National Broadbandn Network (NBN) wholesale market in the opening three months of 2022, doing so at the expense of the nation's larger operators, the Australian Competition and Consumer Commission (ACCC) has reported. In publishing its latest 'NBN Wholesale Market Indicators Report', the ACCC revealed that in the first quarter of this year Telstra, TPG Telecom and Optus all saw their wholesale market shares decline slightly – to 43.7%, 23.3% and 13.9%, respectively. Vocus, the fourth largest operator in terms of wholesale NBN subscriptions was reported to have remained steady at 7.3%, meanwhile. By comparison, the regulator noted that the combined market share of all other retail service providers increased by almost one percentage point, to 11.8%, with growth led by Aussie Broadband, which increased its market share to 6.1% (up 0.5 percentage points). Commenting on the market development, ACCC Commissioner Anna Brakey said: 'The smaller internet providers are growing, and in doing so they are increasing competition in the residential broadband market … The presence of smaller players with competitive offers is keeping the larger providers on their toes.' Meanwhile, in terms of other key findings from the report, it was revealed that as of 31 March 2022 there were almost 8.7 million residential fixed broadband subscriptions being served via the NBN, of which close to three-quarters were on a plan offering downlink speeds of at least 50Mbps. Notably, however, the number of what the ACCC refers to as 'very high speed services' (i.e. those connecting at 100Mbps or faster) dropped by around 140,000 – or 40% – in the quarter, with this attributed to the end of promotional discounts which had been implemented as part of NBN Co's 'Focus on Fast' campaign, which was launched in October 2020.

Safaricom ET and Ethio Telecom Reach In-Principal Deal on Interconnection, Infrastructure Sharing

Safaricom Telecommunications Ethiopia (Safaricom ET) is reported to have reached an agreement in principle with local telecoms incumbent Ethio Telecom related to interconnection and the sharing of cell sites and tower assets. According to Business Insider Africa, a final agreement remains pending though, with Safaricom ET's Public Relations Manager Tewedaj Eshetu cited as confirming earlier this week that 'we are yet to sign a final agreement'. Meanwhile, with Safaricom ET having been expected to launch a commercial service this month, it would appear that as work towards concluding the deal with Ethio Telecom continues, this will mean a delay to that timetable. Indeed, to that end Michael Joseph, Group Chairman of Kenya-based Safaricom was reported to have said that 'the deal is very important and critical for our commercial viability and launch. Hopefully [we will launch] soon but we don't have a date yet'.

JCRA Publishes Key Findings and Recommendations from Retail Pricing Study

The Jersey Competition Regulatory Authority (JCRA) has published its key findings and recommendations resulting from a market study into retail prices for broadband, fixed line and mobile phone services in Jersey. Having announced the start of the study back in November 2021, when it set out its aim to assess how prices in the Bailiwick's telecoms markets compare internationally with other similar jurisdictions, including Guernsey and the Isle of Man, the JCRA has concluded: that consumers benefit from a competitive market; that the price people pay for telecoms services in Jersey is below average when compared to other similar-sized jurisdictions; and that Jersey is more expensive than the UK for mobile voice and data services, and selected 'bundled' packages but generally less expensive for high speed fixed broadband. With regards to the recommendations made by the JCRA in light of its study, meanwhile, in future work programmes the regulator said it will take further steps to address problems consumers may face in switching between service providers. Further, the watchdog said it will also take into account other service considerations, wider than just pricing, in its future work, specifically saying one key focus will be on consumer protection as it relates to contractual terms and compensation. Finally, the JCRA confirmed that it will work with Teligen, a division of Strategy Analytics – which supported the Authority's work on the retail price study – to track prices on an annual basis, with a full report update to be carried out after an 'appropriate period' has passed.

MTN and Vodafone Ghana Sign National Roaming Agreement

MTN Ghana and Vodafone Ghana have announced a strategic partnership to pilot national roaming services in the Volta Region as a first step towards a broader nationwide agreement. The deal will see Vodafone expand its mobile network coverage by leveraging MTN's infrastructure in this pilot phase. In a statement, Vodafone Ghana CEO Patricia Obo-Nai said: 'The implementation of national roaming will enable Vodafone Ghana customers to stay connected in areas outside our current locations of coverage. This is especially important for rural communities as national roaming invariably provides a greater choice of network providers.' MTN Ghana CEO Selorm Adadevoh added: 'MTN fully supports the government's national roaming plans. We acknowledge that national roaming will extend network coverage for Ghanaians nationwide and support the growth of the Ghana telecommunications industry … Over the coming months, the outcome of the pilot will be instrumental in the development of the next phase of the partnership to cover more complex technical configurations for nationwide roaming on either network.' The agreement is part of a wider plan by the Ghanaian government to facilitate universal access and accelerate the country's digital transformation by implementing a full national roaming regime among all operators in the country. As previously reported by CommsUpdate, Glo – the country's smallest mobile network operator by subscriptions – entered a nationwide roaming agreement with rival AirtelTigo last week in a bid to provide wider coverage and a faster internet experience for its customers.

Glo Enters National Roaming Agreement with AirtelTigo

Ghanaian mobile network operator (MNO) Glo has entered into a nationwide roaming arrangement with AirtelTigo for voice, data and SMS services in a bid to provide wider coverage and a faster internet experience for its customers. A joint statement issued by the two companies assured customers that all other conditions of service remain unchanged on the Glo network under the agreement, which saw all Glo subscriptions automatically connected to the AirtelTigo network from 23 April. This means customers will continue to recharge with Glo's scratch cards or electronic credit transfers and enjoy all existing Glo products including Value Added Services. Having struggled with quality of service (QoS), operational performance and debt issues since entering the Ghanaian mobile market in 2012, Glo has failed to mount any significant challenge to rival MNOs MTN Ghana, Vodafone Ghana and AirtelTigo, claiming 847,057 subscriptions and only a 2.1% share of the market at end-December 2021.

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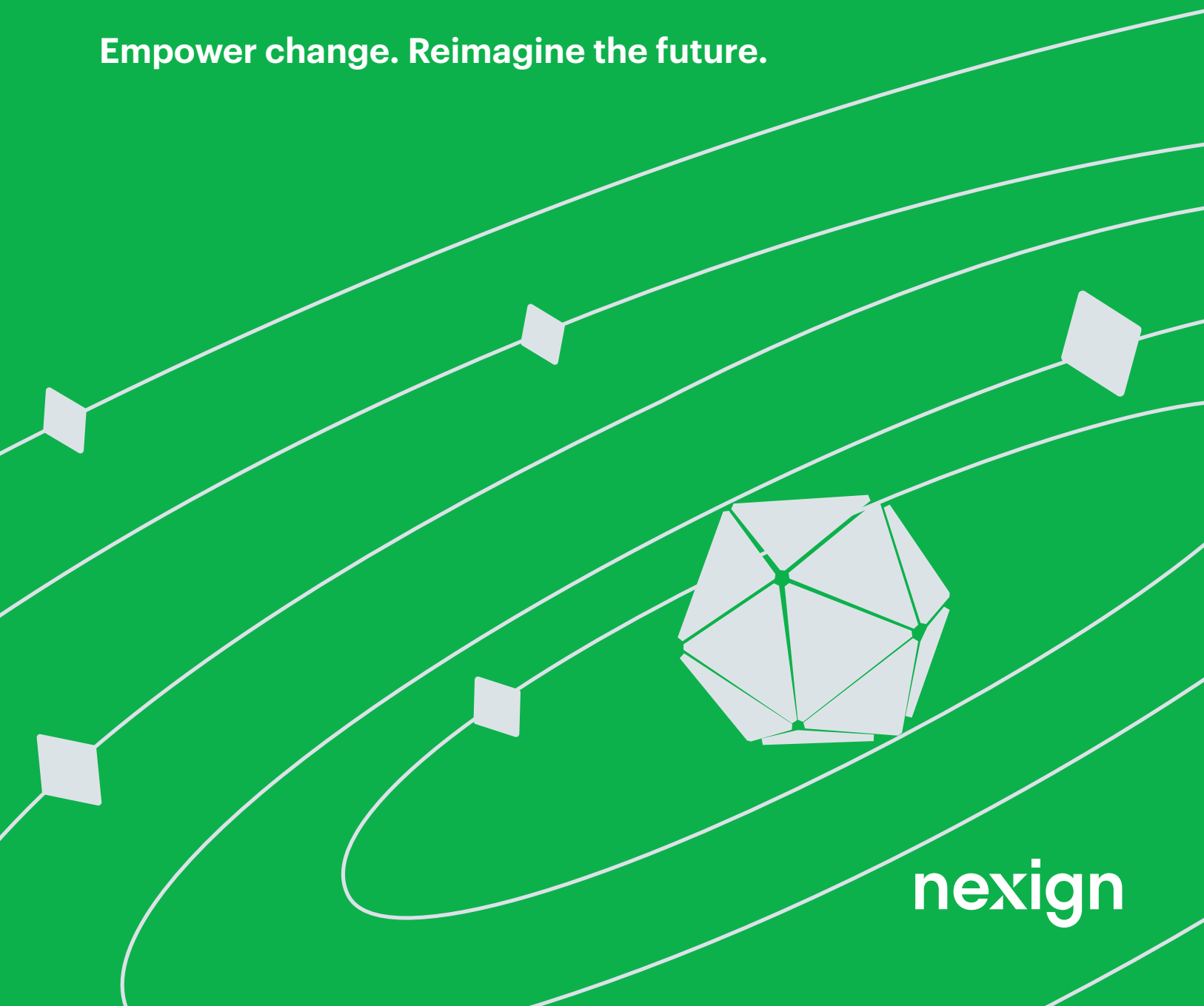

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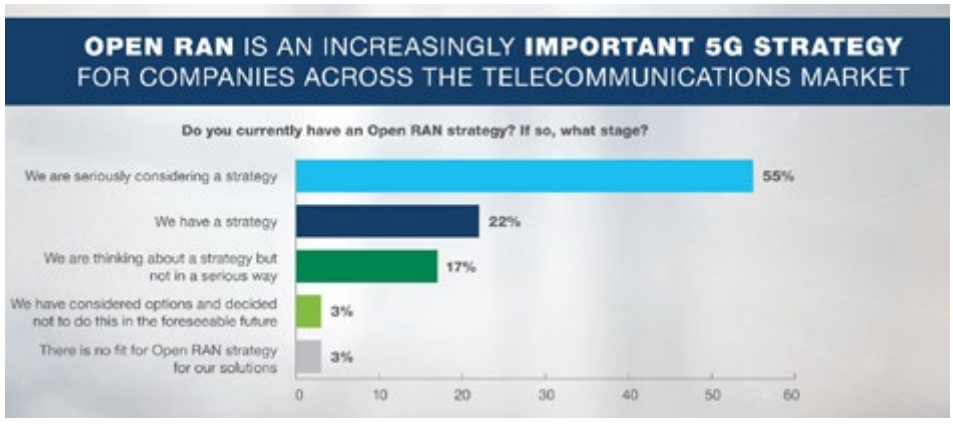
TECHNOLOGY NEWS

Open RAN Tipped to Take Off in Next 2 Years

Research by US manufacturing services company Jabil pointed to growing traction around open RAN, with a majority of businesses involved in the implementation or adoption of 5G expecting the approach to be a serious contender within the next two years. A survey of 193 companies conducted for Jabil by SIS International Research found 57 per cent expect open RAN to be ready for widespread deployment in the timeframe, with 22 per cent already establishing a roadmap. The research also showed 55 per cent of respondents were "seriously considering an open RAN strategy". Jabil stated participants believe open RAN "will reduce capital and operational expenditures". Some 44 per cent of respondents believe cloud service providers including Google Cloud, AWS and Microsoft Azure have a role in open RAN strategies, while 67 per cent which have an existing strategy for the approach stated these companies fit into their plans. The companies were bullish on 5G's prospects, with 65 per cent citing it as a superior technology which will "dramatically transform telecommunications", an increase of 16 per cent compared with the first survey in 2018. Most respondents (64 per cent) agreed it would take one-to-three years before 5G technology was widely adopted, with 32 per cent citing lack of spectrum as the biggest challenge for deployments. Additional business model challenges for 5G include the creation of subscription models (31 per cent); government regulations (27 per cent); and erosion of market share by OTT providers (25 per cent). Open RAN has its fair share of critics. In March, Strand Consult founder John Strand predicted the approach would account for less than 1 per cent of 5G mobile sites in 2025 and not more than 3 per cent by 2030.



Bell Ready to Deploy '5G+' with 3.5GHz Spectrum

Bell Canada announced this week that it is 'poised' to begin deploying the 3500MHz band spectrum it won last summer to expand and upgrade 5G services in urban and rural markets across the country. Bell says that the addition of 3500MHz frequencies to its 5G network will give customers a faster experience with peak theoretical download speeds of 'up to 3Gbps in select areas' under the '5G+' banner. Bell added that 5G customers with compatible devices will 'soon' have access to 5G+ capabilities, starting with Toronto, and it will work towards offering 5G+ coverage to approximately 40% of the Canadian population by the end of 2022. Bell's existing 5G network currently covers over 75% of the population. Bell's rival Rogers Communications claimed a Canadian first with the start of live 3500MHz 5G deployments this week.

Orange Poland Has Over 1m Active 5G Devices

Orange Poland says it now has more than one million 5G devices on its network. The firm added that 47% of all handsets sold during April this year were 5G-capable, with over 100 devices in its 5G line-up. Orange is Poland's largest mobile provider, with 14.4 million subscriptions and around 29% of the overall market in subscription terms.

Cell C to Deploy 5G Across Its Network

South African mobile operator Cell C is planning to add 5G technology to its network, according to company CTO Schalk Visser. Agence Ecofin writes that the company is currently in talks with its infrastructure partners to deploy the technology, though the date of the commercial launch has not yet been disclosed. TeleGeography notes that Cell C secured 10MHz in the 3500MHz band in March 2022 for ZAR288 million (USD18 million). Cell C has moved almost 50% of its network to virtual Radio Access Network (vRAN), allowing it to run its operations as software on other network operators' hardware. These upgrades will make it easier for the company to expand 5G across the country.

EU Reaches Deal to Enforce USB-C in 2024

European Union (EU) lawmakers reached an agreement following years of wrangling for USB-C to become the common charging port for devices in the bloc by late 2024, a landmark move that could have major ramifications for Apple. In a statement, European Parliament and European Council negotiators said a deal had been reached to enforce new rules requiring manufacturers to use USB-C charging in products, meaning consumers no longer need a different charging cable every time they purchase a new device. The majority of smartphones already offer USB-C, although Apple is an exception, with iPhones using its Lightning connector. Apple sold 56 million iPhones in Europe in 2021. The new rules will require mobile phones, tablets, e-readers, earbuds, digital cameras, headphones, headsets, handheld gaming consoles and portable speakers to be equipped with a USB Type-C port, regardless of their manufacturers. Laptops will also have to be adapted to the requirements by 40 months after the rules comes into force. Furthermore, charging speed will also be harmonized for devices that support fast charging, added the statement, allowing users to charge their devices at the same speed with any compatible charger.

E-waste

The European Commission first began a campaign for a common charging port in 2009, in a bid to curb e-waste, and a proposal was drafted in 2021. Now that an agreement has been reached on the scope, the legislation will need to be approved formally by the EU parliament and council later this year, which appears to be a formality. The EU estimates the obligations will lead to more re-use of chargers and help consumers save up to €250 million a year on unnecessary charger purchases. Disposed and unused chargers are estimated to represent about 11,000 tons of e-waste annually. "Today we have made the common charger a reality in Europe," said European Parliament rapporteur Alex Saliba.

One Montenegro Claims Record 5G Transfer Rate in Testing

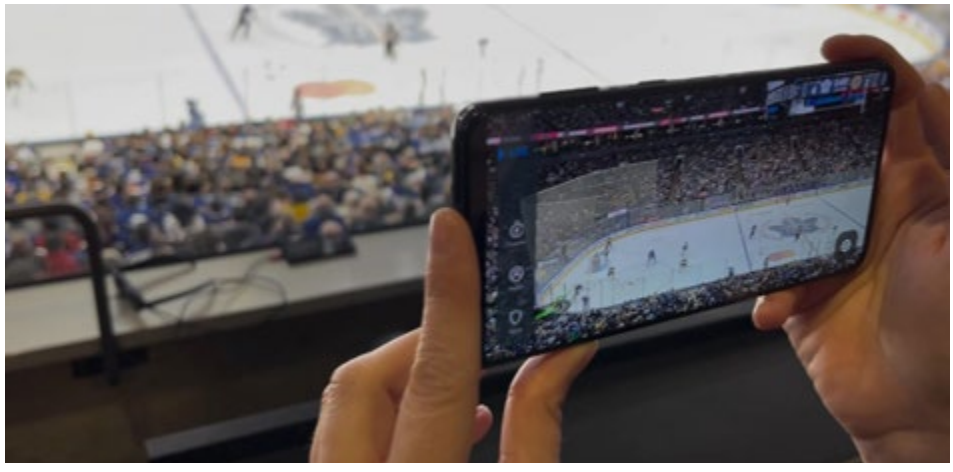
Following deployment of its first 5G base transceiver station (BTS) in the capital Podgorica last week, mobile network operator (MNO) One Montenegro (formerly Telenor Montenegro) claims to have achieved a data transfer rate of over 1.6Gbps during testing – said to be the fastest 5G speed recorded in the country to date. 'One is building a network for the future, which will provide much more than dizzying speeds – it will enable further development of supporting industries and start a completely new era of interconnected devices,' commented Branko Mitrovic, who thanked the Agency for Electronic Communications and Postal Services (EKIP) for authorizing the temporary use of 3.6GHz spectrum for testing. With the support of its new owner, Hungary's 4iG, Mitrovic also reiterated One remains committed to accelerating investment in 5G networks and will bid for additional frequency resources during EKIP's multi-band auction scheduled for the second half of the year.

Vodafone Launches First IoT Tracker for Consumers in Qatar

Vodafone Qatar has launched its first consumer Internet of Things (CIoT) product, the Vodafone Smart Tracker, a new multi-purpose tracking solution that is able to locate users' valuables, such as wallets, bags, luggage, laptops, motorbikes and even cars. The Vodafone Smart Tracker is built on the Vodafone IoT Platform. It enables users to find and track their most important belongings locally and globally, through a dedicated app, developed in-house by Vodafone, and is available to download on both Android or IOS devices. The new consumer IoT tracking solution is lightweight, easy to carry and comes with a built-in SIM, providing connectivity when users are on the move. Unlike Bluetooth-only trackers, the Vodafone Smart Tracker uses three different tracking technologies; GPS, Wi-Fi and cellular, to provide a more reliable connection for customers. The new Vodafone Smart Tracker's versatility means that users can keep track of their items not only in Qatar, but also while traveling in more than 155 countries. According to Business Insider, by 2026 there will be 64 billion smart devices globally. The launch of the Vodafone Smart Tracker shows the continued commitment of Vodafone Qatar to this rapidly evolving sector. Diego Camberos, Chief Operating Officer at Vodafone Qatar said: "We are excited to enhance our product portfolio with an innovative, brand new, first in the market solution, which makes our customers' lives easier and more comfortable than ever before. Our own research has demonstrated just how important it is to create a versatile product that allows users to keep track of their belongings and stay connected to what matters most, and our IoT Platform has enabled us to respond to the clear consumer demand". This launch is the first in a series of new smart products that will be unveiled by Vodafone Qatar over the coming months.

Rogers' 3500MHz 5G Goes Live

Rogers Communications announced that it has started to deploy its 5G 3500MHz spectrum holdings, with the first location going live in Nanaimo, British Columbia. The company will continue its deployment across Canada, including the urban centers of Calgary, Edmonton, Montreal, Ottawa, Toronto and Vancouver and multiple rural areas. More regions will follow as they are released according to the regulatory timetable. Rogers highlighted that adding the 3500MHz band to its existing 5G network increases capacity and will boost speed and deliver ultra-low latency, paving the way for future service possibilities for consumers and business customers – from augmented reality and machine learning to smart homes, vehicles and cities. Tony Staffieri, President and CEO of Rogers Communications, said: 'As the country's biggest investor in 5G spectrum and the first to launch 3500MHz … today's deployment builds on our foundational 5G investment in low-band 600MHz spectrum, so we can usher in a new era of mobile and fixed wireless broadband that will create jobs, fuel innovation and keep our economy competitive.' Rogers' press release gave examples of new solutions being made possible by 5G, including network slicing in the healthcare sector, supporting remote diagnostic capabilities to provide real time images and X-rays to health care providers as they work en route to health centers in ambulances. As another example, using 5G Mobile Edge Computing (MEC), port authorities will remotely control autonomous haulage vehicles in real-time to improve safety.



Telia Finland Extends SA Across Entire 3.5GHz 5G Network

Telia Finland has announced that it has enabled Standalone (SA) 5G functionality across its entire 5G network. The cellco's SA 5G core went live in 20 locations in November 2021 but has now been extended in line with Telia's Non-Standalone (NSA) 5G footprint. Telia notes that SA 5G users can expect to experience lower latency and a more stable connection, especially when indoors. In addition, the upgrade allows Network Slicing, meaning that features previously restricted to private networks will now be available on public networks. According to its website, Telia's 5G network currently covers 3.7 million people, equivalent to around two-thirds of the Finnish population. The NSA network combines 3.5GHz spectrum with 4G frequencies in the 700MHz band, while the SA network exclusively leverages the 3.5GHz band.

China Telecom Trials FAST Solution to Deepen 5G Multi-Frequency Co-Ordination

ZTE Corporation and the Hunan Branch of China Telecom – in cooperation with Qualcomm Technologies – have completed an end-to-end trial of a Fusion Assisting Super TDD (FAST) solution. By flexibly aggregating three frequency carriers in the 2.1GHz and 3.5GHz bands, the solution significantly improved 5G uplink/downlink throughput. This trial showed that the FAST solution offers excellent spectrum harmonisation for coverage and capacity both in downlink and uplink. The Hunan Branch of China Telecom deployed the FAST solution in its commercial network in Changsha city, bolstered with ZTE RAN system and a smartphone test device powered by the Snapdragon X65 5G Modem-RF System, Qualcomm Technologies' fourth generation 5G modem-to-antenna solution. The commercial trial of downlink tri-band carrier aggregation (3C) of 2.1GHz and 3.5GHz with up to 240MHz aggregation bandwidth achieved a maximum downlink data rate of 3.9Gbps. In addition, with the feature of UL Tx Switching of Rel-16, Uplink Time Division Mode Carrier Aggregation (UL TDM CA) of 2.1GHz and 3.5GHz is enabled to boost uplink data rate up to 511Mbps.

Telekom Rolls Out 5G in 700MHz Band

Telekom Deutschland, the domestic fixed and mobile unit of Deutsche Telekom (DT), has announced that it has started using the 700MHz frequency band for its 5G network.

The new service, which utilizes 10MHz of spectrum, will be primarily used to improve mobile coverage in rural areas. More than 3,000 antennas are transmitting 5G at 700MHz, corresponding to about 1,100 antenna locations. Telekom's 5G network is now using three frequency bands, namely 700MHz, 2100MHz and 3.7GHz, providing combined coverage of 92% of the population. More than 67,000 5G antennas are transmitting on Telekom's network; 3.7GHz services are available in more than 400 cities and towns, while all sites using 3.7GHz and 700MHz frequencies also support 5G Standalone (5G SA) technology. They are connected in parallel to both the existing core network and the 5G SA core network. At present, 8,000 Telekom antennas can transmit signals with 5G SA. 'In the course of the expansion, the use of the 700MHz frequency band for 5G is the logical continuation of our spectrum strategy. We want to offer our customers the best network at all times and everywhere. We are thus reaching even more people nationwide with fast internet and improving 5G coverage in rural areas. This is how we create a real value for our customers,' said Walter Goldenits, head of technology at DT.

Unitel Signs Three-Year Huawei Deal on RAN, Other Services

Angola's mobile market leader Unitel has signed a new three-year framework agreement with its long-term Chinese vendor partner Huawei incorporating 'a complete series solution' including Radio Access Network (RAN), transmission network and other aspects such as Customer Experience Management (CEM) and residential solutions. Unitel's press release says that via the partnership it will 'continuously increase network capacity and coverage, incubate 5G innovation, provide better services and enhance the optimal user experience, while ushering in a new era of green, low-carbon telecommunications.' Unitel general manager Miguel Geraldes added: 'Unitel is committed to accelerating the digitization of industry with leading ICT providers to illuminate Angola's industrial and development.' Chu Xiaoxin, CEO of Huawei Angola, noted: 'Since entering the Angolan market in 2002, Huawei has been committed to bringing cutting-edge technologies and advanced solutions to Angolan society.'

T-Mobile US Launches Commercial Voice-Over-5G

T-Mobile US has announced the launch of commercial Voice-over-5G (Voice-over-New Radio [VoNR]) in limited areas of Portland (Oregon) and Salt Lake City, with plans to expand the service to 'many more areas' this year. VoNR – based on 5G Standalone (5G SA) network technology – is initially accessible on the Samsung Galaxy S21 5G smartphone, and will be useable on various other 5G smartphones later in the year, including the Galaxy S22. T-Mobile's 5G SA network boasts nationwide coverage, and the cellco's latest press release adds that with VoNR it can 'keep devices always connected to 5G and enable future transformative applications that require a seamless 5G connection,' adding that 'Standalone 5G removes the need for an underlying 4G LTE network and 4G core, so 5G can reach its true potential.' VoNR was implemented on the T-Mobile network using Ericsson solutions and underpinned by Nokia's radio and core technology. Fredrik Jejdling, Head of Business Area Networks at Ericsson, declared: 'The commercial launch of the VoNR service is another important step in T-Mobile's successful 5G deployment,' while Tommi Uitto, President of Nokia Mobile Networks, called the VoNR deployment 'a critical step forward for the new 5G voice ecosystem'.

Brisanet Acquires Huawei Antennas for 5G Pilot

Brazilian regional ISP Brisanet has confirmed that it has invested BRL230 million (USD44.7 million) in Huawei mobile equipment ahead of its planned 5G pilot. TeleGeography notes that the Ceara-based company acquired a trio of 5G concessions in last year's multi-band spectrum auction: a pair of 80MHz 3.5GHz licenses covering the Northeast and Midwest, plus a 50MHz block of 2.3GHz spectrum covering the Northeast.

Nextlink Achieves Gigabit Speeds Using 6GHz Band

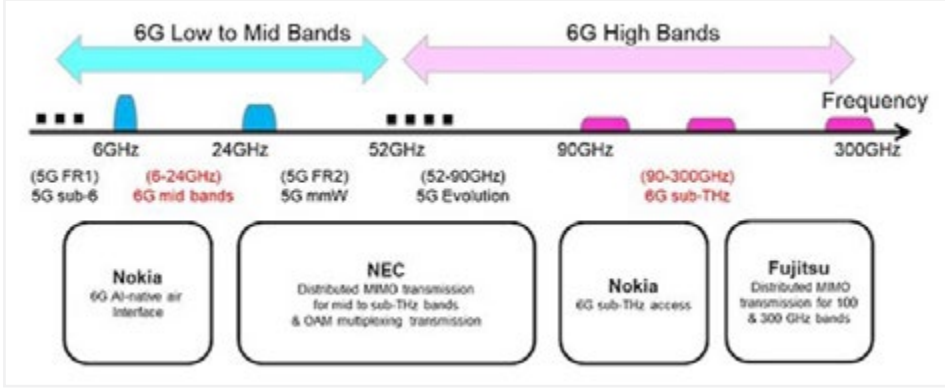
US fixed wireless access operator Nextlink Internet has announced that it achieved download speeds of up to 1Gbps (500Mbps upload) using an experimental 6GHz license issued by the Federal Communications Commission (FCC). The ISP utilized equipment from Cambium Networks and Qualcomm to support the trial. Bill Baker, founder and CEO of Nextlink Internet, commented: 'Upon full commercial deployment later this year, we look forward to rolling out gigabit speed plans in the entirety of our existing fixed wireless service network plus our prospective network expansion for the FCC's Rural Digital Opportunity Fund (RDOF) program. Ultimately, this expansion of gigabit fixed wireless will cover over four million of households and businesses.' Founded in 2012, Nextlink currently offers fixed wireless broadband services across parts of Texas, Oklahoma, Kansas, Nebraska, Illinois, South Dakota and Iowa.

Cable Bahamas Selects Nokia for XGS-PON FTTH Rollout

Finnish vendor Nokia has been selected by Cable Bahamas (REV) to deploy XGS-PON equipment for its new fibre-to-the-home (FTTH) network. The project aims to pass 99% of the homes in New Providence by 2026. Nokia will be the sole FTTH equipment vendor for the rollout, and will provide Cable Bahamas with its complete solutions portfolio. Stephen Curran, chief technical officer at the Cable Bahamas Group, stated: 'I am very happy to be working with Nokia to allow us to provide our customers with an upgraded user experience. At the end of this exercise we will boast the most advanced FTTH network in the entire region with XGS-PON technology.' New Providence – the Bahamas' most populous island – is understood to be home to around 80,000 residential properties and business locations.

DOCOMO and NTT to Work with NEC, Fujitsu and Nokia on 6G 'Experimental Trials'

NTT DOCOMO and Nippon Telegraph and Telephone Corp (NTT Corp) have announced their intention to work with mobile technology vendors Fujitsu, Nokia and NEC to develop new technologies for the targeted commercial launch of sixth-generation (6G) services by around 2030. The realization of 6G is one of the most important goals envisaged in the NTT group's Innovative Optical and Wireless Network (IOWN) project for launching all-new communication infrastructure. DOCOMO and NTT will begin conducting indoor trials within the fiscal year ending in March 2023, and outdoor trials will begin in the following fiscal year. For its part, NEC released a press release yesterday (6 June), confirming its intention to work with the Japanese telcos on 'experimental trials' of 6th generation mobile communication systems. The press release noted that the vendor will work with the pair on 'a distributed MIMO technology' capable of using the mid-band 6GHz, or 'higher to the sub-terahertz band', as well as OAM multiplex transmission technology that 'realizes large capacity by spatial multiplexing of high-frequency band radio waves. The release went on to note: 'NEC will also conduct R&D on device technologies for reducing size and power consumption, as well as high-precision beamforming technologies, transmission methods and propagation models suitable for high-frequency bands. This is in addition to the development of optimization and signal processing technologies utilizing AI. NEC aims to develop and realize these technologies for supporting the start of 6G services by DOCOMO and NTT near 2030.'



UScellular Enlists Ericsson for C-Band, 3.45GHz 5G Rollout

United States Cellular (UScellular) has enlisted Ericsson to help accelerate the ongoing enhancements to its 5G network. The deal includes the deployment of UScellular's recently acquired C-band and 3.45GHz spectrum and opens up the opportunity for the cellco to explore enhanced fixed wireless access (FWA). It adds to UScellular's existing deployment of Ericsson RAN technologies, including low-band (600MHz) and millimeter wave (mmWave, 24GHz/28GHz) 5G equipment. UScellular expects to activate its mid-band spectrum for customer use by the end of 2023. The two companies note that the contract builds on a decade of collaboration dating back to the cellco's initial launch of 4G back in March 2012. UScellular acquired 254 C-band licenses in the Federal Communications Commission (FCC) Auction 107 sale, paying a total of USD1.46 billion. In Auction 110, meanwhile, US Cellular paid USD579.6 million for 380 licenses 3.45GHz licenses.

UK Cellco to Reach 50% of the Population with 5G

British mobile network operator (MNO) EE has announced that its 5G network is now available to more than 50% of the UK population, claiming to be the first of the country's cellcos to achieve this milestone. In a press release regarding the development, the MNO said it had extended coverage to a number of new locations, while also saying it was offering an 'improved 5G service' in others. The locations where service has either been made available or improved comprise: Blackpool, Clacton-on-Sea, Clitheroe, Cowes, Eastbourne, Exeter, Exmouth, Falmouth, Great Malvern, Hastings, Inverness, Minehead, Morecambe, Plymouth, Pontypridd, Poole, Ross-on-Wye, Salisbury, St Austell and Tiverton. Marc Allera, CEO Consumer Division at EE parent company BT Group, said: 'Today's milestone is a huge achievement in our 5G journey. EE was the first network to launch 5G in the UK and now we're the first mobile network operator to take the technology to 50% of the UK population. Our ambitions for 5G don't stop here. We'll continue to invest in our network to provide our customers with unrivalled connectivity.' Meanwhile, as part of its ongoing network investment EE has pledged to offer 5G anywhere in the UK by 2028 through its macro network and 'on demand' connectivity solutions.

VNPT and Casa Systems Sign MoU for 5G Technologies in Vietnam

Casa Systems has announced the signing of a memorandum of understanding (MoU) with telecoms operator Vietnam Posts and Telecommunications Group (VNPT) for next generation 5G technologies in Vietnam. The MoU will explore 5G technologies, including cloud-native 5G Core, RAN and Fixed Wireless Access (FWA) solutions. VNPT Group is in the process of implementing its 5G network development strategy and developing a portfolio of digital services to meet the needs of corporate, government and consumer customers. As part of the agreement, both companies will explore the potential of 4G and 5G technologies across various use cases including public and private networks, in-building solutions and home networking. 'The cooperation with Casa Systems helps VNPT rapidly develop digital services, learn new technologies as well as take advantage of the resources of experts and experiences from Casa Systems in joint researching and building solutions and services suitable to the needs of the Vietnamese market, as well as improving the capacity of VNPT Group,' said Huynh Quang Liem, General Director of VNPT Group, adding: 'This MoU is the basis for a more detailed exploration of Casa Systems' solutions both technically and commercially, conducting technical trials to get ready for deployment when 5G services are officially commercialized.'

Optus and Nokia Claims World's First 3CC 5G Standalone Data Call

Australian mobile operator Optus and Finnish vendor Nokia have announced that they achieved a data session using 3 Components (3CC) Carrier Aggregation (CA) technology over a 5G Standalone (SA) network in Australia, claiming this to be 'the first time this has been done using a commercial smartphone'. In a press release regarding the development, it was noted that in the trial – which combined one FDD band carrier (2100MHz) with two TDD band carriers (2300MHz + 3500MHz) using CA technology – Nokia had used its latest commercial AirScale Baseband and radio portfolio powered by its Reefshark chipset over Optus' commercial network. Lambo Kanagaratnam, Vice President of Networks at Optus, said of the matter: 'We're always looking at ways that we can further optimize our network performance to benefit our customers. Once available commercially, this 3 NR Carrier operation will enable customers to achieve a higher 5G download speed at more places improving their overall 5G experience. Our Samsung Galaxy S22 customers will soon be the first to benefit from this technology enhancement with other handsets to follow shortly after.'

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REGULATORY NEWS

CITC Announces Its Intention to Launch the Emerging Technologies Regulatory Sandbox and Invites Those Who are Interested to Participate

The Communication and Information Technology Commission (CITC) announces its intention to launch of the Emerging Technologies Sandbox. The sandbox aims to provide a flexible and nurturing regulatory environment that will enable businesses to test and deliver innovative business models, solutions and services, which will accelerate digital transformation and maximize the beneficial use of emerging technologies. CITC invites businesses with innovative business models, products and services enabled by emerging technologies to visit the link and register their interests. Applications for the ET Regulatory Sandbox will be open on 10 May 2022. It is worth mentioning that CITC has previously launched the Regulatory Sandbox for innovative solutions developed by telecom service providers and the Regulatory Sandbox for delivery applications, in order to provide an attractive environment that stimulates development and innovation.

39 Bidders Line Up for US 2.5GHz Auction; FCC Also Receives 54 Incomplete Filings

The Federal Communications Commission (FCC) has confirmed that it has received 39 'complete' applications from bidders interested in participating in Auction 108, alongside a further 54 'incomplete' filings. The auction, which will offer new flexible-use geographic overlay licences in the 2.5GHz band, is scheduled to begin on 29 July 2022. Notable bidders on the complete list include: AT&T Spectrum Holdings, United States Cellular Corporation (UScellular), T-Mobile License (T-Mobile US) and Cellular South Licenses (C Spire). (Note: according to Fierce Wireless, DISH Network is registered as Carbonate Wireless.) In the US overseas territories, meanwhile, bidders include AST Telecom (Bluesky) in American Samoa and DOCOMO Pacific, which operates in Guam and the Northern Marianas Islands. The list of bidders who have filed incomplete paperwork includes the likes of Cellco Partnership (Verizon Wireless) and overseas operators such as Aeronet Wireless Broadband and Puerto Rico Telephone Company (Claro), PTI Pacifica (IT&E) and TeleGuam Holdings (GTA).

Global Potential of Internet Remains Largely Untapped, Says UN Agency for Digital Technology

The immense potential of the Internet for social and economic good remains largely untapped despite 30 years of steady growth, according to a new report from the International Telecommunication Union (ITU), the United Nations specialized agency for information and communication technologies. Launched to coincide with the opening of ITU's World Telecommunication Development Conference in Kigali, Rwanda, the Global Connectivity Report 2022 argues that while easy, affordable access to fast broadband is near-ubiquitous in most rich-world nations, vast swaths of humanity remain excluded from the immense possibilities offered by the online experience, stunting economic development and deepening global inequalities. While the number of Internet users surged from a just a few million in the early 1990s to almost five billion today, 2.9 billion people – or around one third of humanity – still remain totally offline, and many hundreds of millions more struggle with expensive, poor-quality access that does little to materially improve their lives. The report advocates for putting 'universal and meaningful connectivity' – defined as the possibility of a safe, satisfying, enriching, productive, and affordable online experience for everyone – at the center of global development. It also evaluates how close the world is to achieving that universal and meaningful connectivity, using the connectivity targets for 2030 recently released by ITU and the Office of the UN Secretary-General's Envoy on Technology. The cost of broadband subscriptions and digital devices remains a major barrier to connectivity, the report confirms. Although the cost of broadband – especially mobile broadband – has fallen significantly over the past decade, the majority of low- and middle-income economies still fall short of the global affordability target of 2% or less of gross national income per capita set by the Broadband Commission for Sustainable Development. “Equitable access to digital technologies isn't just a moral responsibility, it's essential for global prosperity and sustainability," said ITU Secretary-General Houlin Zhao. “We need to create the right conditions, including promoting environments conducive to investment, to break cycles of exclusion and bring digital transformation to all." While the COVID-related surge in demand for Internet access brought some 800 million additional people online, it also dramatically increased the cost of digital exclusion, with those unable to connect abruptly shut out of employment, schooling, access to health advice, financial services, and much more. “Universal, meaningful connectivity has become the global imperative for our decade," said Doreen Bogdan-Martin, Director of ITU's Telecommunication Development Bureau, which produced the report. “It's no longer just about linking people – the catalytic role of connectivity will also be absolutely critical to our success in achieving the UN Sustainable Development Goals." Still looking for the 'missing link' 'The Missing Link' report, published in 1984 by the Independent Commission for World-Wide Telecommunications Development set up by ITU , identified a clear correlation between access to telecommunications and socio-economic development and urged all countries to make connectivity a priority. Nearly 40 years on, that 'missing link' still persists, but has morphed to multiple digital divides:

- The Income Divide – the level of Internet use in low-income countries (22%) remains far below that of high-income countries, which are approaching universal use (91%)
- The Urban-Rural Divide – the share of Internet users is twice as high in urban areas as in rural areas
- The Gender Divide – globally, 62% of men are using the Internet, compared with 57% of women
- The Generation Divide – in all regions, young people 15-24 year are more avid Internet users (72% online) than the rest of the population (57%)
- The Education Divide – In nearly all countries where data are available, rates of Internet use are higher for those with more education – in many cases, far higher.

The report notes that the biggest challenges in connecting the unconnected are no longer related to network coverage, but rather to uptake and use. With just 5% of the global population still physically out of reach of a mobile broadband signal, the 'coverage gap' is now dwarfed by the 'usage gap': some 32% of people who are within range of a mobile broadband network and could theoretically connect still remain offline, due to prohibitive costs, lack of access to a device, or lack of awareness, skills, or ability to find useful content.

Youth

Only 40% of school-age children have home access to the Internet, with many only able to access online services via a mobile phone with limited functionality for activities like e-learning. Access and digital skills are key to ensuring that children and youth enhance their prospects, and there is growing recognition that all stakeholders need to collaborate more effectively to protect youth from online risks and harm. Issues directly affecting young people's digital access and experience were debated at ITU's first-ever Generation Connect Global Youth Summit, which took place in Kigali, Rwanda, from 2-4 June, just ahead of the opening of the WTDC.

Saudi Arabia Grants Three Licenses for Digital Government Transformation

Saudi Arabia has issued interim licenses to three companies for digital government business, state news Saudi Press Agency reported. Elm for Information Security, Takamol Business Services, and Thiqah have been granted licenses to develop and operate 15 existing digital government platforms and products. Saudi Arabia, alongside other Gulf governments, are actively digitally transforming government entities and services. The Governor of the Digital Government Authority, Eng. Ahmed bin Muhammad Al-Suwayan, stated that granting these licenses comes to achieve the objectives of the authority and carry out its functions, as these interim licenses are one of the outcomes of the "Experimental Regulatory Environment for Digital Government Business" initiative launched by the authority in November of 2021, through which the authority seeks to raise the efficiency and quality of digital platforms, ensure business continuity, regulate property rights for government digital platforms and products, govern the mechanism of data sharing and prices of services provided in a way that contributes to improving the investment environment to support entrepreneurs, strengthening the partnership between the public sector and private sector, and accelerating the growth of the digital economy to achieve the strategic directions of the digital government and the objectives of the Saudi Vision 2030. The list of platforms and products included "Wasl", "Naql", "Maritime Transport", "Taajeer", "Washaj" and "Drones" of the "Elm" company. "Ajeer", "Qiwa", "Musaned", in addition to "Donate" of "Takamol" Company, besides "Etimad", "Saber", "Ehkam", "Al-Muwathaq", and "Sedr" of "Thiqah" Company. These platforms and products are affiliated with 10 government agencies, which are; The Ministry of Human Resources and Social Development, the Ministry of Justice, the Food and Drug General Authority, the Public Transport Authority, the Saudi Standards, Metrology and Quality Authority, the State Properties General Authority, the National Center for Government Resource Systems, the National Center for the Development of the Non-Profit Sector, and the Saudi Federation for Cybersecurity, Programming and Drones.

GCRA Begins Consulting on Quality of Service Framework for Broadband Services

A consultation on proposals for a quality of service (QoS) framework for both fixed and mobile broadband services has been launched by the Guernsey Competition and Regulatory Authority (GCRA). According to the watchdog it is looking to determine whether broadband service providers should be required to measure and publicly report on QoS performance. Further, its consultation paper also asks whether an independent broadband price comparison tool that provides more easily accessible, comparable pricing information on broadband offers from all Guernsey broadband service providers, should be established. As per the proposals being considered, the GCRA has suggested that operators providing broadband services would be required to: measure their QoS performance across several technical (e.g. internet access speed) and customer service (e.g. fault repair time) parameters; publish regular reports (every three months) on their performance on their websites, in a clear and consistent way that allows easy comparison across operators; and provide broadband plan information to an independent comparison website. In terms of the scope of the GCRA's proposals, it has noted that the framework would distinguish between network operators and service providers in the provision of fixed broadband services 'to account for differing levels of control over network assets. Further, the regulator has said the framework will apply separately to fixed and mobile broadband services, and, for particular technical parameters, such as internet access service speed and latency, the framework is expected to be applied at the product level.

ITU/UNESCO Broadband Commission Urges Faster Global Action on Digital Development

The Broadband Commission for Sustainable Development met in Kigali, Rwanda, this weekend to pinpoint new actions that can drive faster progress towards universal meaningful access to digital networks and services. The high-level advocacy group came together for its annual Spring Meeting at the invitation of the Commission Co-Chair, H.E. President Paul Kagame of Rwanda, ahead of the landmark digital development conference held every four years by the International Telecommunication Union (ITU): the World Telecommunication Development Conference (WTDC). In his opening remarks to the meeting, President Kagame told Commissioners: "We are still living in tough times, economically, politically, and in terms of global public health. The immediate future is full of uncertainties and risks. But one thing is sure: All of the challenges we face can be handled faster, better, and more equitably, by investing in universal, affordable broadband." Commission Co-Chair Carlos Slim also emphasized the importance of connectivity in the wake of the ongoing global health crisis. "For the adoption gap, carriers could provide the devices, and government programmes could pay the monthly subscription for families that qualify, ensuring reasonable packages with unlimited minutes and enough data. This would support remote education, e-health, and e-commerce, among many other digital services," he said. Commissioners and Special Guests representing government leaders, heads of international organizations and private sector companies, along with civil society and academia, discussed the power of digital transformation to create broad and positive socio-economic impact and looked at ways to rapidly increase access to broadband, foster innovative partnerships, empower youth, and build trust in online spaces. In particular, they confronted chronic connectivity challenges and discussed how to ensure affordable, sustainable, and equitable access to digital services across regions, especially in the world's 46 Least Developed countries, where 17% of the population is still without a mobile broadband signal, and hundreds of millions more kept offline by high prices, lack of digital skills and awareness, and a dearth of usable, relevant and accessible content. Recognizing the role digital technologies play in all facets of economic activity, Commissioners shared government and business strategies that are incentivizing investment in digital literacy, connectivity, and skills. Commission Co-Vice Chair Houlin Zhao, ITU Secretary-General, noted that "One of the challenges we need to overcome is reducing the cost of broadband subscriptions and digital devices, especially in low- and lower-middle-income economies. Affordability of broadband services in developing countries is also one of the Commission's 2025 targets. I do hope that we can use this moment to accelerate the achievement of these targets and break down these last barriers to connectivity." "Digital and media literacy skills are among the most empowering of human transformations: in terms of our livelihoods, in terms of our access to quality and lifelong education, in terms of decisions guiding our health and safety, and in terms of understanding and exercising our civil rights," said Dr Tawfik Jelassi, UNESCO's Assistant Director-General for Communication and Information, representing UNESCO Director-General Audrey Azoulay, who serves as the Commission's other Co-Vice

Chair. "Broadband Commissioners have a unique awareness of this. We have a unique capacity to lead change, through innovation, investment, advocacy and partnership." This latest Commission meeting – the first in-person meeting in two years – provided clear synergies with WTDC, set to kick off with the theme of "Connecting the unconnected to achieve sustainable development". Doreen Bogdan-Martin, Director of ITU's Telecommunication Development Bureau and the Commission's Executive Director, emphasized the urgent need for strong partnerships to step up connectivity. "In alignment with the Partner2Connect Digital Coalition, the UN Secretary General's Roadmap for Digital Cooperation and the 2030 Common Agenda, the Commission will leverage the strength of its membership and collective expertise to advocate for meaningful, safe, secure, and sustainable broadband communications services," she said. The Broadband Commission made an advocacy pledge to the ITU Partner2Connect Digital Coalition to help reach inclusive universal connectivity, through policy recommendations addressing broadband policy, access, affordability, use and skills and the advocacy actions to realize 2025 Broadband Advocacy Targets. Pledges were also received by 16 Broadband Commissioners and their entities. The meeting also highlighted the new Call to Action: My Digital Future, presented by Generation Connect Visionaries Board members as an outcome of the first-ever Generation Connect Youth Summit, calling for inter-generational efforts to build an equitable, inclusive digital future. A video, Broadband Transforming Lives, addressed Broadband Commission Advocacy Target 4 on digital skills for youth and adults, highlighting the work of young changemakers who are embracing technology to make a positive impact on their communities. These voices of the younger generation, together with Commissioners' input, will be conveyed to the upcoming UN Transforming Education Summit 2022, which aims to shape the future of education and learning. Commissioners also reported on the progress of the Commission's four current Working Groups: Virtual Health & Care; Smartphone Access; Data for Learning; and AI Capacity Building. A preview of the forthcoming report of the Working Group on The Future of Virtual Health and Care, co-chaired by Dr Ann Aerts, Head of the Novartis Foundation, and the World Health Organization, emphasized the need for sound stewardship of the global explosion in virtual health triggered by the COVID-19 pandemic, to ensure it drives equitable health access and does not exacerbate existing health inequities.

Russian Operators Begin Charging Users for SIM Cards

Russia's major mobile operators have begun charging fees for SIM cards when registering new subscriptions, Kommersant reported. MegaFon, Yota (a brand of MegaFon) and Beeline have all introduced a per-SIM fee of RUB50 (USD0.92) this month, while MTS and Tele2 Russia are scheduled to follow suit on 24 June and 1 August, respectively. The report adds that operators attribute the move to an increase in wholesale SIM purchase costs due to enforced changes of suppliers, whilst there is the possibility that prices will increase in the future.

Slovak Cellcos Complete 1800MHz Refarming

Mobile operators in Slovakia have completed a reorganization of the 1800MHz band which has left all four cellcos with contiguous holdings, Zive.sk reports. For the purposes of spectrum refarming, the country was split into four areas; each cellco now has 2×20MHz of spectrum in three parts of the country and 2×15MHz in the fourth region. The 1800MHz band was previously fragmented and the operators agreed a reorganization plan to improve network efficiency to support 2G, 4G and 5G services.

PTA Confirms Jazz and Telenor Have Submitted License Fee

Industry watchdog the Pakistan Telecommunication Authority (PTA) has confirmed that mobile providers Telenor Pakistan and Jazz have paid a combined total of PKR19.39 billion (USD97.0 million – although the PTA notes that the fee is equivalent to USD98.49 million) towards the third instalment of their respective license renewal fees. The pair disputed the cost of the renewal of their concessions in early 2019 when the PTA provided updated terms for the licenses, including a price increase, just weeks before their authorizations were due to expire. Pakistan's courts eventually sided with the regulator in August 2021 on the basis that the PTA has the power to set the license fee as it sees fit. Jazz agreed to the PTA's new terms and renewed its concession in October that year whilst Telenor followed suit in December, albeit 'under protest' and maintaining its right to continue its dispute with the PTA. At the time of the renewals the PTA said that Jazz and Telenor had each paid USD333.6 million of the USD449.2 million fee.

Liberty Latin America Gains Regulatory Approval for Claro

Liberty Latin America (LLA) has received regulatory approval to proceed with its US$200 million acquisition of America Movil unit Claro Panama, a move that forms an entity with over half of the market share in the country. BNamericas reported, that the next phase of the acquisition will be the fulfilment of certain conditions between both Liberty and America Movil. The acquisition prompted rival Digicel to exit the Panamanian market by liquidating its local unit, stating that due to the merger of its rivals competition has been stifled. LLA and America Movil will have a market share of 56% in Panama, reported Reuters. The acquisition did not look in doubt as LLA cleared an earlier regulatory hurdle with Panama's Consumer Protection and Competition Authority (Autoridad de Proteccion al Consumidor y Defensa de la Competencia, ACODECO). Liberty Latin America CEO Balan Nair said in a May earnings call: "With our acquisition, we moved from a four-player market to a three-player market, and that was necessary for Panama," reported BNamericas.

Registration Mandatory for OTT Platforms

The information and broadcasting ministry has drafted a guideline, making registration mandatory for national and foreign online streaming platforms to continue their operation in Bangladesh. The ministry drafted the guideline and submitted it to the High Court on Monday to comply with its directive issued in January 2020 after hearing a public interest litigation writ petition filed by Supreme Court lawyer Md Tanvir Ahmed. A bench of Justice JBM Hassan and Justice Razik-Al-Jalil asked the government to update the court on October 19 about the next development on the draft guideline. The court, on scrutiny of the draft guideline, observed that if any citizen felt aggrieved at any rule of the guideline, she or he could come before the court challenging the legality of the rule. The guideline prohibits streaming talk-shows or news except live or recorded programmes of authorized television channels. The ministry has defined the contents for streaming outlets, popularly known as OTT — over-the-top — platforms in the guideline. Various entertainment programmes, dramas, cinemas, documentaries, fictions, nonfictions, sport events, docufictions, infotainment — also called soft news — advertisements, videos on demand, live or recorded contents of authorised television channels except news or talk-shows have been defined as OTT contents, according to the guideline. It prohibits streaming such contents that oppose the liberation ideology, disrupt communal harmony, threaten the order and integrity of the state, oppose existing laws of the land, negate national culture and damage social value. It also prohibits streaming contents which disrespect the national anthem, the national flag, the fundamental principles of the state policy and the spirit of the War of Liberation. The guideline bans OTT platforms from streaming contents which stimulate sexual urge among children, harm religious sentiment, encourage extremism, communalism, disrupt stability in society and state and the contents which have been banned by courts in judgements or by the state with laws. As mandated in the guideline, national and foreign steaming platforms will have to apply to the secretary of the information and broadcasting ministry for registration in the prescribed form of the ministry under the Broadcasting Policy 2014 until the draft Content-based Over-The-Top (OTT) Service Providing and Operation and Display of Advertisements Guidelines 2021 becomes effective. The guideline bans video streaming of any program or advertisements using internet or other technology in the country without having any registration. An OTT registration seeker will have to deposit a bank draft or pay order of Tk 5 lakh to the ministry along with the application while the requirement for a foreign applicant is a bank draft or pay order of Tk 25 lakh along with the application. The applicants are required to mention, especially in their applications, the purpose of operating an OTT and what types of content they intend to stream. The information ministry, on scrutiny of the applications, would send them to the home ministry to get security clearance certificates while the applications filed by foreign nationals would be sent to the foreign ministry for getting security clearance certificates. Once the registration with the information and broadcasting ministry is done, the applicants would have to update their registrations every three years with the payment of Tk 3 lakh for a national applicant and Tk 10 lakh for a foreign applicant. The draft guideline is needed to prevent the posting of immoral video contents to streaming platforms and to impose value added tax on all streaming platforms for running their business, said Tanvir Ahmed, who filed the writ petition to regulate the OTT contents. Reza-E-Raquib Khandaker, appearing for the Bangladesh Telecommunication Regulatory Commission, told New Age that the BTRC had earlier submitted a draft guideline titled 'Bangladesh Telecommunication Regulatory Commission Regulation for Digital and Social Media Platforms 2021'. The BTRC draft guideline, which had mandated registration for social media platforms, including Facebook and YouTube, to operate within the country, drew flaks from right defenders. Under the regulations, the commission had prepared a stringent code of conduct that would be mandatory for the users of these platforms. Besides, the commission had also made it a must for the social media platforms as well as other online public platforms to take measures against the users in case of violation of the code of conduct. The measures of that draft guideline had included blocking contents as well as users for the violation of the code of conduct.

DoT Sets Out Guidelines for Controversial Private Networks

The Department of Telecommunications (DoT) has published guidelines for the licensing and operation of private networks, referred to by the ministry as Captive Non-Public Networks (CNPNs), which India's cellcos have argued risk undermining the business model for 5G services by eliminating one of the most potentially lucrative areas for revenue generation. The DoT claims that allowing companies to establish their own CNPNs will support the development of new use cases for 5G in industries such as manufacturing, construction, healthcare and transportation. The nation's service providers have argued against the move, however, as the provision of industrial 5G services represents a substantial source of potential revenue for cellcos, without which they might not be able to invest as heavily in the acquisition of necessary spectrum resources or the construction of widespread networks for use by the consumer market. Of particular concern to the operators is the fact that enterprises have been given the opportunity to receive spectrum directly from the DoT, without having to spend vast sums to purchase the frequency rights through competitive auctions. The Economic Times quotes an unnamed senior official at one of the nation's cellcos as saying: 'the government has paved the way for administrative allocation of 5G spectrum to large tech companies who can easily meet the INR1 billion (USD12.8 million) networth criteria, which is extremely unfair as it expects telcos, on the contrary, to buy these coveted airwaves by splurging billions in the upcoming auction.' The DoT's new guidelines permit enterprises to establish CNPNs in four ways: telecom service providers (TSPs) may provide CNPNs as a service to enterprises using network resources over public networks (such as through network slicing); TSPs may establish CNPNs for enterprises using spectrum that they have acquired; enterprises may lease spectrum from TSPs to establish their own CNPNs; or enterprises may obtain spectrum directly from the DoT to establish their own CNPNs. The DoT has published amendments to the Unified License (UL) and Unified Access Service License (UASL) that cover the provision of CNPNs and the leasing of spectrum to enterprises. For enterprises to establish their own CNPNs, meanwhile, the DoT's guidelines specify that the company must apply for a CNPN license and have a net worth of at least INR1 billion. The ten-year CNPN license is valid for a specific geographic location and may not be used for the provision of a commercial telecommunication service, nor may it be connected to public networks although the licensee may connect CNPNs at different locations through leased lines obtained from TSPs. Companies will not be required to pay an entry fee or license fee for the CNPN license but will be required to pay an application fee of INR50,000. Regarding the assignment of spectrum to CNPN licensees, the rules state that the DoT will undertake demand studies and then see recommendations from the Telecom Regulatory Authority of India (TRAI) for such allocations. Licensees will be required to obtain clearance from the Standing Advisory Committee on Frequency Allocation (SACFA) and will be responsible for ensuring that signals are restricted to indoor areas or within the specified geographical area and the network does not cause harmful interference to other spectrum users. The DoT's decision to move forward with the licensing for CNPNs is expected to negatively impact bidding in the upcoming 5G spectrum auction, set to take place late next month. As previously reported by CommsUpdate, the tender will feature spectrum in the 600MHz, 700MHz, 800MHz, 900MHz, 1800MHz, 2100MHz, 2300MHz, 3300MHz and 26GHz bands.

Zambian Government Reportedly Puts Telco Up for Sale

A senior official at state run telecoms firm Zamtel has revealed that the government has put the company up for sale. According to local press outlet the Lusaka Times, Zamtel Acting CEO Joshua Malupenga informed a special virtual staff meeting last week that the government has already found an equity partner to run the company, although the executive was said to have stopped short of disclosing the identity of this company, only confirming that it was a foreign entity. According to the unnamed source cited by the report, meanwhile, the state's aim is for the new equity partner to come in by August 2022, within the first year of the current government taking office. The sale of the telco is said to have been opted for following the revelation by Science and Technology Minister Felix Mutati earlier this week that Zamtel is currently loss-making. Mutati recently disclosed that around 90% of the fixed line incumbent's revenue is being utilized for administrative expenses, while it was reported that Zamtel requires around USD265 million to survive. On top of this, the report also claims Zamtel currently has debts of around ZMW3 billion (USD175 million), while it still owes around USD500 million to LAP GreenN, the latter being related to the reversed sale of a stake in the telco back in 2010.

China Welcomes Fourth Mobile Operator to the World of 5G

Back in 2019, a group of Chinese cable broadcast and television operators, then known as China Broadcasting Network (CBN), won spectrum in the country's national 5G spectrum auction, signaling their ambition to become the nation's fourth fully-fledged nationwide mobile operator. The government-backed company won 80 MHz of 700 MHz spectrum and 100 MHz of 4.9 GHz spectrum, both of which can be used to provide 5G services. Catching up with the likes of China Unicom, China Telecom, and China Mobile when it comes to 5G, however, will be no mean feat. 5G subscribers currently account for around a quarter of the trio's existing subscriber base, totaling around 428 million people. As such, the greenfield mobile operator will need to scale up quickly if it is to prove competitive. Earlier this month, the China Broadcasting Network was rebranded as China Broadnet and at the same time announced it was taking pre-registration for 5G phone numbers. China Broadnet has begun its 5G journey in earnest, announcing the launch of commercial services. For now, it seems that the operator has very little in the way of its own network infrastructure, being largely reliant on a network sharing agreement with China Mobile signed back in early 2021 to offer services to customers. The 11-year network sharing deal was split into two phases; the first year-long phase, would see China Broadnet able to purchase wholesale access to China Mobile's 2G, 4G and 5G networks for the duration of 2021, while the following 10-year phase will allow China Broadnet access China Mobile's 700 MHz and 2.6 GHz networks, as well as committing them to the shared deployment of a large-scale deployment of a shared 700MHz network. This network sharing agreement will allow China Broadnet to today offer 5G services to a huge proportion of Chinese consumers but luring them away from the more established providers will be difficult. Based on the company's website, it seems that its mobile plans are slightly cheaper than comparative offers by China Mobile – for example, its cheapest 5G plan is 118 yuan

($17.60) for 40GB of data, while China Mobile charges roughly 10 yuan ($1.50) more for a similar plan ¬– but whether this will be enticing enough to secure a significant market share remains to be seen. Nonetheless, Broadnet does have something of a unique selling point for customers in its broad array of media assets, with the operator hoping to become a converged mobile and media company, providing immersive and interactive broadcast and TV media services, including the use of augmented and virtual reality, which will be enabled by their 5G network. In related news, earlier this month, China Broadnet announced that it had selected ZTE to provide the 5G core network for a location-based service (LBS) project, seemingly initially focused on providing support for emergency services. ZTE will deploy their technology at one site in Beijing and another in Nanjing, with the result being that all of Broadnet's 5G customers will be able to benefit from emergency location services, with further applications for the technology related to enterprise customers expected to be announced in the near future.

FCC Identifies a Path Forward for 5G C-Band Near Airports

The Federal Aviation Administration (FAA) announced progress toward allowing Verizon and AT&T to enhance 5G service around certain airports while protecting commercial air travel from disruption by 5G C-band interference. "We believe we have identified a path that will continue to enable aviation and 5G C-band wireless to safely co-exist," said Acting FAA Administrator Billy Nolen. "We appreciate the willingness of Verizon and AT&T to continue this important and productive collaboration with the aviation industry." The phased approach requires operators of regional aircraft with radio altimeters most susceptible to interference to retrofit them with radio frequency filters by the end of 2022. This work has already begun and will continue on an expedited basis. At the same time, the FAA worked with the wireless companies to identify airports around which their service can be enhanced with the least risk of disrupting flight schedules.

Competition Watchdog Investigates Fiber Network Rollouts in Flanders

The Belgian Competition Authority (BCA) has opened a formal investigation into possible distortions of competition in the deployment of fiber networks in the Flanders region. 'On the basis of serious indications of practices capable of distorting fair competition and the efficient rollout of fiber networks in Flanders, and taking into account the BCA's policy note of 12 May 2022 which identifies the telecommunications sector as a priority sector, the Prosecutor General has decided to open a formal investigation,' the watchdog said in a statement released last Friday. It stressed, however, that initiating such an enquiry does not imply that companies are guilty of anti-competitive conduct. No concrete details were provided about the investigation. Proximus set up Fiberklaar, a joint venture with EQT Infrastructure, in March 2021 with the aim to connect at least 1.5 million homes and businesses in Flanders to an open fiber network by 2028. Rival Telenet, meanwhile, signed a deal with utility provider Fluvius last October to deploy a fully open access network in the region, including both cable and FTTH services.

Indian 5G Rollouts Expected to Commence in August/September; 20-25 Cities to Be Covered By End-2022

Ashwini Vaishnaw, the Union Minister for Railways, Communication, Electronics and IT, expects the winners of this summer's planned 5G spectrum auction to commence their network rollouts in August-September, with a view to achieving coverage of 20-25 towns and cities by end-2022. Speaking at an event over the weekend, the official stated: 'I can say with confidence that 5G deployment will start in at least 20-25 cities and towns by year-end.' India's 5G auction will comprise more than 72GHz of spectrum across the 600MHz, 700MHz, 800MHz, 900MHz, 1800MHz, 2100MHz, 2300MHz, 3.3GHz and 26GHz bands. Interested parties have until 8 July to submit applications, with the auction due to begin on 26 July. All licenses will be valid for 20 years.

Romania Imposes 4% Tax on Streaming Platforms

As telcos call for so-called over-the-top (OTT) players to contribute financially to infrastructure costs, Romania is already moving ahead with a direct tax on the profits of streaming services like Netflix In recent months, European operators have once again been urging regulators to force big tech companies to help pay for their expensive infrastructure rollouts. In a recent study from the European Telecommunications Network Operators' Association (ETNO), the telcos argued that Meta, Alphabet, Apple, Amazon, Microsoft, and Netflix should contribute €20 billion annually towards their network costs, since they account for over 56% of annual traffic on telco networks. European Commissioner Margrethe Vestager has said that the EU will consider this proposal, saying that these players have so far "not been contributing" to enabling the traffic that they generate. Detractors, meanwhile, say such plans unfairly punish the tech players, with a group of non-government organizations also recently pointing out that such a tax would arguably run contrary to European rules surrounding net neutrality. Now, it seems that Romania is already moving to redress the balance of power, at least when it comes to streaming services, implementing a new tax of 4% on the revenues of video-on-demand providers. The tax will apply on revenues generated from both individual transactions and repeat subscriptions. The funds raised from this tax will be given to the national film fund, managed by the Romanian Film Centre, to help develop the country's domestic film industry. The tax is being implemented to create a more level playing field between streaming services and the broader film industry, with Romania's domestic cinemas already obligated to dedicate 4% of their revenues to the film fund." The contributions to the Cinematographic Fund, as they are provided in art. 13 of Government Ordinance 39/2005 regarding cinematography are 4% for the traditional operators, respectively the cinemas. On-demand audiovisual media services, generically known as VoD platforms, are in fact still operating. Thus, a discrimination in the way in which one operator contributes to the Film Fund in relation to another does not find any objective justification," said the government in a translated statement. Services with audience levels below 1% or with revenues of less than €65,000 a year will be exempt from this new tax. The law will also see streaming platforms required to dedicate at least 30% of their libraries to media produced in Europe.

India to Reserve 5G Spectrum for Private Networks

India unveiled plans to hold an auction of 5G-enabling spectrum by the end of July and indicated some frequencies will be reserved to enable enterprises to establish private mobile networks. In a statement, the Union Cabinet chaired by Prime Minister Shri Narendra Modi announced it had approved a proposal of the Department of Telecommunications (DoT) to auction a total of 72GHz of spectrum spanning frequencies from 600MHz to 26GHz, with a validity period of 20 years. Reuters reported India's government agreed to set a reserve price of INR3.2 billion ($40.6 million). However, the plan to set aside spectrum for what the government termed "captive non-public networks" has proved controversial and somewhat divisive. It is opposed by the Cellular Operators Association of India (COAI), which represents major operators including Bharti Airtel, Reliance Jio and Vodafone Idea, but the Broadband India Forum (BFI), which speaks on behalf of tech companies including Amazon, Google and Meta Platforms, supports the plan. In a tweet, the COAI wrote allocating spectrum to industry verticals for private networks "isn't justified as licensed access service providers are fully capable of providing all customized solutions". The cabinet explained it decided to enable private networks to support "a new wave" of industrial applications in sectors such as automotive, healthcare, agriculture, energy, and more.

T-Mobile US Seeks Special Temporary Authority to Trial 3.45GHz Spectrum

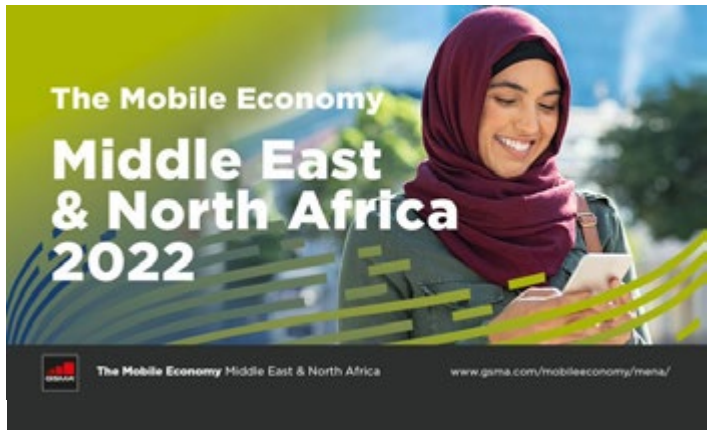
T-Mobile US has requested special temporary authority (STA) from the Federal Communications Commission (FCC) to test spectrum in the 3.45GHz-3.55GHz band in and around Dallas, Texas, Kansas City, Missouri, New York City, New York and Seattle, Washington. The STA, which was unearthed by RCR Wireless, was requested by holding company T-Mobile License and covers the period from 2 May to 29 October. Grant of the STA will permit T-Mobile to test the band – in cooperation with equipment manufacturers – in advance of providing services to the public. T-Mobile US was a successful bidder in the FCC's recently concluded 3.45GHz band auction (Auction 110), after submitting more than USD2.89 billion in gross bids to secure 199 licenses covering 79 Partial Economic Areas (PEAs).

Ofcom Readies Drones Liftoff

UK regulator Ofcom outlined plans to establish a spectrum licensing regime for commercial drones, with the aim of allowing operators to use mobile and satellite networks to deliver services via the unmanned flying devices. The regulator said it has been working with the government and Civil Aviation Authority (CAA) to develop a new approach for authorizing the radio equipment needed on drones. It has now opened a consultation on its proposals, and is inviting responses by 5 September 2022. It plans to publish its decision by November. In a statement, the regulator said advances in drone technology have created a range of commercial opportunities across several industries, from doorstep deliveries to machinery maintenance. Ofcom's spectrum interim group director Helen Hearn said the aim is to ensure that businesses "can access the spectrum they need to harness the full potential of the latest drone technology". Ofcom currently allows drones to use airwaves designated for model aircraft or for Wi-Fi, but noted that this is unsuitable for the services offered by the latest generation of drone. The proposed Unmanned Aircraft System (UAS) Operator Radio license would authorize licensed operators to use mobile and satellite terminals for control and transmission of data and video; as well as safety equipment to avoid collisions. The new license would not replace the current license exemption regime for low power 2.4GHz and 5GHz equipment currently used by most drones on the market.

Saudi Arabia Leads on 5G Rollout

Saudi Arabia is leading the rollout of 5G in the Middle East and North Africa, says the GSMA's news Mobile Economy Report for the Middle East & North Africa (MENA) 2022. The revelation is one of the many conversations to be had at Mobile 360 Riyadh, a two-day conference hosted by the GSMA. The event is also significant for being the first, post-Covid in-person gathering of the telecoms industry in the MENA region. The report also explores how Saudi Arabia has evolved into a digital hub and a leader in the regional transition to 5G, a position enabled by positive regulation, government funding and projects such as stc's MENA HUB – a $1 billion investment in regional connectivity and infrastructure that will support Saudi Arabia's rapidly expanding digital and cloud sector. The report predicts that the dominant 4G networks of today will peak in 2023 as consumers transition to 5G. By 2025, 5G will account for nearly a fifth of total mobile connections in MENA but currently there are around 15 million 5G connections eight MENA countries. Meanwhile, the number of mobile internet users in MENA swelled to over 300 million in 2021. In Saudi Arabia, 60 of the 136 governates were covered by 5G services as of mid-2021, up from 30 just one year earlier. In addition, the telcos stc and Zain have built commercial 5G Stand Alone (SA) networks in Saudi Arabia to cater to the most demanding industrial scale use cases. The operator stc has also launched 5G SA in Kuwait. "Covid-19 made mobile networks instrumental for social and economic activity.



Now it's time to drive economic recovery and promote sustainable development," said Mats Granryd, Director General, GSMA. The key themes at Mobile 360 Riyadh will be Expanding the Boundaries of Technology; Urban Innovation in Action and Digital Policies for a Digital Future. Additional debates include a discussion on What Next for the Mobile Sector and dedicated sessions on FinTech, Smart Cities, Spectrum and Sustainability. Mobile 360 Riyadh is hosted by sponsor stc. Other sponsors include Neom, Cisco, Ericsson, Evina, Huawei, Digis Squared, Ookla, Protei, PXS, SES, Syniverse, Technotree and Viavi.

Neko to return 5G Spectrum, Report Says

Brazilian 5G spectrum bidder Neko Servicos de Comunicacoes Entretenimento e Educacao has reportedly filed a waiver seeking to return the 26GHz frequencies it won at auction. According to Teletime, which cites sources familiar with the process, the paperwork was filed last month, but has yet to be publicly confirmed by Neko itself. Neko successfully bid on a regional 26GHz concession comprising a 1×200MHz block of spectrum in Sao Paulo. Post-auction, Neko was revealed to be a bidding vehicle for Yon Moreira, who runs MVNE Surf Telecom, which currently supports around 100 MVNOs. Neko intended to target 5G fixed wireless access (FWA) and low-latency IoT solutions with its 26GHz spectrum.

Ofcom Proposes Update to Technical Conditions of O2 And Vodafone Licenses

British telecoms regulator Ofcom has announced that, in response to requests from local mobile network operators (MNOs) Vodafone and O2, it is proposing to make changes to some licenses the duo hold. In a press release regarding its plans, the watchdog said the changes would allow both MNOs to 'deploy new technologies, including 5G, and deliver the next generation of connectivity and services to their users'. According to Ofcom the changes it has proposed include an updating of the technical conditions of licenses held by Vodafone in the 900MHz, 1800MHz, 2100MHz and 2.6GHz bands; the proposed variations would amend the concessions with updated parameters that reflect the latest technologies. In addition, the regulator has proposed removing technology restrictions in Vodafone's licenses to make them 'technology neutral'. Meanwhile, Ofcom has said it plans to remove a restriction placed on O2's unpaired spectrum in the 2.6GHz band. It is understood the operator has requested the removal of a restriction on the 5MHz block within its unpaired spectrum allocation adjacent to Vodafone UK's unpaired allocation. For its part, Vodafone has reportedly contacted the regulator to confirm its agreement with the request. It was noted that this development, if finalized, would allow O2 to use an unrestricted 20MHz of spectrum compared with the 15MHz currently available. According to Ofcom, meanwhile, to make this arrangement work, the two licensees need to synchronize transmissions and both of their licenses will need to be amended.

EC Approves Italy's EUR2bn Subsidized 5G Rollout

The EC has approved, under EU state aid rules, a EUR2 billion (USD2.15 billion) scheme by the Italian government to roll out 5G mobile networks in underserved areas of the country. Authorities in Rome are holding a series of tenders to find partners for state-subsidized deployments to offer mobile data speeds of at least 150Mbps across Italy by June 2026. The contracts, which will see the government providing up to 90% of the rollout costs, call for the installation of fiber-optic infrastructure to connect more than 10,000 existing mobile tower sites and the construction of new 5G sites in over 2,000 locations. EC competition policy maker Margrethe Vestager said: 'This EUR2 billion Italian scheme, entirely funded via the RRF [Recovery and Resilience Facility], will support the deployment of high performing 5G mobile networks. This will enable consumers and business to access high quality 5G services, contributing to the economic growth of the country and to

the EU's strategic objectives relating to the digital transition.'

ARTP Adjusts QoS Penalties Imposed on Operators

Following an appeal, Senegal's Regulation Authority for Telecommunications and Posts (L'Autorite de Regulation des Telecommunications et des Postes, ARTP) has reduced the fines imposed on the country's three mobile network operators – Sonatel (Orange Senegal), Free (Saga Africa Holdings) and Expresso Senegal – last December for quality of service (QoS) failings. In order to ensure increased network investment, however, the companies are now required to earmark additional funds, not already provided for in their current plans, to improve coverage and service quality. Sonatel, which was originally fined XOF16.727 billion (USD27.5 million), will now be required to pay a sanction of XOF2.51 billion and undertake to invest an additional XOF20 billion before the end of 2023, Saga Africa Holdings (initially XOF2.258 billion) will pay a XOF436.5 million fine and invest XOF1.7 billion, while Expresso (XOF1.028 billion) will pay XOF192 million and invest XOF1.19 billion. To ensure the companies honor their commitments, the ARTP will implement a monitoring and control system which will be financed by the telcos. The regulator notes the new sanctions and conditions imposed on the MNOs will 'compel them to substantially increase investments in network modernization and performance, with a view to satisfying the needs and interests of all consumers, irrespective of their geographical location'.

Vodafone NZ, Commerce Commission Both Appeal Fine

Vodafone New Zealand and the Commerce Commission have both said they will appeal a NZD2.25 million (USD1.4 million) fine imposed on the telco for its historic marketing of 'FibreX' branded HFC fixed broadband services between 2016 and 2018. Vodafone was found guilty in April of conduct liable to mislead consumers into believing that FibreX was a fiber-to-the-home (FTTH) connection. Vodafone also pleaded guilty to charges relating to its online address checker, which suggested to consumers that FibreX was the only available broadband service at their address. Charges were brought under the Fair Trading Act and the telco faced potential fines of up to NZD16 million, with the Commission seeking a NZD5.8 million penalty. Commerce Commission Chair Anna Rawlings said in a statement that the regulator will argue the fine did not appropriately reflect the seriousness of the offending, and the size and financial resources of Vodafone. The regulator will also argue that Vodafone's conduct was wilful rather than grossly careless and allowed Vodafone to make significant commercial gains. 'The fines imposed for this type of offending must be significant enough to deter Vodafone and other large businesses from engaging in this type of conduct in the future,' she stressed. 'We are very disappointed with the outcome and respectfully disagree with the court's decisions,' Vodafone NZ said in a statement. 'Our appeal will set out our strong belief that there are several errors with the original conviction decision and that there are aspects of the FibreX judgment that simply misunderstand the services we sell and are not in the best interests of consumers or future competition'. Describing the HFC service offered in Wellington, Kapiti and Christchurch as a 'well-performing, price-competitive product', the telco noted the Commission's latest broadband measurement report found HFC Max plans were able to support four simultaneous UHD Netflix streams, offering an equivalent experience to FTTH plans in this respect.

EU Institutions Back 5G FWA to Plug Fiber Gaps

Representatives from the European Commission (EC) and other bodies in the region highlighted the benefits of fixed wireless access (FWA) 5G deployments during an online event, with the technology backed to aid the region's connectivity targets. Speaking at a regulator-focused Forum Europe event, EC head of unit for investment in high-capacity networks Franco Accordino highlighted FWA's role in aiding efforts to provide gigabit internet speeds. "The combination of FWA with 5G technology has the potential to significantly contribute to the achievement of the European connectivity targets set for the end of the decade," Accordino told the Releasing the Potential of FWA in Europe event "If properly designed and deployed, it can definitely support the gigabit objectives that we have set." During the event, FWA 5G received support from representatives from a number of other bodies including the European Investment Bank (EIB), ETNO, Global mobile Suppliers Association (GSA) and national regulator association BEREC. EIB director of the department for innovation and competitiveness Felicitas Riedl described the connectivity method as "a useful technological solution to mitigate the market failure of insufficient investments in very high capacity networks (VHCN) in less densely populated areas of the European Union". "EIB supports FWA, as its economics are particularly well suited to that kind of sparsely populated environment and, thanks to the lower concentration of traffic in those areas, FWA could be a viable VHCN solution capacity and quality-wise," he added. Several operators across the world have already reported success with FWA and, although much of the discussion about the technology is on it becoming an alternative to fibre in rural areas, a GSMA Intelligence report released earlier this year highlighted its potential in more densely populated locations.

FCC Seeks Input on Increasing A-CAM Broadband Speed Requirements for Rural Carriers

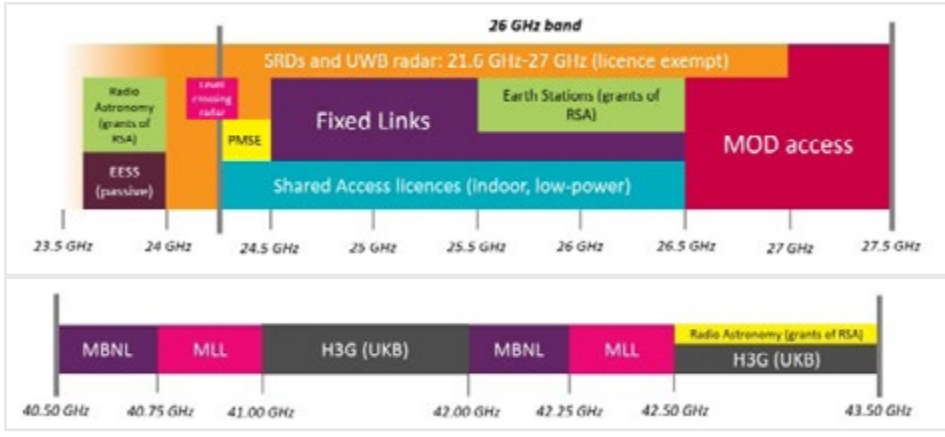
The NPRM was created in response to a proposal for an Enhanced A-CAM program filed with the FCC by a group of providers currently funded through the program known as the ACAM Coalition. The proposal calls for providers receiving Enhanced A-CAM support to be required to deploy service at speeds of at least 100 Mbps downstream and 20 Mbps upstream. Currently the minimum speed that providers must deploy is 25/3 Mbps, but as a draft NPRM circulated by the FCC notes, that target doesn't match well with the higher 100 Mbps speed target that has been established for the $42.5 billion BEAD rural broadband program that will be administered by NTIA. (The A-CAM program is one portion of the Universal Service Fund high-cost program for rural rate of return carriers and the high-cost program has a combined budget of about $2 billion annually.) The BEAD program initially targets unserved areas, defined as those lacking 25/3 Mbps service, but if all unserved locations in a state are served or slated for service, funding can be used toward deployments to underserved areas, defined as those lacking 100/20 Mbps service. As the ACAM Coalition proposal notes, that opens up the possibility that an A-CAM carrier could use the funding to deploy service to an area at 25/3 Mbps speeds and the area could immediately be considered underserved. As the FCC explained in a press release, the NPRM also seeks input on how the FCC could:

- Use the new Broadband DATA Act maps to determine any new deployment obligations
- Calculate support for an Enhanced A-CAM program, including whether the existing A-CAM framework continues to be appropriate
- Align specific proposals with Congressional intent, as well as programs at other agencies
- Improve the administration of the high-cost program and better safeguard the Universal Service Fund

Providers and provider associations issued statements generally voicing support for the A-CAM NPRM. "NTCA deeply appreciates the FCC's ongoing commitment to universal service, which itself is a program that requires ongoing commitment by providers to serving rural communities," said Shirley Bloomfield, CEO of NTCA—The Rural Broadband Association. "We are grateful for today's vote, and we are eager to move now to the next stage of the debate over how best to both realize and sustain universal service in rural America." "WTA has supported the FCC releasing this proposal for public comment," said Derrick Owens, Senior Vice President of Government & Industry Affairs for WTA—Advocates for Rural Broadband. "We'll continue to discuss the ideas outlined in the NPRM with our members and will provide feedback to the FCC. We'll also continue working with our industry partners to develop plans that ensure the USF High Cost Program (HCP) provides sufficient and predictable support to all HCP recipients." "TDS Telecom is pleased with the unanimous vote to begin the rulemaking process to enhance the Alternative Connect America Cost Model (ACAM) program," said Andrew Petersen, senior vice president of Corporate Affairs for the company. "An extended ACAM program will certainly bridge the digital divide by bringing future-proof internet speeds to rural areas. This vote is an important step forward to help deliver reliable and affordable broadband to rural families and businesses across America."

UK Regulator Opens Consultation on mmWave 5G

Ofcom outlined an ambition to make mmWave spectrum available to the UK's mobile industry by 2024, as it launched a consultation on opening access to the 26GHz and 40GHz bands. In a statement, the regulator pointed to the advantage of deploying 5G in the bands for faster speeds and greater capacity in crowded areas, citing transport hubs, busy streets and entertainment venues. Ofcom noted it could also enable high-speed fixed wireless access services in hard to reach areas and be deployed in private networks for applications including factory automation and smart agriculture. In the UK, the 26GHz band is already used for fixed point-to-point links; a satellite earth station; level crossing radars used by railway operators; ultra-wideband radar; a range of short-range devices; and for special events. Ofcom added the UK Ministry of Defence also has access to the band but currently doesn't have a use for it. The consultation outlines an ambition to offer a range of very local and city-wide licenses for the 26GHz band. In high density usage areas where fixed link licenses are already active, Ofcom plans to issue a five year notice period to revoke them. In low density areas, it aims to allow existing fixed link users to continue with current activities. Other users of the band, it added, are expected to co-exist with 5G and other mobile services. Ofcom explained the 40GHz band had been allocated in 2008 with Hutchinson 3G UK, Mobile Broadband Network, and MLL 40GHz holding the licenses. However, the trio are not allowed to deploy mobile services in the band and currently use it for fixed links. The regulator's consultation provides a number of options for the 40GHz band, from changing existing licenses to clearing and reallocating it. Alongside general views on allocation for mobile use, interested parties have also been invited to make comments on a potential auction format, competition considerations and license lengths. The consultation closes on 18 July 2022 with a provisional timescale of making spectrum available by 2024.



Videotron Wins Another Court Ruling Over Western 3.5GHz Spectrum

Canada's Federal Court has this week rejected nationwide operator Telus Communications' attempt to block Quebec-based rival Videotron's rights to 3500MHz 5G mobile licenses in western provinces won at auction last year. The ruling follows the same court's refusal of a stay request from Telus and fellow nationwide player Bell Canada in October 2021, while Bell withdrew its objections before this week's decision according to an official at Videotron's parent Quebecor. Telus had argued that Videotron did not meet government conditions to qualify for the 'set-aside' spectrum (reserved for companies other than Bell, Telus or mobile market leader Rogers Communications) requiring it to have existing commercial facilities-based telecoms services in the auction regions, but as reported by the Financial Post, Federal Court Justice Alan Diner found the set-aside eligibility assessment process and the Minister of Industry's decision on the awards to have been 'fair and reasonable'. Videotron had indicated in its application that it qualified for the set-aside in British Columbia, Alberta and Manitoba through an affiliate, Fibrenoire, which had customers in each of these provinces.

Safaricom Allocated 2600MHz Spectrum for 5G, Report Says

Kenyan mobile market leader Safaricom has been allocated spectrum in the 2600MHz band from the Communications Authority of Kenya (CA), reports The Daily Nation. The operator has been allocated 60MHz of spectrum in the 2600MHz band, which was previously used by security agencies but has been freed up following a change in the technology that they use, an unnamed senior source was quoted as saying. The source did not disclose how much Safaricom paid for the spectrum, which is expected to be used for its 5G network rollout. The CA is also currently preparing to reallocate spectrum in the 3.5GHz band, which was previously assigned for fixed wireless access (FWA) networks in Kenya but will be refarmed for 5G by 30 June 2022.

VEON/Beeline to Assist Uzbek Government with Digitalization During WTO Accession

Multinational telecoms group VEON announced that it will advise and provide digitalization services to the Uzbekistan government during the country's accession to the World Trade Organization (WTO), following a meeting between Laziz Kudratov, First Deputy Minister of Investments & Foreign Trade, and VEON CEO Kaan Terzioglu. VEON has been present in Uzbekistan through its Beeline-branded local operating company since 2006, and the cellco will participate in the implementation of the Digital Uzbekistan 2030 program, while intending to increase its volume of investments in the country's economy by USD250 million over the next five years. VEON's statement continued: 'The success of Uzbekistan's WTO application will be influenced by the digitalization of the economy of Uzbekistan, which is striving to become one of the technological leaders in Central Asia. For the world community, what is important is not only the general state of the country's economy, but how the level of technology development in Uzbekistan has increased. By investing in the infrastructure of VEON's mobile operator, Beeline Uzbekistan, we are striving to make digital services available to residents and businesses throughout the country, which will no doubt be an additional advantage for Uzbekistan's WTO application.'

EC Clears Telefonica, Pontegadea for Telxius Deal

The European Commission (EC) approved Telefonica and partner Pontegadea to buy investment company KKR's stake in infrastructure business Telxius for €215.7 million, after concluding there were no competition issues with the deal. Telefonica and Pontegadea already hold sizable stakes in Telxius and, on completing the purchase of KKR's 40 per cent interest, will own 70 per cent and 30 per cent of the business respectively. Clearing the deal, the EC concluded there were no relevant overlaps with the parties' other interests. It also highlighted Pontegadea's assets were mostly in real estate and the textile sector. Telxius' business is focused on submarine cables and related communications infrastructure, having sold its tower arm to American Tower in 2021. It currently holds a network of submarine cables covering 94,000km. On first announcing its intent to buy part of KKR's stake, Telefonica highlighted the importance of cable networks during the pandemic, adding they would be "equally decisive for the development of the metaverse, Web 3 and the new digital era."

Government Authorizes Panama Watchdog to Take Control of Digicel

The Panamanian Cabinet Council, which is headed by the President of the Republic, Laurentino Cortizo Cohen, has approved the transfer of Digicel Panama's concession to the National Public Services Authority (Autoridad Nacional de los Servicios Publicos, ASEP). The decision was made after Digicel informed the government that it intended to apply for voluntary liquidation and withdraw from the Panamanian telecoms market. Digicel blamed its decision on the government's decision to greenlight the proposed takeover of Claro Panama by Cable & Wireless Panama (trading as +Movil). The government says that the move will 'guarantee the continuity of the workers and the personal communications service'. The update was published on the website for the Ministry of the Presidency on 27 April. In related news, Millicom International Cellular – which owns Tigo Panama – has ruled itself out of a move for Digicel's Panamanian assets. Speaking during the group's 1Q22 earnings call last week, CEO Mauricio Ramos stressed: 'We are not in M&A mode. We are in operational mode.' Expanding on the theme, Ramos noted: 'So, whether Digicel stays on or doesn't stay on, it really doesn't significantly change what we … are delivering on. Our focus in Panama, as elsewhere, to be very honest with you, is largely organic. We don't want to stack ourselves with picking these [assets up] or that [company] up, because we're driving the brand. We're being preferred by customers. We're driving volume, sustaining ARPU. So, we want to stay very, very focused organically.'

Ottawa Sets New CRTC Telecom Policy Directives to Promote Competition and Affordability

Ottawa says it will direct the federal telecom regulator to emphasize competition and affordability in the internet and mobile phone markets and to improve its wholesale network access regimes. The new policy directive, announced Thursday, aims to eliminate some industry confusion by replacing two previous policy directions that some saw as conflicting with one another. The first, introduced in 2006 by the then-Conservative government, emphasized relying on market forces and encouraging network investments by telecoms. The second, which was put in place in 2019 by the Liberal government but did not replace the earlier directive, instructed the regulator to emphasize affordability, competition and consumer rights. The new directive seeks to promote competition while also encouraging investments in networks in a sector that has attracted criticism from government and consumer advocates for having high prices. The announcement comes at a time when the government is in the midst of reviewing Rogers Communications Inc.'s proposed $26-billion takeover of Shaw Communications Inc. Critics argue that the merger of the country's two largest cable systems would reduce competition and lead to higher prices for consumers. The federal government also opted not to overturn a controversial ruling by the Canadian Radio-television and Telecommunications Commission, which in 2021 reversed its 2019 decision to lower the rates that Canada's large phone and cable companies can charge smaller internet providers for access to their broadband networks. The regulator has said it found significant errors that cast doubt on the correctness of that decision and opted to largely maintain the interim rates that have been in place since 2016. "The wholesale rates decision made by the CRTC in 2021 is an attempt to correct errors made in 2019, and it makes permanent the rates that have been in force since 2016. The decision provides stability, and the government has determined that it will not alter this decision," François-Philippe Champagne, Minister of Innovation, Science and Industry, said in a statement. "That is why the new policy direction would require the CRTC to support a wholesale Internet regime that is sustainable, effective and fair, because wholesale broadband is a proven regulatory tool for increasing retail competition in the Internet service market," Mr. Champagne added. The proposed new policy directs the CRTC to improve wholesale broadband rates in its future decisions and to require large telecoms to provide their competitors with access to faster speeds. The policy does not specify the rates that the government would like the CRTC to implement, leaving it up to the regulator to make that decision. (Large telecom companies are required to sell broadband network access to third-party operators, which then sell internet services to their own customers. Matt Stein, who is CEO of Distributel Communications Ltd. and chairman of the Canadian Network Operators Consortium (CNOC), an industry group for independent ISPs, said the decision provides clarity for regulators. "This is not what we asked for, but this is good, too," Mr. Stein said, adding that he's disappointed that the government opted not to overturn the CRTC wholesale rates decision, but is encouraged by the directive's emphasis on consumers. "It's a really good start and hopefully they do bring it into force," Mr. Stein said. The federal government is also instructing the CRTC to improve its regime governing wireless network access for eligible regional competitors "as necessary." In April, 2021, after a lengthy review of the country's wireless industry, the telecom regulator ruled that Rogers, BCE Inc., Telus Corp. and SaskTel must sell wireless network access to regional competitors who commit to building their own networks. However, the CRTC stopped short of opening up national wireless networks to competitors without their own infrastructure, known in the industry as mobile virtual network operators, or MVNOs. Still, the government is prepared to move to a full MVNO model, if needed, to support competition in the sector, the department of innovation, science and economic development said Thursday in a backgrounder document. Canadians have until July 19 to submit comments on the proposed new directive, which the government aims to finalize by the fall. The proposed new directive also instructs the telecom regulator not to phase out the current wholesale broadband regime when it introduces the new model it is developing. Under the current "aggregated" system, the large telecoms are required to sell to third-party operators services which bundle access to the "last mile" – the connection into customers' homes – along with transport of data to and from the broader internet. Under the new "disaggregated model," competitors will gain access only to the last mile, and then will be able to either provide their own data transport or lease it from other service providers. The new model is meant to encourage network investment. The government said it has concerns that phasing out the aggregated model could harm competition. Ottawa is also instructing the CRTC to strengthen consumer rights by introducing new measures to address what it calls "unacceptable sales practices," overhauling the governance of the telecom ombudsman to give consumers a more prominent role, and implementing a number of other changes. Speeding up the deployment of internet access, for instance by making it easier for telecoms to access infrastructure such as telephone poles, is another priority that the government has identified. Anthony Lacavera, chairman of Globalive Capital, said that "when implemented and enforced, this new policy direction will help ensure true independent competition in wireless and internet services." Globalive Capital is one of the potential bidders circling around Shaw's Freedom Mobile, which is up for sale as part of Rogers' $26-billion takeover of Shaw.

Commerce Department's NTIA Releases Details for Funds Distributed Under IIJA

The U.S. Commerce Department on Friday morning released the rules governing three separate federal broadband programs, laying down the rules for more than $45 billion in spending. The agency's National Telecommunications and Information Administration released the Notice of Funds Opportunity for its Broadband Equity, Access and Deployment program under the Infrastructure Investment and Jobs Act, as expected. "In the 21st century, you simply cannot participate in the economy if you don't have access to reliable, affordable high-speed internet," Commerce Secretary Gina Raimondo said. She was expected to make additional remarks in Durham, North Carolina. "Thanks to President Biden's Bipartisan Infrastructure Law, Americans across the country will no longer be held back by a lack of high-speed internet access. We are going to ensure every American will have access to technologies that allow them to attend class, start a small business, visit with their doctor, and participate in the modern economy," according to Raimondo's remarks from a press release. The IIJA, signed into law on November 15, 2021, required Commerce to release the BEAD NOFO by Monday, May 16. It had been expected to release those rules Friday. Funding under the BEAD program is primarily directed through state broadband offices, acting under the supervision of the NTIA through the legislative framework established by IIJA, and the regularly rules laid out in the BEAD NOFO. But the agency also released the rules for the Enabling Middle Mile Broadband Infrastructure and State Digital Equity Act programs on

Friday, in advance of when IIJA required the notices.

- Broadband Equity, Access, and Deployment (BEAD) Program ($42.5 billion)
- Enabling Middle Mile Broadband Infrastructure Program ($1 billion)
- State Digital Equity Act programs ($1.5 billion)

The IIJA allocated $65 billion in funding for broadband spending, with at least $45 billion allocated to the NTIA through these three programs. The $42.5 billion for BEAD is designed to address last-mile broadband connectivity. The $1 billion for middle mile spending addresses the "secondary highways" — in between data centers and individual homes — that allow our internet to work. The additional $1.5 billion is for states to engage in programs designed to address digital equity. Most of the additional $20 billion of broadband funds under IIJA are dispensed through the Federal Communications Commission's Affordable Connectivity Program. But BEAD itself also include money for planning grants: Under IIJA, each state is guaranteed to receive $100 million in BEAD funds for broadband infrastructure. Up to $5 million of those awards may be drawn down within three months. Each state is able to receive at least $100 million in funding. Particular states may receive significantly more depending upon the proportion of "unserved" broadband homes in their state relative to the nation as a whole. Whether a particular home is "unserved" or not will be determined by broadband maps to be created by the FCC.

The funding is being dispensed by states to sub-grantees, including private, cooperative and municipal broadband providers, and the BEAD funding is designed primarily to address inadequate last-mile broadband connectivity throughout the country.

New President Orders ICE to Relinquish 5G Spectrum Within Six Months

In one of his first acts since assuming power earlier this month, President Rodrigo Chaves Robles has ordered Marco Acuna Mora, the executive president of Grupo ICE, to return all of the state-owned company's 5G-suitable spectrum holdings to the Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnologia y Telecomunicaciones, MICITT) within six months. On 25 June 2021 the MICITT notified Grupo ICE of its intention to retrieve the operator's 5G-suitable frequencies, as it seeks to further the country's wider 5G ambitions. Subsequently, in November 2021 the Superintendency of Telecommunications (Superintendencia de Telecomunicaciones, Sutel) informed the MICITT that it was unwilling to reimburse ICE for its unused frequencies, prompting the state-backed company to dig its heels in. ICE has been accused of 'under-use and non-use' of 5G-suitable spectrum in the 1400MHz, 2600MHz, 3500MHz and 26GHz bands.

EFTA Court Upholds Fine on Telenor Norge for Anticompetitive Practices

Telenor Norge has confirmed that a EUR112 million (USD118 million) fine handed to it back in June 2020 by the EFTA Surveillance Authority (ESA) has been upheld. In a press release regarding the matter Telenor Norge confirmed that the EFTA Court had ruled against it following an appeal, in which it appealed for the original decision to be revoked. Telenor Norge now notes that with the judgment upholding the ESA's original decision, the matter cannot be reviewed further. The operator also confirmed that it had paid the fine back in Q2 2020 and as such suggested the court ruling would 'not have further accounting effects. In June 2020 the ESA fined Telenor Norge after concluding the latter had 'abused its market dominance by a pricing strategy that resulted in rivals making a loss when selling residential mobile broadband services on tablets and laptops'. At the time, the ESA said that following an in-depth investigation it had determined that during a 'critical growth phase in mobile data in Norway' Telenor Norge's wholesale prices for access to its network had been priced higher than the retail prices it charged its own residential users for accessing mobile broadband services on large-screen devices, such as tablets and laptops. Arguing that Telenor's margin squeeze prevented rival providers competing viably between 2008 and end-2012, the ESA argued this amounted to an abuse of the telco's dominant position on the wholesale market, in breach of the European Economic Area (EEA) antitrust rules.

NCC Commissions Study on Colocation and Infrastructure Sharing Market

The Nigerian Communications Commission (NCC) says it has commenced the process of conducting a study to assess the current level of competition in the colocation and infrastructure sharing (CIS) segment of the telecoms sector, a market in which 78 licensees currently operate. The aim of the study is to determine the level of competition in the CIS segment and formulate strategies to enhance opportunities in the market, as well as ensure and promote increased competition. The NCC has hired PricewaterhouseCoopers (PwC) to conduct the study, which is expected to be concluded by July.

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A SNAPSHOT OF REGULATORY ACTIVITIES IN THE SAMENA REGION

Algeria

Multinational telecoms group VEON disclosed in its Q1 2022 report that the process of selling its 45.6% equity stake in Algerian cellco Optimum Telecom Algerie (Djezzy) to the Algerian government's National Investment Fund (Fonds National d'Investissement, FNI) is 'on track', after a final valuation for VEON's shares was concluded at USD682 million. On 1 July 2021 VEON exercised its put option to sell its entire stake in Djezzy (via holding company Omnium Telecom Algerie) to FNI, which would raise the latter's stake to 96.47%. The exercise of the option initiated a process under which a third-party valuation was undertaken to determine the fair market value at which the transfer shall take place. VEON has since reported on Djezzy as a 'discontinued operation' and 'asset held for sale'.

(May 3, 2022) commsupdate.com

Bahrain

The Telecommunications Regulatory Authority of Bahrain (TRA), in collaboration with stakeholders from the sector, announces the development of a Telecommunication Emergency Response Plan in accordance with the Government's fourth and fifth National Telecommunications Plans, to ensure that the sector remains resilient to cyber and physical threats and is ready for any disasters or emergencies that may arise. Essentially, this plan lays the foundations for a sector-wide response to a Telecom Emergency that will be both effective and coordinated. By defining the roles and responsibilities of the Licensees and the Authority during the pre-disaster and post-disaster phases and by laying down the sequence of actions to be taken by the Sector during a Telecom Emergency, this document aims to provide guidance to the Sector in these circumstances. Aside from providing pertinent information about the Sector's response to incidents and telecom emergencies that may have a direct or indirect impact on the Critical Telecommunication Infrastructure and Services of the Kingdom of Bahrain, the Plan will also serve as a guide to help those who need a better understanding of how the sector should respond. According to Mr. Philip Marnick, the TRA's General Director, " We all depend upon on Telecoms it is essential it just works all the time. In emergency or disaster situations we need to ensure the TRA and industry can work together so we have a working telecoms system both here in Bahrain and to and from other countries. We cannot be cut off. Our Telecoms Emergency Plan is designed to ensure we have resilience and if emergencies occur – be they natural disasters, or other significant emergency events, we can all work together to get communications working - to keep us connected and to support disaster relief and search and rescue operations. (June 16, 2022) tra.org.bh

The Telecommunications Regulatory Authority of Bahrain (TRA) held an open forum to discuss TRA's 2022-2023 draft work plan. The forum, provided stakeholders a platform to share their thoughts on the plan. The draft workplan was published on April 24 and it includes the TRA's work streams with the intention of achieving objectives based on four key themes. Specifically, the TRA aims to meet the government policy outlined in the 5th National Telecom Plan, to ensure network security and resilience, to provide a reliable broadband service for all, and to ensure consumer empowerment and protection, a statement said. Among those attending were representatives of the telecommunications industry, from the Ministry of Transportation and Telecommunications, as well as consumer advocacy organizations. Philip Marnick, General Director of the Telecommunications Authority, said: "We are pleased that so many people attended our first TRA Open Forum. It enabled stakeholders, especially consumers, an opportunity to share their ideas and help shape our work. At the end of the day, the work we do here is for the people of Bahrain, so talking to one another helps us serve our community better." Marnick added: "We expect to hold more open forums on future draft publications, so that we can remain in touch and engage with all our stakeholders.

(May 22, 2022) tradearabia.com

Bahrain's Telecommunications Regulatory Authority (TRA) has published a public consultation document on the draft reference offer of BNET, operator of the national fiber-optic broadband network, which outlines the products and services offered to licensed operators. Based on the TRA's preliminary assessment, the proposed tariffs represent significant reductions in wholesale prices, with the cost of a wholesale 100Mbps consumer broadband connection set to fall by 33%. To enable everyone to

benefit fully from a fiber connection, and ensure Bahrain is one of the world's leading broadband markets, BNET also proposes to remove several of the slower speed accesses currently offered. The deadline for submissions is 2 June. Commenting on this consultation, TRA General Director Philip Marnick stated: 'We want to ensure all consumers in the Kingdom of Bahrain have access to world class broadband services at good prices. Providing licensed operators with a wholesale offer is a key regulatory mechanism that underpins competition and choice. The new Reference Offer proposes to streamline the broadband and connectivity speeds available in the Kingdom as well as reducing prices. This will allow enhanced competition in the retail market which will benefit consumers and businesses who use telecommunications services, in addition to further enhancing Bahrain's global competitiveness.' (May 3, 2022) commsupdate.com

The Telecommunications Regulatory Authority (TRA) has published its draft work plan for 2022-2023, structured upon four main pillars: meeting government policy, ensuring a secure and resilient network for all users, reliable broadband for all, and protecting and empowering consumers. As part of this process, the Authority will consult to ensure that everyone's views are taken into consideration before publishing the final work plan. Comments should be submitted by 24 May. Under its proposed Work Plan, the TRA intends to review several areas including: the sector's current licensing framework; the universal service regulation framework; number portability regulation to address the broadband transfer process; BNET's revised reference offer and cost model, as well as its governance arrangements to ensure non-discrimination between all market players; and the retail broadband and domestic data connectivity markets to determine whether any licensed operator holds Significant Market Power (SMP) in a relevant wholesale market. In addition, the TRA plans to award permanent frequency licenses in the 3400MHz-3700MHz band to mobile network operators for an initial 15 years, as well as develop a detailed spectrum roadmap that meets the requirements of all stakeholders. (April 26, 2022) commsupdate.com

Bahrain's Information & eGovernment Authority (iGA) has announced that the government's eKey service has witnessed a surge in demand during the pandemic, with more than 190,000 new users registering since the beginning of March 2020. With the total number of users now topping 572,000, there have been more than 30 million successful eKey entries accessing safe and secure electronic services since the start of the pandemic, said the statement from iGA. Also there has been greater linking of various government systems and services to the eKey, which simplified identity verification and allowed transactions online to be sped up, supporting social distancing measures, ensuring business continuity, and all but eliminating the need for physical visits. Recent additions to the National Portal include a range of services offered by the Ministry of Housing and the Ministry of Labor & Social Development, among others. Director of Government Systems Support & Maintenance Hesham Ebrahim AlHashemi said the eKey offers access to eServices through the National Portal, bahrain.bh, as well as other electronic government channels, eliminating the need to enter personal information repeatedly across platforms. "Users can also opt to receive important notifications by email or SMS by entering their details in the system's website, www.ekey.bh. These include alerts when users' personal data is updated, their accounts are upgraded, and their passwords are changed, as well as updates on various other transactions conducted through the iGA's electronic channels," he added. A total of 153 eServices that require an eKey are available through the National Portal, bahrain.bh and the eGovernment app store, bahrain.bh/apps, including services related to ID cards, the General Department of Traffic, judiciary and courts, commercial records, educational qualification certifications, financial support for low-income individuals, and the Wejhati app for travelers who wish to keep in touch with Bahrain's embassies abroad. A comprehensive list of services is available on the eKey Services page on www.ekey.bh, stated AlHashemi. He called on the public to register for the eKey service, which offers Basic and Advanced levels of access. The Basic level, available to all Bahrain citizens and residents, as well as those who hold ID cards issued by other GCC countries, can be accessed through either the National Portal or the eKey website. Holders of the Basic eKey can upgrade their accounts to the Advanced level through a one-time visit for ID card and fingerprint verification at the iGA's ID Card Service Center in Isa Town, the Bahrain Investors Center at the Financial Harbor, or the Social Insurance Organization, sad the statement. They can also do this through one of the IGA's self-service kiosks, which were launched by Minister of Interior Lt. Gen. Rashid bin Abdulla Al Khalifa in February 2021 and are available at the ID Card Service Centers in Isa Town, Muharraq, and Mina Salman, it added.
(April 24, 2022) www.tradearabia.com

Bangladesh

The Bangladesh Telecommunication Regulatory Commission (BTRC) penalized the four major mobile operators in the nation a total of BDT76.5 million ($823,566) for hosting illegal VoIP services on SIM cards, The Daily Star reported. BTRC fined state-run Teletalk BDT50 million, Robi Axiata BDT20 million, Grameenphone BDT5 million and Banglalink BDT1.5 million, with payment required by the end of June, the local newspaper wrote. Illegal VoIP services allow users to make less expensive calls by bypassing interconnection exchanges and legal international gateways, eliminating termination fees which are shared with the government. BTRC cracked down on unauthorized call termination in 2018 and 2019, finding 52,344 SIM cards with illegal VoIP service from the four operators and originally fining them BDT266 million, The Daily Star stated. The fines were reduced at a hearing in April

after the operators assured the agency they would take measures to ensure their SIM cards don't support illegal calls. Teletalk MD Shahab Uddin told The Daily Star it would again appeal to the BTRC to revise the penalty. (June 13, 2022) mobileworldlive.com

The number of broadband and mobile internet subscribers in Bangladesh stood at 11 million and 113.9 million respectively in March this year, surpassing February's total of 122.8 million. The number of mobile internet users increased by 1.21 million in March, with the number of broadband internet connections rising by 0.89 million after being stuck at 10 million users for more than a year. In addition to the growth of internet subscribers in March, the country's mobile phone subscriptions also increased by 1.4 million at the end of the month to 182.9 million from 181.5 million in the previous month. Market leader Grameenphone gained the highest connections of 0.69 million during the month among the operators, growing its connection base to 83.9 million in March from 83.2 million in February. On the other hand, the third-largest operator, Banglalink, gained 0.39 million connections, taking its connection base to 38.1 million in March from 37.7 million in February. Meanwhile, Robi, the second-largest operator added 0.29 million connections in March, reaching 54.1 million from 53.8 million in February. The number of connections of state-owned telecommunication operator Teletalk remained almost the same at 6.89 million as it added only 10,000 connections during the same period. However, although the number of internet users hit the 125 million mark, almost 75% of the country's population, the unique internet penetration in Bangladesh still lacks behind. According to a report released recently by the GSM Association, an organization that represents the interests of mobile network operators worldwide, the unique mobile internet penetration in Bangladesh is only 31 %. This is lower than the average in South Asia, the report concluded. Among the South Asian countries, the penetration of unique mobile phone internet users in India and Nepal is 38% and the penetration is 52% in Sri Lanka. However, the GSMA report also said that the unique mobile phone penetration in Bangladesh was higher than the South Asian average of 54%, which for Bangladesh is 55%. (May 9, 2022) dhakatribune.com

Egypt

The National Telecom Regulatory Authority (NTRA) has financed the development of Egyptian rural villages by L.E. 150 million, and about 600 million are expected to be dispersed during the fiscal year 2022/2023. During a meeting with the Parliament's Planning and Budget Committee, to discuss the draft plan and NTRA's general budget, Vice President of NTRA, Ashraf Hosni, said that about "381 million pounds were spent on spreading communications services on roads and areas deprived of them, and it is expected that about half a billion pounds will be spent during 2022/ 2023." NTRA's funding of countryside's development in Egypt comes in the framework of the presidential development initiative of "Haya Karima," or as it translates to "Dignified life." He added that Egypt has made progress in the financial inclusion index to become among the ten fastest growing countries in the field of digital inclusion among 82 countries. Hosni also explained that the budget of the National Telecom Regulatory Authority came in accordance with general trends and in light of the state's 2030 strategy, which aims to achieve sustainable development, and the budget has been prepared in accordance with the laws, regulations and decisions regulating the preparation of the budgets of public and economic bodies. (June 2, 2022) egypttoday.com

The National Telecom Regulatory Authority (NTRA) has removed unlicensed wireless networks in major areas in Giza governorate. Unlicensed networks had a negative impact on the quality of telecom services in Haram, Faisal, Kirdasa, and the surrounding areas, and therefore, these areas had been experiencing quality issues in terms of voice and data transfer services. Service levels were consequently boosted at such areas, according to the measurements conducted by NTRA post removal. In fact, this step comes in line with the NTRA's role to govern and regulate the telecom market as well as improve the levels of service provided for users. Many users living in Haram, Faisal, and Kirdasa complained about poor service quality in these areas. As per the field inspections conducted by NTRA's technical teams, it was clear those users had been receiving telecom services from illegal networks not affiliated with any of the licensed operators in Egypt's market whatsoever, and therefore, telecom services in such residential areas were entirely affected. After taking the necessary legal action, Telecom Police escorted by inspectors and law enforcement officers in the NTRA carried out a mission where 1,089 Wi-Fi routers, 146 short-range nano-stations, 157 access points, 202 multi-port switches, 19 long-range microwaves, 21 external antennas, and 33 power-supplies to telecom networks were all seized or removed. As affirmed by the NTRA, law enforcement campaigns are carried out within the NTRA's strategy to boost the level of services provided for users and make sure all telecom devices in Egypt's market conform with the international standards. Such campaigns also aim to narrow down the use of unauthorized devices, eradicate harmful practices, and prevent law violations in Egypt's telecom market which have a negative impact on the quality of telecom services provided for users. To this end, the NTRA works to ensure that all rules and regulating procedures are abided by to guarantee the rights of telecom users. The NTRA also calls upon users of telecom services to make sure they are using the services provided by licensed telecom operators, since unlicensed networks do not actually abide by the quality standards acknowledged by the NTRA. Furthermore, users of such networks do not have the right to receive proper customer service or report any quality issue. Unlicensed networks are also illegal by virtue of law and have a harmful impact on service quality for wide distances in the areas where they are deployed.

(May 17, 2022) dailynewsegypt.com

The National Telecom Regulatory Authority (NTRA) has added

e-wallets to the range of services included within its 'My NTRA' app. Using their ID numbers, users can identify e-wallets registered with their name across the networks of the four mobile operators in Egypt's market and across banks as well. Users may also cancel such wallets via the app. It is worth noting that each user has the right to create three e-wallets at maximum in accordance with the regulatory frameworks established by the NTRA and the Central Bank of Egypt (CBE). The service was actually added after users' feedback, complaints, and needs were taken into account as part of the NTRA's role to improve basic telecom services for individuals and corporations, boost users' experience, and ease up the process of providing services via mobile. As for corporate services, the NTRA also added licensing services for wireless telecom devices to the range of interactive services encompassed in My NTRA in order to carry out all procedures related to permits, licenses, and custom clearances of telecom services via app. Furthermore, this step aims to provide the NTRA's services online in conjunction with the state's goal to go digital. The My NTRA interactive app was launched at the end of 2021 and is considered a leading app worldwide, encompassing a large number of integrated services for end-users. Downloaded about 2 million times so far, My NTRA includes many interactive services starting with 'My Numbers', through which users can check which cell phone numbers they own with each operator in the country's market without visiting their branches. It also includes dialing the free-of-charge unified code to inquire about or cancel entertainment services in response to users' complaints regarding extra charges on monthly packages. Furthermore, the NTRA also provides operators with a 'Points of Sale (PoS) Interactive Service' through which users can look up the addresses of the operators' official points of sale in Egypt's market. Users can also escalate their complaints to the NTRA or inquire about and track the status of already existing ones via the complaints section in the event no satisfactory solution was reached with an operator. Additionally, they can test and measure the speed of Wi-Fi or data internet services via the 'Internet Speed Check Service' on the Android app. (April 25, 2022) dailynewsegypt.com

Jordan

The number of active fiber Internet subscriptions had hit 355,000 by the end of the first quarter of this year against 238,000 for broadband Internet services. According to statistics published on the Telecommunications Regulatory Commission (TRC)'s website, there were about 129,000 active subscriptions to ADSL internet services. Active mobile subscriptions totaled 7.3 million, including 5.4 million prepaid and 1.9 million postpaid subscriptions. Until the end of the first quarter, 65.5 percent of the population had a mobile phone. There were 268,000 active landline subscriptions, with 176,000 being residential and 92,000 being commercial.

(June 6, 2022) en.ammonnews.net

Kuwait

The Communications and Information Technology Regulatory Authority (CITRA) is currently working on establishing an international telecommunication access infrastructure by linking with one of the longest underwater cables in the world. According to informed sources, the cables, which will be implemented through a consortium of companies, will pass through the Gulf countries to South Africa, and then link with the international communication traffic, thus becoming the longest global marine cables. Kuwait is currently connected to two marine cables that link it to international telecommunications traffic. However, one of the cables is disabled due to frequent interruption and inefficiency as a result of its old infrastructure. The establishment of a new underwater cable would increase the telecommunications traffic to and from the global internet so that local companies can provide Internet services to the public with higher efficiency. The granting of a license to a company to establish a free international communications infrastructure in Kuwait will contribute to increasing the annual revenues of the state.It will also contribute to strengthening the Internet for local companies by operating additional capacities on the new cable. The sources said, "The sea and land cables will enhance the level of service and prices offered to the public by linking Kuwait to the global Internet, and work on distributing international communications through multiple international gateway. This will reduce the impact of interruptions on the users, and enhance the sustainability of linking Kuwait with the global network". Regarding the number of land cables, they stated that the country has three land cables currently, indicating that work is underway to establish a fourth land cable that will be completed within six months after creating extensions between the country's switchboards.The sources called on the Ministry of Communications to establish parallel lanes for cables linked to the switchboards, explaining that the Umm Al-Hayman, Al- Zour and Al-Nuwaiseeb exchange switchboards are linked by one cable, and in the event of a disconnection, the communications traffic will be affected, especially in light of the construction works on King Fahad bin Abdulaziz Road (Fifth Ring Road).

(June 22, 2022) zawya.com/en

Ooredoo Telecom, the first to introduce innovative digital services in Kuwait, announced that it is the first Telecom in Kuwait to obtain the Cloud Service Provider license from the Communication and IT Regulatory Authority (CITRA). The "Cloud Service Provider" license, which is new in Kuwait, was issued to Ooredoo following an extensive review of the company's technical capabilities, cloud infrastructure robustness, security policies and safeguards, data handling and storage procedures, as well as technical and security certifications. CITRA's review process ensures that Ooredoo, is in strict compliance with Kuwait's data sovereignty and security requirements, and is following international data protection best practices. In a statement regarding the license, Abdulaziz Yaqoub Al-Babtain, Chief Executive Officer at Ooredoo Kuwait said, "We are proud of this achievement, which represents a milestone in the history of Ooredoo Kuwait's Data Center since its launch in 2017, which was designed with the highest standards and is the first commercial center to obtain Tier 3 certification in Kuwait, being the only one of its kind nationwide. We are also very keen on managing all the data in our data center with accuracy and efficiency by a team of specialized professionals". Al-Babtain added, "Ooredoo Kuwait's data center was built with the highest levels of security and the latest technologies to provide cloud and cyber security services. The data center provides a suite of managed hosting services tailor-made to fit corporate and business needs. These services are ideal for corporates and businesses looking to better manage their data, platforms and applications". (May 23, 2022) zawya.co

Morocco

The Digital Cooperation Organization (DCO), dedicated to the pursuit of digital prosperity for all, announced the accession of the Kingdom of Morocco as its ninth member state, helping it strengthen and expand initiatives to empower more women, youth and entrepreneurs to realize the potential of the digital economy. Morocco, with nearly 37 million people and a GDP of USD114 billion, joins the DCO alongside Bahrain, Jordan, Kuwait, Nigeria, Oman, Pakistan, Rwanda and Saudi Arabia. The country's accession increases the DCO's collective GDP to more than USD 2 trillion and with a population of well over half a billion people with more than 70 percent aged under 35. Morocco is a major regional digital hub with rapidly expanding technological infrastructure and successful startups in the digital industry. The country's efforts to further expand and strengthen its internet network and grant citizens and residents digital access to government services have been recognized by international entities, including the World Bank and the European Investment Bank. Morocco's Minister Delegate of Digital Transition and Administration Reform, H.E. Dr. Ghita Mezzour, welcomed the announcement, stating: "The DCO's mission of enabling digital prosperity aligns with Morocco's digital transformation agenda, and the DCO provides a platform for Morocco to be a global leader in the new digital economy. We are delighted to join the DCO, and our membership builds on Morocco's significant investment in developing our local digital infrastructure." Commenting on the newest of its valuable members, Secretary-General Deemah AlYahya said: "Morocco has made significant progress in expanding network coverage and using digital technologies to make government information and services more accessible to citizens. Having a country that has so clearly prioritized digital transformation coupled with a thriving start-up and innovation ecosystem as a member state of the DCO will undoubtedly strengthen our collective strength and impact in creating a more inclusive global digital economy. "Digital inclusion is a critical global socioeconomic challenge of our time – and at the DCO, it is our fundamental belief that true digital prosperity is a result of collaborative, multilateral efforts among governments and between the private and public sectors. We look forward to working with leaders and digital economy ecosystem pillars across Morocco as well as the impact driven women empowerment initiatives as part of our continued commitment to strengthening digital opportunities around the world." (April 27, 2022) zawya.com

Nepal

The Nepal Telecommunications Authority (NTA) has introduced minimum signal level standards for mobile coverage in a bid to improve services across the country, reports Nepalitelecom.com. The move follows a series of tests by the watchdog that found the country's mobile network operators (MNOs) – Nepal Telecom, Ncell and Smart Telecom – were failing to meet agreed minimum Quality of Service (QoS) criteria regarding call success, drop rates and set-up times. After studying worldwide industry best practice, the NTA has now introduced Rx level standards to ensure uniform performance on all mobile networks, setting the minimum signal level for outdoor coverage at -82 dBm for 2G networks, -87 dBm for 3G and -95 dBm for 4G. The NTA will determine a threshold for 5G networks once fifth-generation services have been deployed. (April 26, 2022) commsupdate.com

Pakistan

Pakistan Telecommunication Authority (PTA) has carried out an independent Quality of Service (QoS) Survey in 15 Cities and 8 Motorways/Highways/Inter City Roads of Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan and Azad Jammu & Kashmir (AJ&K) in order to measure the performance and quality of Cellular Mobile Operators' (CMOs) services being provided to their customers. During the survey, the licensed KPIs of voice, network coverage, SMS and mobile broadband/data were checked using state of the art automated QoS Monitoring & Benchmarking Tool. The drive test teams selected survey routes in such a manner to cover main roads, service roads and majority of sectors/colonies in areas being survey. Based upon the compliance level of each KPI against threshold defined in the respective licenses and QoS Regulations, CMOs have been ranked between 1st to 5th position in Mobile Network Coverage and Voice Services as per compliance level in surveyed cities and motorways/highways. Similarly, in Mobile Broadband Speed segment, the ranking is with respect to the highest data download speed. The survey results revealed that CMOs are compliant with respect to Broadband Services to a great extent while SMS and voice KPIs have been found below the licensed threshold in the areas of Punjab, Sindh, KPK, Balochistan and AJ&K. Eventually, necessary instructions have been issued to the operators for taking corrective measures so as to ensure improvement in the service quality upto the licensed standards. The service quality monitoring activity is being carried out by PTA field teams with the ultimate aim to pursue the operators for provision of better mobile services and to promote a healthy competition among the operators. (June 22, 2022) pta.gov.pk

Pakistan Telecommunication Authority (PTA) has received Rs 19.39 Billion (equivalent to USD 98.49 Million) against third instalment of license renewal fee from two Cellular Mobile Operators (CMOs) Telenor Pakistan and Pakistan Mobile Communication Ltd. (Jazz). The amount has been deposited in Federal Consolidated Fund (FCF). With this deposit, the total deposits by PTA in FCF during the current financial year i.e. 2021-22 have become Rs. 102.5 Billion (equivalent to USD 577 Million). (May 26, 2022) pta.gov.pk

To proliferate the usage of Internet of Things (IoTs) in Pakistan, Pakistan Telecommunication Authority (PTA) has started accepting applications for "Low Power Wide Area Network (LPWAN)" license. This license shall be valid for a term of 5 (five) years. Applicants for the license will have to provide letter of application, CNIC along with other relevant details/documents. The complete list of information and requirements is available at: https://www.pta.gov.pk/en/industry-support/home/iot-lpwan-license-090522. This is in pursuance to Rolling Spectrum Strategy 2020-2023 issued by Government of Pakistan, and to facilitate introduction of futuristic technologies through automation in different industries.
(May 10, 2022) pta.gov.pk

Qatar

The Minister of Communications & Information Technology, Mohammed bin Ali Al Mannai, has approved amendments made by the Communications Regulatory Authority (CRA) to Annexure 'G' related to Network Rollout and Coverage Obligations, to enable the nation's two mobile operators Ooredoo and Vodafone Qatar to further improve the performance of their networks and the quality of services provided to consumers, in particular further facilitating the availability of 5G technology across Qatar. Under the amendments, the CRA will release additional spectrum for expanding and upgrading 5G networks in the 3.5GHz and 26GHz bands to Ooredoo and Vodafone 'by 2023', with total allocated spectrum bandwidth potentially reaching 'up to 1000MHz' depending on the service providers' demands, The Peninsula reported. The amended license obligations state that 5G networks must cover 99% of Qatar with minimum data speeds of 100Mbps by 2024. (May 23, 2022) commsupdate.com

Saudi Arabia

The Communications and Information Technology Commission (CITC) has published a public consultation on "Network Neutrality Regulations Document" as part of its initiatives under the Digital Content Council which aims for a thriving digital economy by protecting consumers, safeguarding competition, ensuring reliable services, fostering digital innovation, and promoting transparency. The Network Neutrality Regulations Document establishes common provisions to protect consumers' rights to access lawfully permissible content, safeguard local content providers' non-discriminatory access to the market, promote healthy competition, foster digital innovation, and ensure the continuity of the service providers' control over their operations. CITC invites

all interested parties, national and international, to participate on the public consultations and submit their comments by June 24, 2022. Noting that CITC and the Digital Content Council believe that interested parties, investors and entrepreneurs play a valuable role on the process of drafting regulations.

(May 25,2022) citc.gov.sa

The Communication and Information Technology Commission (CITC) is pleased to announce the launch of the Emerging Technologies Regulatory Sandbox. The Application period starts from Tuesday, 10 May thru 7 July 2022 via the Emerging Technologies Regulatory Sandbox page on CITC website. Noting that the launch of the Emerging Technologies Regulatory Sandbox is part of CITC's mission upon delivering on its mandate, to provide a flexible and promoting a supportive regulatory environment that will enable service providers to test and deliver innovative business models, solutions and services that accelerate digital transformation and maximize the beneficial use of emerging technologies across sectors.

(May 10,2022) citc.gov.sa

Sri Lanka

The government of Sri Lanka is implementing a wave of tax reforms including a rise in VAT from 8% to 12% and an increase in the Telecommunication Levy from 11.25% to 15%. In a statement, the office of the Prime Minister and Minister of Finance, Ranil Wickremesinghe, has directed the Telecommunications Regulatory Commission of Sri Lanka (TRCSL) to implement the latter, with immediate effect. The Telecommunication Levy was reduced from 15% to 11.25% effective from 1 December 2019 which the government claims 'led to a decrease in revenue by 28% to LKR13.1 billion in 2020 from LKR18.3 billion in 2019. Hence, it is proposed to increase the Telecommunication Levy from 11.25% to 15% with immediate effect.' Wider income tax reforms have also been proposed, along with changes to betting and gaming levies. The PM's statement noted that the low tax regime introduced in late 2019 following the election of President Gotabaya Rajapaksa, but reportedly caused an annual loss of around LKR600 billion–LKR800 billion in tax revenue to state coffers.

(June 1, 2022) commsupdate.com

The Prime Minister and Minister of Finance Ranil Wickremesinghe has proposed an increase in value added tax (VAT) from 8 percent to 12 percent and a hike in the telecommunication levy from 11.25 percent to 15 percent with immediate effect, the prime minister's office said. "The VAT rate was reduced from 15 percent to 8 percent with effect from December 1, 2019 and the threshold for registration of VAT was increased from Rs. 3 million per quarter or Rs. 12 million per annum to Rs. 75 million per quarter or Rs. 300 million per annum effective from January 1, 2020. Due to the above reforms coupled with the impact of COVID-19, VAT revenue declined by 47 percent to Rs. 233.8 billion in 2020 from Rs. 443.9 billion in 2019," the statement said. The telecommunication levy, meanwhile, was reduced from 15 percent to 11.25 percent effective from December 01, 2019, which led to a decrease in revenue by 28 percent to 13.1 billion rupees in 2020 from 18.3 billion rupees in 2019, the PM's statement said, explaining the increase. Income tax reforms have also been proposed, along with changes to betting and gaming levies.

(May 31, 2022) economynext.com

Syria

The Syrian Salvation Government (SSG) has issued a license to ISP Syriana LTE to provide mobile services. The Idlib-based SSG is one of several alternative governments that have emerged in Syria since the country descended into civil war in 2011 and controls a pocket of territory in the northwest of Syria on the border with Turkey. The concession was allocated to Syriana in late May based on legislation that had been passed in March 2019 but the cost and full terms of the authorization were not disclosed. Syriana CEO Hussam Twelo was cited as saying that the company's network would provide coverage of the city of Idlib and the surrounding area within the coming months, and that the operator would seek to expand into areas controlled by the Syrian Interim Government, in Aleppo.

(June 24, 2022) News Agency Enab Baladi

Turkey

A report from Bloomberg citing unnamed sources says that Turkey's sovereign wealth fund – which completed its majority takeover of Turk Telekom (TT) early last month – is planning to extend TT's main operating license to boost the company's value

ahead of a potential sale. Turkey Wealth Fund is working alongside regulators and the communications ministry to extend the license beyond its current Q1 2026 expiry, a move which could be followed by a secondary public offering or a direct stake sale, according to the sources 'with direct knowledge of the matter'. The state fund controls TT (including cellular arm TT Mobil) as well as mobile market leader Turkcell and cable/satellite major player Turksat. (May 17, 2022) commsupdate.com

United Arab Emirates

The UAE has successfully registered more than 19,000 terrestrial radiocommunication stations at International Telecommunication Union (ITU), according to the Telecommunications and Digital Regulatory Authority (TDRA). The ITU is the UN's specialized agency for information and communication technologies (ICTs). According to the TDRA this achievement represents an international recognition of the frequencies allocated to the UAE and the ability to protect radiocommunication stations from harmful international interference, which greatly affects the quality of services provided to the public. Eng. Tariq Al Awadhi, Executive Director of Spectrum Affairs, TDRA, said, "The spectrum is a natural resource, and the UAE is keen to use it adequately to ensure providing optimal communication and broadcasting services." In line with this, Al Awadhi highlighted that the TDRA has been developing plans and strategies to manage spectrum resource and accelerate the deployment of radiocommunication stations, in cooperation with service providers. In addition, the organization also held regular meetings and signed agreements with the competent authorities in sister and neighboring countries to limit harmful interference that may occur on radiocommunication services. He further noted that these efforts by TDRA reflect its key role in protecting terrestrial and space radiocommunication stations from harmful interference that may be caused by other countries. Al Awadhi added, "TDRA is keen to cooperate and coordinate with the Cooperation Council for the Arab States of the Gulf – (GCC), through the Technical Committee of the GCC Technical Office for Telecommunications and to participate in the meetings that discuss important technical matters, in the field of telecommunications and frequency spectrum in the GCC. The most important of which was studying the technical and organizational aspects of a number of modern and emerging technologies, such as the 5G, coordinating the use of mobile networks and radio channels in the border areas among the GCC, and limit harmful interference impacting some radiocommunication services, coordinating the use of frequency bands for the GCC rail network, and other subjects of interest for the member states." TDRA also pointed out that it is continuously upgrading the frequency spectrum management system with the aim to reach the latest version used in spectrum management at the regional and global levels and to provide the users in the UAE safe frequencies that are free from harmful interference.

(May 18, 2022) www.itp.net

REGULATORY ACTIVITIES BEYOND THE SAMENA REGION

Argentina

The National Communications Agency (Ente Nacional de Comunicaciones, ENACOM) has agreed to provide the country's incumbent mobile operators with additional 2600MHz frequencies, in order to help them boost LTE coverage. As part of the distribution process ENACOM will reorganize existing 2600MHz spectrum holdings on a contiguous basis. The decision was authorized by the regulator's Board of Directors which convened for its 78th meeting. ENACOM stated: 'This new assignment, and the subsequent reordering of all assignments, will give providers the possibility of equalizing their holdings both in the total amounts and in the amounts assigned in the 2600MHz band … this will promote general efficiency and competition between the different operators, resulting in an improvement in the quality of the 4G service received by users.' In May 2017 ENACOM initiated a tender process for FDD/TDD spectrum in the 2500MHz-2690MHz (2.6GHz) frequency range. Two months later it was confirmed that Claro and Movistar had each acquired 2×15MHz FDD blocks, while Personal bid on a 2×20MHz FDD block alongside an unpaired 20MHz TDD block; no prices were disclosed.

(May 16, 2022) commsupdate.com

Australia

Australia's new government claims to have achieved its first major milestone under the 'Better Connectivity for Rural and Regional Australia Plan', announcing that AUD480 million (USD333 million) has been provided to NBN Co to upgrade the fixed wireless element of the National Broadband Network (NBN). In a press release regarding the matter, it was noted that with the plan aiming to deliver improved communications coverage in regional Australia, it is expected that the funding will enable consumers in the NBN fixed wireless footprint to benefit from access to increased download speeds of up to 100Mbps, with up to 85% able to access downlink rates of 250 Mbps. Meanwhile, fixed wireless coverage is set to be expanded to cover a further 120,000 currently satellite-only premises. Further, the government has suggested that by settling funding arrangements now, NBN Co will be able to increase Sky Muster data allowances and product inclusions in coming weeks, with further enhancements to follow after the upgrades are complete. Such work will reportedly benefit around 300,000 premises. With the funding in place, NBN Co will now roll out the fixed wireless upgrades over the next two and a half years, it was noted. More information about exactly when, where, and how these improvements are to be made available will reportedly be announced by the operator 'over the coming months.

(June 27, 2022) commsupdate.com

NBN Co's proposed variation to its Special Access Undertaking (SAU), which is a key part of the regulation of the National Broadband Network (NBN), has been published by the Australian Competition and Consumer Commission (ACCC). With the undertaking setting the maximum prices and terms and conditions for broadband providers to access the NBN until 2040, the ACCC has released an accompanying consultation paper on the proposal and has called for feedback from interested parties. In a press release regarding the development ACCC Commissioner Anna Brakey said: 'The [SAU] exists to promote competition and efficiency in Australia's broadband market, to the benefit of households and businesses … The variation will influence the price, quality and range of broadband offers in the market for the next two decades. Before we decide whether to accept NBN Co's proposed variation, we are conducting a public consultation to hear from the retailers who sell NBN services, other service providers, and households and businesses that rely on the NBN for their broadband.' Of note, the variation reportedly seeks to incorporate fiber-to-the-node (FTTN) and other copper-based technologies in the SAU, with a view to creating a single regulatory framework that covers all network technologies. At present, the existing SAU – which has been in place since 2013 and is scheduled to operator until 2040 – only applies to a subset of network technologies, namely fiber-to-the-premises (FTTP), fixed wireless and satellite. However, with such connections accounting for only around one quarter of the NBN's assets, it has been suggested that extending it to cover the other technologies would bring the majority of NBN assets into this regulatory framework. Meanwhile, NBN Co's variation also proposes significant changes to product and pricing commitments, the framework for its cost recovery, and rules for how the ACCC assesses network expenditure. A deadline of 8 July 2022 has been set by the ACCC for submissions to its consultation.

(May 23, 2022) commsupdate.com

Belgium

Telecoms regulator the Belgian Institute for Postal Services and Telecommunications (BIPT) has announced that the main phase of the auction of new 5G spectrum (700MHz and 3600MHz) and existing 2G and 3G frequencies (900MHz, 1800MHz and 2100MHz) has concluded after three weeks of bidding, raising more than EUR1.202 billion (USD1.264 billion) – some EUR468.5 million higher than the reserve price. In addition to the incumbent mobile operators Orange Belgium, Proximus and Telenet, two new entrants – Citymesh Mobile and IT services provider Network Research Belgium (NRB) – also succeeded in securing part of the available spectrum. Proximus spearheaded the bidding, agreeing to pay a total of EUR491.1 million for a package of spectrum in the five bands, while Orange, Telenet and Citymesh also secured user rights to frequencies in the blocks, bidding EUR321.5 million, EUR264.4 million and EUR114.3 million respectively. NRB agreed to pay EUR10.97 million for a 20MHz block of 3600MHz spectrum. User rights will be valid for a period of 20 years, with the exception of frequencies in the 3600MHz band, which will expire on 6 May 2040. Citymesh Mobile (owned by B2B networks provider Citymesh [51%] and RCS&RDS [49%], of which Digi Communications is the main shareholder) exercised an option at the end of March 2022 to obtain a reserved radio spectrum package of 30MHz duplex in the various radio frequency bands for both 5G and 2G, 3G and 4G applications against payment of EUR83.34 million, enabling it to enter the market with an adequate spectrum package. The three existing mobile operators also took up an option to acquire the radio spectrum reserved for them against payment of EUR73 million each, in order to guarantee the continuity of their current services. The selected candidates must now submit to the BIPT no later than 5 July a common proposal per frequency band for the positioning of the various frequency blocks, failing which an extra round of bidding will take place. The BIPT will now organize a third procedure to allocate 90MHz of spectrum in the 1400MHz for a period of 20 years.

(June 21, 2022) commsupdate.com

Botswana

The government is implementing new measures to help expand connectivity across the country. Botswana's Minister of Communications, Knowledge and Technology Thulagano Segokgo confirmed the government's goal of extending the geographical range of mobile signal in the country, as well as pushing fixed services to unconnected rural areas. Segokgo noted that the ministry was assessing the tariffs offered by operators and internet service providers to ensure that "favorable packages [are] accessible to consumers", and added that the government would "strive to look at other policy measures we can adopt to reduce the input costs for operators and in turn reduce tariffs." Botswana's government is currently implementing a rural connectivity initiative that aims to connect 500 villages with digital infrastructure. This in turn will provide internet access to clinics, schools, businesses and municipal buildings in previously unconnected regions. The government also plans to announce a number of online government services in June this year. "Connectivity, like access to water, is simply a human right," said Segokgo. "Such efforts and commitment will ensure that our citizens have access to government services around the clock, everywhere and anywhere. This will bring convenience to elders and eliminate unnecessary visits to government offices and also spending several hours in queues."

(May 24, 2022) developingtelecoms.com

Brazil

The National Telecommunications Agency (Anatel) has approved a 60-day extension to the deadline for launching 5G services in the 3300MHz-3700MHz band for winners of frequency auctions in all state capitals and the Federal District. The deadline for releasing the commercial 5G frequencies has now been moved from 30 June to 29 August 2022, while the deadline for activating 5G services with at least one base station per 100,000 inhabitants of each capital has been moved from 31 July to 29 September 2022. Anatel disclosed that delays in equipment supply had led to the extension, in particular equipment used to mitigate interference in satellite stations from usage of the 3300MHz-3700MHz band, due to factors including shortages of semiconductors, lockdowns in China, limitations of air transport and delayed customs clearance.

(June 6, 2022) commsupdate.com

The National Telecommunications Agency (Agencia Nacional de Telecomunicacoes, Anatel) approved the sale of Oi's V.tal unit (formerly known as InfraCo) on 5 May. According to the watchdog, the transaction will take place in three stages: firstly, control of Globenet will pass to investment vehicles managed by the BTG Group; secondly, control of V.tal will pass to Globenet; and finally, Globenet will be incorporated by V.tal. On 25 January 2021 Oi signed an exclusivity agreement relating to the sale of its fiber-optic InfraCo unit. The contract was signed with Globenet Cabos Submarinos, BTG Pactual Economia Real Fundo de Investimento em Participacoes Multiestrategia and other investment funds managed or controlled by the BTG Group. The staggered BRL11.4 billion (USD2.2 billion) transaction was approved by the Administrative Council for Economic Defence (Conselho Administrativo de Defesa

Economica, CADE) in November 2021, and InfraCo was duly renamed V.tal. Post-closing, V.tal will position itself as a neutral network provider, and aims to pass 32 million homes with fiber by 2025.
(May 6, 2022) commsupdate.com

Canada

Innovation, Science and Economic Development Canada (ISED) has opened its mmWave Licensing Framework Consultation, proposing to make more 5G spectrum available to develop higher quality services and innovative new applications. According to ISED, the mmWave 26GHz, 28GHz and 38GHz bands are expected to support both highly localized mobile 5G services (such as in crowded sports arenas) and new applications from industries such as manufacturing and transportation. The consultation follows a spectrum repurposing decision announced in 2019, with the mmWave license auction planned for 2024. The consultation also proposes to make additional mmWave spectrum available through a future non-competitive licensing process to support new and non-traditional users. The consultation's closing date for initial comments is 6 September 2022 with 'reply comments' accepted until 7 October 2022. Currently there are satellite service licensees in all three mmWave bands but satellite earth stations are only licensed in the 28GHz band, while there are fixed service licenses in the 38GHz band only. In 2019 ISED implemented a moratorium on new 26GHz, 28GHz and 38GHz terrestrial service licenses, and once the new licensing framework is established for these bands, the previous framework for terrestrial services will no longer apply, while ISED has set out a transition plan for incumbent frequency holders. (June 8, 2022) commsupdate.com

The Minister of Innovation, Science and Industry, Francois-Philippe Champagne, yesterday announced a new proposed policy direction in the telecoms sector which will require the Canadian Radio-television and Telecommunications Commission (CRTC) to put in place new rules to improve competition and support consumers, aimed at achieving lower prices and better services, declaring that: 'While the progress we have made and witnessed to date on lowering prices is encouraging, more needs to be done. Canadians still pay too much for their internet and cellphone services.' The new approach sets out to: 'enhance wholesale internet access and competition; increase mobile wireless competition; improve consumer rights; speed up new infrastructure for universal access; and build better regulations to better support Canadian consumers.' The statement clarified: 'the new policy direction would require the CRTC to support a wholesale internet regime that is sustainable, effective and fair, because wholesale broadband is a proven regulatory tool for increasing retail competition in the internet service market. The new direction will directly improve this important tool, strengthen support for competitors and ensure that they continue to have a fair chance at entering markets to offer more options for Canadian consumers. This will be implemented as part of this broader direction to improve telecommunications services and consumer protection.' (May 27, 2022) commsupdate.com

China

China's three mobile players signed up an additional 30.1 million 5G package subscribers in May, taking their combined figure to 899.3 million and accounting for the vast majority of the global total. China Mobile added 18.2 million to end May with 495.1 million. Since the beginning of the year, it picked up 108 million. Rival China Telecom added 7 million in May, taking its total to 224.5 million, with 36.7 million added in the opening five months. China Unicom closed May with 179.7 million, up 4.9 million from the previous month and 24.7 million since the start of the year. The number of subscribers with both 5G service plans and compatible handsets is much lower than the package counts. In March, China Mobile revealed it had 190 million real 5G users at end-2021 compared with 387 million package customers. China Mobile's total mobile subscribers increased by 9.7 million in May to 966.6 million and China Telecom's by 8.7 million to 381.1 million. China Unicom hasn't disclosed mobile subscriber numbers in 2022, but released totals combining mobile, fixed, broadband and IoT connections.
(June 21, 2022) mobileworldlive.com

Chile

The Department of Telecommunications (Subsecretaria de Telecomunicaciones, Subtel) has set out plans to resolve the ongoing dispute regarding the use of spectrum in the 3.5GHz band. Diario Financiero cites Subsecretary of Telecommunications Claudio Araya as saying that the regulator aims to enable operators with spectrum licenses for fixed wireless services to change how those concessions so that the frequencies can be used for advanced mobile services. Of the six providers with spectrum in the band, three – WOM, Entel and Movistar – paid substantial fees for 5G licenses in last year's tender whilst the other three (VTR, Claro and GTD) were allocated fixed wireless licenses in 2001 at no cost. The official explained that the latter

trio hold spectrum that is not being put to effective use and the additional capacity from the airwaves will be of growing importance as more users migrate to 5G services. Mr. Araya went on to say that to address the matter quickly and without impacting competition, the older concessions should be upgraded to permit the use of the spectrum for mobile services. To that end, executives from the six companies along with regulatory officials and other experts are set to conduct a series of meetings over the next two weeks to agree on a value for the spectrum holdings and a fair price for the change of the concession. Once this has been completed, Subtel must take the matter to the Antitrust Tribunal (Tribunal de Defensa de la Libre Competencia, TDLC) as an earlier ruling on the matter from the body mandated that 3.5GHz spectrum be allocated via a public tender.

(May 26, 2022) commsupdate.com

Colombia

The Communications Regulatory Commission (Comision de Regulacion de Comunicaciones, CRC) has relaxed a number of regulatory conditions relating to rural network rollouts, as it seeks to encourage regional ISPs to expand their services to hard-to-reach parts of the country. Via Resolution No. 6755, ISPs that serve fewer than 30,000 subscriptions and target 'rural, remote and difficult to access areas' are no longer obliged to follow sector guidelines relating to user service, compensation and measurement indicators, as the government seeks to incentivize companies to extend their networks beyond their existing footprints. A total of 479 ISPs that serve 1,012 municipalities are eligible for the scheme and the watchdog notes that the initiative could ultimately benefit as many as 5.8 million people. The CRC notes that the Resolution is in accordance with Law 2108 of 2021, which declared internet access to be an essential public service in Colombia.

(May 31, 2022) commsupdate.com

Congo

Congolese business organization the Federation of Companies of Congo (La Federation des enterprises du Congo, FEC) has issued a statement clarifying its position regarding price hikes in the mobile segment, after industry watchdog Regulatory Authority of Post and Telecommunications (Autorite de Regulation des Postes et Telecom, ARPTC) warned that it had not approved any such price increases. The FEC had claimed that increases in taxation on the sector would result in higher prices for consumers. The ARPTC responded by dismissing the reports as false, stating that no tariff increases had been approved and warning that any provider illegally raising prices would be severely sanctioned. Explaining the matter in more detail, the FEC notes that its original claims were with regards to taxes levied on providers on calls, messages and internet use that were introduced in March and April this year. According to the FEC the invoices issued to the providers for the period from 24 March to mid-May 2022 represents 'several tens of millions of US dollars'. As such, the FEC said, operators would be obliged to adjust prices to integrate the new charges into their price structures. The body goes on to argue that operators are permitted to increase prices, as the law requires that tariffs are oriented towards costs. Consequently, the FEC considers it: 'inadmissible for the government to set up new taxes in favour of the ARPTC to remunerate its services on the one hand and does not accept to assume the logical consequence of a subsequent increase in the prices of these new charges on the other side.' In a related development, Bloomberg cites people with knowledge of the matter as saying that the nation's four main cellcos – Vodacom Congo, Orange DRC, Airtel DRC and Africell – had been issued the regulator's invoices through consulting firm 5C Energy. The quartet reportedly rejected the notices as 'irregular and therefore unenforceable' and are refusing to pay the demands. The new taxes are expected to cost providers around USD180 million per year.

(June 13, 2022) commsupdate.co

Dominican Republic

The Dominican Telecommunications Institute (Instituto Dominicano de las Telecomunicaciones, Indotel) is hoping to relaunch its failed auction of 700MHz spectrum, news reports, citing comments made by Executive Director Julissa Cruz during last week's Latin America Digital Symposium. The frequencies were originally included in last year's 5G spectrum auction, alongside 3.5GHz airwaves, but failed to attract any bids. Ms. Cruz admitted that the obligation to offer local roaming access to rival operators not in possession of low-band spectrum for three years was the key factor that dissuaded the country's cellcos to bid on the spectrum. As such, the licensing terms will now be revised before a sale is relaunched. Nine 2×5MHz blocks of 700MHz spectrum were included in the original tender. In October 2021 Indotel announced that its auction of 5G-suitable frequencies had generated a total of USD73.789 million. Claro Dominicana submitted the largest bid, offering USD53.111 million for a 70MHz block of spectrum in the 3.3GHz-3.4GHz band. Altice Dominicana, meanwhile, paid USD20.678 million for a 70MHz block of 3.4GHz-3.5GHz spectrum. (June 8, 2022) BNAmericas

Estonia

Bids for the second 5G broadband cellular network license on offer in Estonia have passed the US$4.7 million mark. The 3.6 GHz bandwidth is open to three companies: Telia, Tele2 and UAB Bite, a Lithuanian company. Elisa, having won the auction of the first bandwidth to be held, is not eligible to be in the running for the subsequent auctions. Aap Adreas Rebas, spokesperson for the Consumer Protection and Technical Regulatory Authority (TTJA), which is overseeing the bidding, said: "The second auction of the 3.6 GHz 5G frequency license reached the 30th round as of June 28 at a level of €4,500,300. All three bidders can submit bids, and at least one bid must be submitted in each round." The auction is likely to last some time more, he added. "Most likely the second round is not over yet. That the competition is fully there. Perhaps the last round will see a little less competition," he added. Elisa paid €7.2 million for its bandwidth in the first auction, which lasted over 57 rounds and ended on May 27. The asking price raises in €100,000 increments per round. Once the second auction is completed, the TTJA will start the third and final round, which as noted only two companies will be eligible to bid in. Elisa claims that the first license, which it won, was the most valuable of the three on offer, on the grounds that it is not subject to stricter restrictions relating to the Russian border. The company opened up its 5G network on June 16, initially offering Internet packages which can be used with an outdoor router, with the network available to other devices from the fourth quarter of this year.(June 28, 2022) news.err.ee

Estonia has launched the auction of its second 3.5GHz license, with Telia, Tele2 and Bite Lietuva left in the running after Elisa emerged as the winner of the first concession late last month. The second license, which offers 130MHz of spectrum in the 3410MHz-3800MHz band, has a starting price of EUR1.597 million (USD1.7 million); Elisa won the previous auction with an offer of EUR7.206 million after 57 rounds of bidding. Four firms have been vying for the three available concessions, so competition for a license is expected to be fierce.

(June 13, 2022) commsupdate.com

Elisa has been named as the winner of the first license in Estonia's auction of 5G-capable 3.5GHz spectrum. The Consumer Protection and Technical Surveillance Authority (TTJA) announced that Elisa submitted a bid of EUR7.206 million (USD7.756 million), well above the reserve price of EUR1.597 million. A further two concessions are still available, and the auction for the next license will begin once Elisa has paid the necessary fees. Andres Suti, Minister of Enterprise and Information Technology, commented: 'The final price, which is many times higher than the starting price, shows the strong competition in our 5G market, which accelerates the delivery of 5G to customers. Elisa now has the green light to offer a new user experience and new solutions to its customers, and two more licenses have to be shared.'

(May 31, 2022) commsupdate.com

France

Satellite internet company Starlink has been awarded a new concession in France, after its previous authorization was revoked on a legal technicality. The original decision to grant two frequency bands to the company was over-ruled by France's highest administrative court, the Conseil d'Etat, in April 2022; the authority was quoted as ruling that the license award 'could impact the market of access to high-bandwidth internet and affect the interests of end users', therefore it should have been a legal requirement to carry out public hearings before granting the licenses, a step which Arcep omitted. Following the court's decision, Arcep opened a new public consultation process, which highlighted in particular the potential of the Starlink service to improve connectivity in 'white areas' that are poorly served by fiber networks. In view of the contributions received, Arcep issued Decision No. 2022-1102, awarding the 10.95GHz-12.70GHz and 14GHz-14.5GHz bands to Starlink.

(June 6, 2022) commsupdate.com

Finland

A deadline for the granting of 700MHz spectrum licenses for the Aland Islands has been further extended, the Ministry of Transport and Communications (Liikenne-ja viestintaministerio, MoTC) has announced. Previously, in December 2021 the ministry issued an invitation to apply for the concessions, setting an initial deadline of 3 March 2022. However, in February this year the MoTC announced an extension to the application deadline – to 31 May 2022. Now, a further extension to 3 November 2022 has been confirmed, and in announcing the delay the ministry noted that under the Act on the Autonomy of Aland, a state authority may grant a license for public telecommunications operations for the islands only with the consent of the islands' local government. As such, the MoTC has said: 'It is justified to extend the time limit so that the Government of Aland can process the matter to a sufficient extent.' With there being three concessions on offer, the MoTC notes that applications have already been submitted by a trio of operators, namely: Elisa, Telia Finland and Aland Telecommunications. According to the ministry, the technology neutral licenses are being issued 'to promote the construction of 5G networks in Aland and to improve the availability of high speed wireless broadband connections'. (June 1, 2022) commsupdate.com

Germany

The Federal Network Agency (FNA) has announced that it has published the Telecommunications Minimum Supply Ordinance (TKMV) in the Federal Law Gazette. The ordinance, which came into force on 1 June 2022, defines the minimum requirements for the right to be provided with telecoms services. According to the Telecommunications Act, every citizen has a legal right to be provided with voice communication services and a fast internet access service for appropriate social and economic participation. The download speed must be at least 10Mbps and the upload rate must be a minimum of 1.7Mbps, while the latency should not be higher than 150 milliseconds. The FNA will review these values annually. The minimum supply of telecoms services must be offered at an affordable price, to be determined and monitored by the regulator, although the right to be supplied with telecoms services does not specify the technology with which the minimum offer is to be provided. To date, the basic service has been provided by Telekom Deutschland, but the new minimum offer can now be provided voluntarily by any telecoms provider, and the FNA also has the right to oblige an operator to provide a telecoms connection and to offer services if there are no voluntary offers.

(June 20, 2022) commsupdate.com

Germany's competition regulator commenced a probe against Apple to review its rules on tracking third-party apps, raising suspicions it gives its own apps and services preferential treatment and hinders other companies. Bundeskartellamt stated it would examine Apple's App Tracking Transparency Framework, which the company introduced for third-party apps in April 2021. The framework establishes certain conditions for user tracking as defined by Apple and requires users to opt-in to tracking. Advertisers or app publishers use tracking to display targeted advertising on websites and apps, or other purposes, which are vital to business models particularly if the apps are free of charge and rely on advertising. However, preliminary findings indicated while users could restrict the use of their data for personalized advertising on third-party apps, Apple was not subject to the rules of the framework. Bundeskartellamt president Andreas Mundt explained the regulator welcomed business models which employ data and give users a choice of how their data is used, but warned a company like Apple, which is in the position to set rules for its ecosystem and its app store, should make pro-competitive rules. "We have reason to doubt that this is the case when we see that Apple's rules apply to third parties, but not to Apple itself. This would allow Apple to preference its own offers or impede other companies." Germany opened a separate probe against Apple's market dominance in June 2021, accusing the company of creating a digital ecosystem centered around its iPhone and iOS.

(June 14, 2022) mobileworldlive.com

Greece

The National Telecommunications & Post Commission (Ethniki Epitropi Tilepikoinonion kai Tachydromeion, EETT) has announced that a sale of spectrum in the 410MHz-430MHz band attracted a single bidder. The license offering 2×2MHz was acquired by OTE Group, which operates in Greece under the Cosmote brand, for EUR1.15 million (USD1.2 million). The 410MHz band is earmarked for use in Greece for private LTE (P-LTE) networks which support enterprise and IoT connectivity.

(May 16, 2022) commsupdate.com

Guernsey

A proposed decision to grant a telecommunications license to Ireland-registered Starlink Internet Services Limited has been published by the Guernsey Competition and Regulatory Authority (GCRA). In a press release regarding the matter, the watchdog noted that its proposal comes after receiving an application from Starlink for permission to establish, operate and maintain a telecoms network and provide fixed communications services – specifically satellite user terminal network and ESIM services – to customers in Guernsey. In its application, Starlink said it intends to provide high speed, low latency satellite internet services to Guernsey customers through its low earth orbit (LEO) satellite communications constellation. Its service will reportedly provide downlink in excess of 100Mbps and uplink speeds of 80Mbps, utilizing low power user terminal devices that are sold directly to customers. Starlink also proposes to provide ESIM services on platforms in motion (e.g. ships or aircraft). Meanwhile, Starlink proposes using satellite spectrum in the Ku band for its offerings, in accordance with the Satellite (Earth Station Network) License issued to it by UK communications regulator Ofcom; that concession allows the company to use satellite spectrum for this purpose anywhere in the UK and Channel Islands. According to the GCRA, its proposed decision to grant Starlink a license is consistent with a previous decision made in March 2022 on a framework for licensing gateway earth station and user terminal network satellite services in Guernsey. Having published a copy of the proposed license, the GCRA is now seeking any comments regarding the matter by a deadline of 15 June 2022, and has said the proposed decision will become final from 22 June 'unless otherwise notified'.

(June 9, 2022) commsupdate.com

India

The Indian government will convert debt owed by Vodafone Idea (Vi) into equity in the troubled telco before the commencement of the country's multi-band 5G spectrum, which is scheduled to start on 26 July. According to the Financial Express, the timing of the move is designed to pave the way for the operator to fully participate in the frequency sale. The conversion of debt into equity will be done under Section 62 (4) of the Companies Act. Vi will issue shares to the government on a preferential basis, and they will be held by the Department of Investment and Public Asset Management (DIPAM). After the INR161.3 billion (USD2.09 billion) debt is converted into equity the government will hold a 32% stake in Vi, while the stake of the company's promoters, which includes UK's Vodafone Group and India's Aditya Birla Group, will be diluted from the existing 75% to 50%. The government has informed the telco that the stake will be treated as 'public shareholding' and it will neither participate in the management of the company, nor seek board representation. (June 21, 2022) commsupdate.com

The Indian government has approved plans for the upcoming multi-band 5G spectrum auction, now set to take place in late July this year, comprising more than 72GHz of spectrum across the 600MHz, 700MHz, 800MHz, 900MHz, 1800MHz, 2100MHz, 2300MHz, 3300MHz and 26GHz bands. The new licenses will be valid for 20 years, and interested parties have until 8 July to submit applications with the auction due to begin on 26 July. The Department of Telecommunications (DoT) has published a Notice Inviting Applications (NIA) for participation in the auction setting out the finalized conditions for the sale and whilst the updated rules for the tender have improved conditions for the interested bidders (the removal of Spectrum Usage Charges [SUC] and easier long-term payment options, for example), several concerns raised by operators following the publication of the initial draft plans have not been addressed. Of particular concern to operators was the suggestion that spectrum could allocated directly (i.e. without auction) to businesses for private networks. Regarding the matter, the Economic Times writes that industry group the Cellular Operators Association of India (COAI) last week warned the telecom minister that 'any move to directly allocate spectrum to non-telco enterprises would degrade the 5G services business case for telcos and make CAPEX-intensive 5G network rollouts meaningless for them'. Despite such protests the DoT maintained its position and the NIA sets out several options for Captive Non-Public Networks (CNPNs), including the direct allocation of spectrum to enterprises, though details for such direct assignment will be determined at a future date. Meanwhile, operators had also requested further reductions in base prices for 5G spectrum to encourage bidding and free up funds for investment in infrastructure. The prices recommended by the Telecom Regulatory Authority of India (TRAI) and subsequently accepted by the DoT represent a decrease of more than 30% – and around 40% for the coveted 700MHz range – compared to the last auction but telcos had requested that the reserve prices be lowered further still.

(June 15, 2022) commsupdate.com

Isle of Man

New spectrum licensees in the 700MHz and 3.6GHz bands are set to be awarded by the Isle of Man's Communications and Utilities Regulatory Authority (CURA), it has announced. With the regulator having previously published a final memorandum on its plans for the sale of spectrum in these bands back in December 2021, it has now confirmed the conclusion of the sale process, with three companies – Manx Telecom, Sure (Isle of Man) and BlueWave Communications – bagging frequencies. Both Manx Telecom and Sure successfully bid for 700MHz spectrum, with the former securing both a 2×15MHz paired block in the band (703MHz-718MHz/758MHz-773MHz) and a 10MHz block of supplementary downlink spectrum (748MHz-758MHz), at a total cost of GBP499,884 (USD631,059). Sure, meanwhile, has agreed to pay GBP299,930 for a 2×15MHz block in the 700MHz band (718MHz-733MHz/773MHz-788MHz). Meanwhile, Manx Telecom, Sure and BlueWave all bid successfully for a 1×100MHz block of 3.6GHz spectrum, with the last named paying marginally less for its new frequencies, GBP641,519, versus the GBP651,519 that Manx Telecom and Sure will each pay for their respective allocations. With the CURA confirming that all of the licensees issued are technology neutral, it also revealed that payment for the concessions will be made over their 17-year duration. Of note, lower percentage fees will apply in the earlier years of the license period – 3% of the total fee is payable in each of the first three years, compared to 5% in years four to eight and 8% in the last four years of the license. According to CURA, this distribution of license fee payments has been designed to 'incentivize the investment in new services during the earlier parts of the license duration'.

(May 30, 2022) commsupdate.com

Italy

The final batch of contracts to deploy open access 5G networks in rural areas of Italy have been awarded to a consortium comprising tower company INWIT and two of its telco shareholders, Telecom Italia (TIM) and Vodafone. The tender was split into six regional lots plus a separate contract covering the provinces of Trento and Bolzano, worth a combined EUR345.7 million (USD362.6 million). Winning bidders will get up to 90% of their rollout costs paid by the government and must guarantee transmission speeds of at least 150Mbps to at least 40% of the 2,000 communities included in the tender. Work must be completed by end-June 2026. TIM had previously won tenders worth EUR725 million for another batch of rural 5G rollouts. The Italian government says it has now committed EUR5.5 billion in public and private funding to its national broadband strategy. (June 30, 2922) commsupdate.com

The Italian government's Infratel unit has launched a new tender for state-subsidized 5G network rollouts in rural areas after its initial call for partners earlier this year failed to attract sufficient interest. Under the revised plan, EUR567 million (USD598 million) will be made available via six separate lots, each of which covers several Italian regions. Operators must agree to cover a minimum number of areas in each set of allocated regions, with up to 90% of rollout expenses paid by the government under its National Recovery and Resilience Plan. Networks should offer download rates of at least 150Mbps, with uplinks of at least 30Mbps. Rollouts must be completed by mid-2026.

(May 23, 2022) commsupdate.com

Jersey

A next step towards the licensing of 5G-suitable spectrum has been announced by the Jersey Competition Regulatory Authority (JCRA), with the publication of an updated 'Statement of Intent' which contains details of spectrum packages that will be available to interested operators. Furthermore, the regulator has also begun consulting on the proposed process of applying for these spectrum packages, via the publication of a consultation on its 'Draft Invitation to Tender'. As per the latter document, the JCRA noted that in terms of a proposed licensing timetable, it expects to publish a final invitation to tender in September 2022, while it envisages announcing the winners of the tender and making recommendations for spectrum awards to UK telecoms regulator Ofcom – which manages frequencies in Jersey – in Q1 2023. Pursuant to that, the Authority expects to have completed the 'required local enabling activities for tender winners' in H1 2023, with the issuance of spectrum licenses by Ofcom taking place in that same timeframe. Submissions to the JCRA's consultation are being accepted until 23 August 2022. Of note in its Statement of Intent, meanwhile, the JCRA confirmed it plans to ensure Islanders have access to 'widescale quality 5G services' by issuing three 'Full Service' spectrum packages; each of these will contain up to 100MHz of contiguous spectrum in the 3.4GHz-3.8GHz band and 2×10MHz of paired spectrum in the 700MHz band. Alongside these allocations, the regulator has set out plans to 'create opportunities for Islanders or local organizations to receive specific innovative 5G services' by offering several 'Limited Service' packages; these will each contain up to 30MHz in the 3.4GHz-3.8GHz range.

(June 29, 2022) commsupdate.com

Kenya

The Communications Authority (CA) has extended the deadline for the country's mobile phone users to register their SIM cards with their service providers by a further six months, to 15 October 2022. In February the regulator directed the country's mobile operators to ensure that the personal details of their subscribers were fully updated by 15 April 2022, in accordance with the Kenya Information and Communications (Registration of SIM Cards) Regulations 2015. However, after determining that 'operators still have a long way to go to achieve 100% compliance' – with Safaricom reporting that so far 67% of its SIMs have been updated, followed by Airtel with 55% and Telkom Kenya with a compliance level of 33% – the CA has decided to extend the deadline to 15 October. At this date, the watchdog said it will conduct a detailed compliance audit on each of the operators and revealed that 'any case of non-compliance by either the operators or subscribers will attract immediate penalties as laid out by law'.

(April 20, 2022) commsupdate.com

Kosovo

Sector watchdog the Regulatory Authority for Post and Electronic Communications (Autoriteti Rregullator i Komunikimeve Elektronike dhe Postare, ARKEP) has launched a public consultation regarding the distribution and use of spectrum in the 3400MHz-3800MHz band for mobile/fixed communications networks (MCFN). Under the proposals the range would be divided into 80 1×5MHz blocks of TDD spectrum, with 300MHz (3400MHz-3700MHz) to be allocated on a nationwide basis to be used for mobile or fixed wireless networks. The remaining 100MHz would be issued on a local basis for private networks and the regulator intends to handle

each request on an individual basis. Authorizations for such private networks would be issued for four years with the right to renew after the expiry period. ARKEP notes that these allocations would also be limited in the border areas due to the necessity of coordinating frequency planning with neighboring countries. ARKEP is accepting comments on its proposals until 1 July 2022. (June 1, 2022) commsupdate.com

Lesotho

The Lesotho Communications Authority (LCA) has announced that the country's mobile phone users will be required to register their SIM cards with their service provider starting from 24 June. The announcement follows the publication of the Communications (Subscriber Identity Module Registration) Regulations, 2021 in December last year. The LCA's Chief Regulatory Officer, Thato Ponya, said the exercise is aimed at reducing crime committed using mobile phones. The country is home to two mobile network operators, namely South Africa-based Vodacom and Econet Telecom Lesotho (ETL). (May 19, 2022) commsupdate.com

Lithuania

The telecoms watchdog the Communications Regulatory Authority (Rysiu Reguliavimo Tarnyba, RRT) has kicked off the auction of 5G mobile spectrum in the 700MHz band. The tender comprises the sale of one 2×10MHz block (713MHz-723MHz/768MHz-778MHz) and two lots of 2×5MHz (723MHz-728MHz/778MHz-783MHz and 728MHz-733MHz/783MHz-788MHz), with initial prices set at EUR5 million and EUR3 million, respectively. Spectrum licenses are valid for an initial period of 20 years. In January this year the RRT postponed the deadline for interested parties to submit documents for the 700MHz auction to 25 March 2022. Subsequently, the RRT confirmed that the country's three existing mobile networks operators – Bite Lithuania, Tele2 Lithuania and Telia Lietuva – had all registered to take part in the tender. Winning bidders are subject to certain rollout and service provision obligations, including a requirement to launch commercial 5G services in at least one of the country's five largest cities (Vilnius, Kaunas, Klaipeda, Siauliai and Panevezys) within six months and to all five by 31 December 2023. (May 25, 2022) commsupdate.com

Malawi

Malawi could see the launch of a third mobile network operator in competition with Airtel and Telekom Networks Malawi (TNM), with local newspaper The Times reporting that Nyasa Mobile has announced its intention to roll out services by the end of the year. According to Nyasa Mobile's Chairperson Konrad Buckle, the firm has been in discussions with UK-based Vodafone Group about a potential strategic partnership. He said the pair have been assessing the telecoms industry and wanted to bring new and cheaper services to Malawians. It is unconfirmed when Nyasa Mobile, which is a subsidiary of Nyasa Manufacturing Company, received its mobile operating license. The numerous attempts by the government and the Malawi Communications Regulatory Authority (MACRA) over the last 20 years to introduce much-needed competition to the mobile sector have so far failed. The market is characterized by high tariffs and poor service quality, with mobile penetration standing at just 59% of the population at the end of March 2022.
(May 26, 2022) commsupdate.com

The Malawi Communications Regulatory Authority (MACRA) has officially launched the Universal Service Fund (USF) Strategic Plan for the period 2022-2027. The five-year plan is set to promote the adoption of ICT services in rural and underserved areas of the country. The USF, which is managed by MACRA, was established by the Communications Act No. 34 of 2016 to promote universal access to communications services. In May 2018 MACRA launched a consultation with stakeholders on a draft framework regarding the USF and the following year the Communications (Universal Service Fund) Rules, 2019 were published by the regulator. The USF will be used to offer subsidies on a competitive basis to licensees, in order to give them incentives to expand communications services to unserved and rural areas that are not economically viable.(May 23, 2022) commsupdate.com

Malaysia

The Malaysian Communications and Multimedia Committee(MCMC)hasissuedasetofqualitycompliance directives to domestic mobile network operators (MNOs) Celcom Axiata, Digi Telecommunications and U Mobile. In a press release regarding the matter, the regulator confirmed it had issued the directives after they failed to meet broadband quality of service (QoS) standards, while it said the cellcos had also failed to improve service quality in several identified areas in the state of Langkawi, including the Langkawi Highway and several tourist areas. With the three MNOs having now been directed to make the necessary improvements

to ensure their respective quality of service levels and user experience comply with the country's Mandatory Standards for Quality of Services (MQSoS), the MCMC notes that failure to comply with the directives could results in each of the operators being subject to fines of up to MYR200,000 (USD45,370).

(June 24, 2022) commsupdate.com

The Malaysian Communications and Multimedia Commission (MCMC) is launching a public inquiry on a review of 'Mandatory Standard on Access' ('MSA'). In a press release regarding the matter the regulator said that the inquiry was being carried out pursuant to sections 55, 56, 104(2) and 106 of the Communications and Multimedia Act 1998. A public inquiry paper released by the MCMC has set out its preliminary views on amendments to non-pricing terms and conditions for those communications facilities and services that are included in the current Access List Determination (ALD), dated 2 December 2021. The watchdog has invited members of the public to participate in this inquiry by sending written submissions on the specific questions, preliminary views and the rationale and analysis presented in its paper. A deadline of 8 August 2022 has been set for submissions. Among the notable proposals made by the MCMC are plans to include two new defined terms in the MSA, those being: 'customer demand list', defined as being 'a list submitted by an access seeker requiring certain actions to be taken by the access provider to facilitate the placement of an order'; and 'high priority areas', which would be defined as meaning 'certain locations, facilities or areas in respect of which a new fast-track process for access to Common Antenna Systems will apply to facilitate the placement of an Order by the access seeker'.

(June 14, 2022) commsupdate.com

Mexico

The Federal Telecommunications Institute (Instituto Federal de Telecomunicaciones, IFT) has approved the proposed financing arrangement between the Mexican Development Bank (Banobras, Nafin and Bancomext) and ALTAN Redes (Red Compartida), which will result in the latter becoming a public-private partnership (PPP). The Mexican Development Bank will loan ALTAN Redes USD161 million, while other shareholders will provide loans worth USD50.5 million. As a result, ALTAN Redes' shares will be contributed to a Trust, which will be 61%-owned by the Mexican Development Bank and 39%-owned by the other shareholders. The Mexican Development Bank will have the right to appoint the majority of the members of the Board of Directors, while its percentage of trustee rights will gradually decrease and revert in favor of the other shareholders as the credit is paid off. The IFT notes that the term of the PPP contract has been modified, from 20 years (with the possibility of extension) to 40 years (without the possibility of extension). Further, the watchdog has reiterated the coverage milestones approved in February 2022: 85% by 24 January 2027 and 92.2% by 24 January 2028. Red Compartida launched its open access 4G network in March 2018. A total of 114 MVNOs are now offering connectivity via the 700MHz network, while 81% of the subscriptions are mobile users and the other 19% correspond to fixed wireless access (FWA) accounts. Red Compartida currently offers coverage to 70.97% of the population.

(June 23, 2022) commsupdate.com

Moldova

The Moldovan regulator ANRCETI has published three draft decisions on the award of DTT channel licenses in the country. In a statement, it says that they will be available for public consultation until July 15. ANRCETI adds that the decisions are:

1) the project regarding the approval of the procedure for organizing and conducting the competition for issuing licenses for the use of radio frequencies / channels in order to provide publicly available electronic communications networks and services, in the digital terrestrial TV system

2) the project for the approval of the specifications of the competition for the issuance of licenses for the use of frequencies / radio channels in the frequency band (470-694 MHz) in order to provide networks with regional coverage and publicly available electronic communications services, in digital terrestrial TV system

3) the project on the approval of the Special License Conditions for the use of radio frequencies / channels in the frequency band (470-694 MHz) in order to provide networks with regional coverage and publicly available electronic communications services in digital terrestrial TV system.

Broadband TV News notes that the transition to digital terrestrial broadcasting in Moldova was due to be concluded at the beginning of this year. This, according to Moldpres, was following the approval of a draft law on the process by the country's Cabinet of Ministers on December 14, 2021. (June 27, 2022) broadbandtvnews.com

Montenegro

The telecoms watchdog the Agency for Electronic Communications and Postal Services (EKIP) has opened a consultation regarding its draft plans for the tender of frequencies in the 700MHz (694MHz-790MHz), 3.6GHz (3400MHz-3800MHz) and 26GHz (26.5GHz-27.5GHz) bands scheduled for later this year. Interested parties are invited to submit their feedback by 8 July. EKIP proposes to award a total of 1,475MHz of spectrum (2×30MHz paired and 1,415MHz unpaired) in the three bands as follows: six blocks of 2×5MHz spectrum and three lots of unpaired 5MHz frequencies in the 700MHz band; 40 blocks of 10MHz spectrum in the 3.6GHz band; and five lots of 200MHz spectrum in the 26GHz band. All frequencies will be valid for 15 years from the date of approval. The regulator notes one lot of 5MHz unpaired 700MHz frequencies and two 10MHz blocks in the 3.6GHz band will not be subject to a one-time allocation fee, as they may require the development of additional measures to reduce harmful interference to neighboring frequency bands.

(May 31, 2022) commsupdate.com

Namibia

The Communications Regulatory Authority of Namibia (CRAN) has launched a national campaign to raise awareness of the introduction of mandatory SIM card registration, which will come into effect on 1 January 2023. Noting the process was in line with international best practice, CRAN CEO Emilia Nghikembua explained that operators will need to register all existing customers within twelve months and any new subscriptions within three months of the date of sale, following which all unregistered SIMs will be deactivated. The executive highlighted that having a secure authorized digital identity has become increasingly important in a democratic society in the interests of national security, public safety, and for the prevention of crime. 'SIM registration can enable many consumers to access value-added mobile and digital services that would otherwise be unavailable to them as unregistered users. Namibia must leverage on the use of safe and secure mobile technology to enjoy the benefits of the Fourth Industrial Revolution and meet the United Nations Sustainable Development Goals,' she said. (June 8, 2022) commsupdate.com

The Ministry of Information and Communication Technology (MICT) has attributed growth in mobile broadband subscriptions to Mobile Telecommunications' (MTC's) 081EVERY1 project, which aims to achieve 100% population network coverage by 2023. Speaking at the Digital Rights and Inclusion Forum held in Windhoek last month, Deputy Minister of ICT Emma Theofelus claimed mobile broadband connectivity had been extended to 89% of the population, while LTE infrastructure now provides 79% coverage compared with 40% a year earlier. According to the Communications Regulatory Authority of Namibia's (CRAN's) latest market report, the country's mobile market grew by just 0.6% year-on-year to 2.915 million subscriptions at the end of 2021, whereas mobile broadband subscriptions increased by 8.8% to 1.894 million. (May 5, 2022) commsupdate.com

The Communications Regulatory Authority of Namibia (CRAN) has revealed it intends to review its frequency band plan every four years, The Namibian reports. Speaking at a public consultative meeting about the watchdog's spectrum assignment strategy for 2022 to 2024, CEO Emilia Nghikembua said this would involve amending frequency band allocations and regulations as required, following due regulatory process, with spectrum licensees required to migrate to new frequencies. The authority will address each migration on a case-by-case basis in accordance with the regulations for spectrum licensing procedures, she added. 'CRAN has developed a spectrum assignment strategy setting out objectives for spectrum management and providing clarity in respect of the authority's approach to the control, planning, management, administration and licensing of radio frequency spectrum,' Nghikembua told the meeting, adding the authority had set out conditions to ensure the efficient use of scarce resources and prevent anti-competitive practices, such as the hoarding of spectrum, and to free up spectrum space for assignment to emerging technologies and services. 'CRAN deems it prudent to keep abreast of the latest regulatory trends and technology developments to ensure the efficient use of the spectrum as a limited resource, taking into account the spectrum is the basis for development of the ICT sector,' she said.

(April 21, 2022) commsupdate.com

The Netherlands

A special advisory committee to the Dutch government has said that 5G mobile frequencies in the 3.5GHz band will become available after an auction on 1 December 2023. The committee recommends that satellite operator Inmarsat relocates its specific services in this band 'to a location they provide in Greece'. The auction should make 1×300MHz frequencies available for nationwide mobile usage, whilst 'as long as the foreign location is not yet operational (the aim is 2 January 2024), the satellite company will still have limited space (80MHz) to continue its activities.' Minister of Economic Affairs Micky Adriaansens has received the

external and independent advice and will present a government response before this summer. On the basis of the advice, the Ministry of Economic Affairs will draw up a new decision to amend the National Frequency Plan (NFP) and in the meantime will continue to consult with Inmarsat about facilitating its intended move to Greece. Also, in the 3.5GHz band, as planned, 100MHz (of a total possible 400MHz) will remain available for 'local wireless applications.

(May 132, 2022) rijksoverheid.nl

Nigeria

The telecommunications subscribers consumed 350,165 terabytes of data in 2021. This was disclosed by the Nigerian Communications Commission (NCC) in its 2021 Subscriber/Network Data Annual Report released today. The report shows that the amount of data being used by an average Nigerian increased last year. According to the data, the 2021 figure was a 68% increase compared with the 205,880 terabytes consumed in December 2020. This was in spite of an 8% decrease in internet subscriptions in the year. Affected by the directive from NCC in December 2020 to all GSM Operators to suspend the sale and registration of new SIMs, SIM swaps, and all porting activities, subscriptions for internet decreased from 154.3 million as of December 2020 to 141.9 million as of December 2021. The increase in the volume of data consumption by the subscribers, however, covered the network operators in terms of revenue. This is reflected in the 2021 financial results of two of the leading network operators, MTN and Airtel, which showed a surge in earnings from data. MTN, for instance, recorded 55% increase in data revenue for the year as it raked in N516 from its internet customers. Airtel Nigeria also raked in N304 billion as data revenue for the year, representing a 41.1% increase. The two operators acknowledged that their 4G expansion across the country was the driving force for the increase in data usage by their customers.

(June 16, 2022) nairametrics.com

The Nigerian Communications Commission (NCC) has commenced the process of conducting a study to assess the current level of competition in the collocation and infrastructure sharing (CIS) segment of the Nigerian telecommunications sector. Seventy-eight licensees are currently operating in that market segment. The study is to enable the Commission to have insightful and evidenced-based facts to glean the dynamics at play and ensure the continuous growth of the CIS segment of the telecom market. The NCC takes this issue as priority in view of the critical role played by the collocation and infrastructure sharing segment of the telecom ecosystem in ensuring robust services. Already, the Commission has engaged the services of Messrs. Price Waterhouse Cooper (PwC), a globally renowned consulting firm, to conduct the study on its behalf, in exercise of NCC's regulatory functions as provided in the Nigerian Communications Act (NCA), 2003. The study is expected to be concluded between April and July, 2022. Speaking at the NCC's stakeholders' forum recently organized in Lagos on the commencement of the study, the Director, Policy, Competition and Economy Analysis (PCEA) at NCC, Yetunde Akinloye, who represented the Executive Vice Chairman of the Commission (EVC), Prof. Umar Garba Danbatta, said the forum was organized to intimate operators in the CIS segment of the telecom market on the study. (May 9, 2022) sunnewsonline.com

The Nigerian Communications Commission (NCC) has confirmed that the winners of last December's 3.5GHz spectrum auction, MTN Nigeria and Mafab Communications, have each been officially issued with their spectrum licenses. In line with the terms and conditions of the concessions, the companies are expected to commence the rollout of their 5G networks from 24 August. MTN and Mafab each paid USD273.6 million for one lot of 100MHz TDD spectrum by the 24 February 2022 deadline. Following the conclusion of the assignment stage, MTN selected spectrum in the 3500MHz-3600MHz band for an additional USD15.9 million, and the second lot (3700MHz-3800MHz) was assigned to Mafab. (May 6, 2022) commsupdate.com

North Macedonia

Three companies – Neotel, A1 Makedonia and Makedonski Telekom (Telekom) – have submitted letters of interest (LoI) to the Agency for Electronic Communications (AEK) in regards to the forthcoming auction for 5G spectrum. The agency published the results from a public hearing and position paper regarding its intention to conduct the tender, saying that as the EoI are less/equal to the number of blocks on offer, it will proceed with issuing spectrum concessions based on the requests. The authorizations will be valid for 15 years (extendable for another five years afterwards). Neotel requested blocks B41, B44, B45 and B46 suitable for fixed services in regions 1 (Skopije, Ilinden, Petrovets, Zelenikovo, Studenichani, Sopishte, Chucher Sandevo and Arachinovo), 4 (Bitola, Prilep, Demir Hisar, Krushevo, Dolneni, Krivogashtani, Mogila, Novaci and Resen), 5 (Ohrid, Struga, Debarca, Vevchani, Kichevo, M. Brod, Drugovo, Zajac, Oslomej, Vraneshtica, Plasnica, Debar and Centar Jupa) and 6 (Tetovo, Gostivar, Tearce, Jegunovce, Jelino, Brvenica, Bogovinje,

Mavrovo and Rostushe); A1 Macedonia: A3 (723MHz-733MHz/778MHz-788MHz) and B2 (3.6GHz-3.7GHz); and Telekom: A2 (713MHz-723MHz/768MHz-778MHz) and B3 (3.7GHz-3.8GHz). The AEK launched the tender for the allocation of 5G-suitable spectrum at the end of November 2021, though the auction was subsequently cancelled at the request of the Commission for Protection of Competition. A new award process was initiated in April 2022. (June 6, 2022) commsupdate.com

Panama

The Cabinet Council, which is headed by the President of the Republic, Laurentino Cortizo Cohen, has approved the allocation of additional spectrum in the AWS band for mobile broadband use. As per Cabinet Resolution 41-22 (dated 12 April 2022) the National Public Services Authority (Autoridad Nacional de los Servicios Publicos, ASEP) has set the price at PAB1,214,287 (USD1,214,287) per MHz. With a total of 120MHz of spectrum up for grabs, the frequency sale could generate up to USD145.68 million. (Note: 25% of the funds generated will be used to support the government's Universal Access programmes.) Tigo Panama has already declared its intention to acquire new AWS frequencies. Speaking during the group's 1Q22 earnings call, Millicom CEO Mauricio Ramos commented: 'The government of Panama has released really reasonable prices [for] AWS spectrum, which we'll be picking up. I think we're in the process of buying it and acquiring it … Panama has historically had a really good spectrum policy, which is parity of spectrum for everybody. And we think that is a really, really good spectrum policy going forward. Predetermined prices, reasonable prices, spectrum parity, so quite frankly that's a good setup.' (May 3, 2022) commsupdate.com

Philippines

The Philippines' Anti Red Tape Authority (ARTA) has overturned its earlier ruling and in the process, set aside the 'Declaration of Completeness and Order of Automatic Approval' it previously issued to NOW Telecom (NOW Network) and the telco's sister company News and Entertainment Network Corporation (Newsnet). Local press reports note that ARTA issued two separate Resolutions on 17 June 2022, siding with the previous ruling handed down by the Department of Justice (DOJ) on 9 July 2021 that has become 'final and executory and affirmed the authority of the National Telecommunication Commission (NTC) in assigning and use of frequency'. On 31 March 2022 ARTA issued a resolution throwing out a motion filed for reconsideration by the telecoms regulator and declared NOW Telecom's application for cellular mobile telephone system (CMTS) provisional authority as complete. The operator's efforts to secure a toehold in the mobile broadband market have been hindered for more than a decade, but the provisional authority covered rights to use 220MHz of spectrum ranging from 1970MHz-1980MHz, paired with 2160MHz to 2170MHz and 3.6GHz to 3.8GHz, including 5G frequencies for mobile and fixed wireless broadband. An order of automatic approval was issued by ARTA on 1 March 2021. Subsequently, in April ARTA granted its approval for NOW Telecom's application for an automatic extension of its mobile license permits, thus paving the way for it to offer mobile broadband services across the country. However, the country's third telco DITO Telecommunity Corp, whose frequency was affected by ARTA's earlier decision, reportedly filed a complaint against ARTA's original decision and the anti-red tape body has now changed its decision.

(June 24, 2022) commsupdate.com

Poland

The Polish government is trailing a new method of allocating broadband funding. The Prime Minister's Office for Digitization has announced four tenders which will be open to regional authorities, with each tender providing funding of PLN5 million (USD1.15 million), which will account for up to 80% of the overall cost of the project. The winning regional governments will then choose telcos to act as their rollout partners. Local authorities will be selected on their plans to improve connectivity and digital services in their own area. Applications are open until 27 June.

(May 24, 2022) commsupdate.com

The Polish telecoms regulator, the Office of Electronic Communications (Urzad Komunikacji Elektronicznej, UKE), has opened a consultation regarding the extension of the 2100MHz spectrum license held by cellco Plus (registered as Polkomtel). According to a report from Telko.in, Plus submitted an application on 14 December 2021 to extend its concession which is set to expire at the end of this year. The operator is looking to use 29.6MHz of frequencies in the 2100MHz range until 31 December 2037. The license renewal will cost Plus PLN403.4 million (USD94.4 million). Poland's other cellcos – Orange, Play and T-Mobile – are also looking to renew their 2100MHz concessions, with the

government expecting to raise almost PLN1.9 billion from the process. (April 24, 2022) commsupdate.com

The Polish telecoms regulator, the Office of Electronic Communications (Urzad Komunikacji Elektronicznej, UKE), has opened a consultation regarding the extension of the 2100MHz spectrum license held by cellco Plus (registered as Polkomtel). According to a report from Telko.in, Plus submitted an application on 14 December 2021 to extend its concession which is set to expire at the end of this year. The operator is looking to use 29.6MHz of frequencies in the 2100MHz range until 31 December 2037. The license renewal will cost Plus PLN403.4 million (USD94.4 million). Poland's other cellcos – Orange, Play and T-Mobile – are also looking to renew their 2100MHz concessions, with the government expecting to raise almost PLN1.9 billion from the process. (April 22, 2022) commsupdate.com

Portugal

The National Communications Authority (ANACOM) has launched a public consultation on the availability of spectrum in the 1427MHz-1517MHz ('1500MHz') frequency band. The consultation aims to collect the position of the various market participants (manufacturers, operators, private and public entities, users and others) on the availability of said spectrum. The spectrum could potentially come into play for terrestrial electronic communications services (servicos de comunicacoes eletronicas terrestres (SCET) in 2023-2024. The 'L-band' is currently used to support 4G technology in markets as disparate as San Marino and Japan, and has been used for 5G in Latvia. Further, 1500MHz frequencies have been earmarked for future use in many other major markets around the world. (June 29, 2022) commsupdate.com

Russia

The Ministry of Digital Development, Communications & Mass Media will extend the period of allocation of analogue TV frequencies in the 700MHz range for another year, taking the expiry date to August 2023. The 700MHz spectrum has been earmarked for 4G/5G mobile broadband services for a decade – with the main cellcos MTS, MegaFon, Beeline and Tele2 Russia holding theoretical rights to 700MHz bandwidth under their national 4G licenses renewed last year – but successive regulatory decisions have repeatedly prolonged the frequencies' analogue broadcasting allocations, despite the completion of digital terrestrial TV rollout in 2019. The renewed analogue TV bands include frequencies within the ranges 175MHz-230MHz and 470MHz-790MHz.

(June 15, 2022) Kommersant

Senegal

The Regulation Authority for Telecommunications and Posts (L'Autorite de Regulation des Telecommunications et des Postes, ARTP) has established a steering committee to coordinate efforts to increase mobile network coverage and enhance quality of service (QoS). The body aims to strike a balance between network operators, ISPs, MVNOs and consumer associations, enabling them to work together on improving the service provided to end-users. It is hoped the committee will help identify issues hindering coverage and service improvement and enable operators to optimize their investment plans in partnership with the regulator.

(May 5, 2022) commsupdate.com

Spain

The Congress of Deputies approved the revision of the 2014 General Telecommunications Law with a majority vote on 9 June. The amendment received 291 votes in favor, 51 against and no abstentions. One of the key clauses included in the updated law will see minimum download speeds increased to 100Mbps for 100% of the population within the next twelve months – compared to a previous target of 2025. Another addition compels public administration authorities to guarantee telecoms operators access to public electricity, gas and water infrastructure to assist with the deployment of fixed broadband networks. While the 100Mbps rollout targets may seem ambitious, 95.2% of the population can already receive access to download speeds of 30Mbps, while 87.6% have access to 100Mbps speeds.

(June 13, 2022) commsupdate.com

Slovakia

The Office for Regulation of Electronic Communications & Postal Services (Urad pre regulaciu elektronickych komunikacii a postovych sluzieb, RU) has completed its auction of 5G-capable spectrum in the 3.5GHz band (3410MHz-3800MHz). All four incumbent cellcos won frequencies, paying a total of EUR63.61 million (USD67.2 million). The new licenses will be valid from 1 September 2025 and will run until end-2045. The regulator has not yet published the exact holdings and winning bids of the four auction participants: Orange, O2, Slovak Telekom (ST) and SWAN/4ka.

(May 6, 2022) commsupdate.com

Sweden

The Post and Telecom Agency (Post & Telestyrelsen, PTS) has opened applications for its auction of 900MHz, 2100MHz and 2600MHz licenses, which is being held next year. Applications for the sale are open until 30 September 2022, with the auction due to start in September 2023. Current licenses in the three bands expire in 2025. (June 15, 2022) commsupdate.com

The Swedish Post and Telecom Agency (Post & Telestyrelsen, PTS) has opened applications for its 2022 broadband support scheme. The regulator has almost SEK1.3 billion (USD130 million) funding available to distribute to operators looking to deploy broadband infrastructure in rural areas. Networks must provide connectivity at download rates of at least 1Gbps. Separately, PTS has opened an analysis to assess demand for wireless spectrum in the 700MHz, 1500MHz and 26GHz/28GHz bands. The regulator says that if there is sufficient operator demand for spectrum then it will begin work on formulating a distribution plan. (May 12, 2022) commsupdate.com

The Swedish Post and Telecom Agency (Post & Telestyrelsen, PTS) has opened another consultation into the proposed extension of licenses in the 2.6GHz band, enabling them to run for an additional two years until end-2025. This would allow the regulator to auction 2.6GHz licenses along with those for the 2100MHz and 900MHz bands. Under PTS proposals, the auction process for all three bands is due to get underway in September 2023, with permits valid from the start of 2026. (April 27, 2022) commsupdate.com

Switzerland

Swiss telecoms watchdog the Federal Communications Commission (ComCom) has extended the universal service license of state-backed incumbent operator Swisscom for an additional year. In a statement from the watchdog, ComCom explained that the decision was due to the ongoing amendment of the laws concerning the universal service for telecommunications, through which the Federal Council are looking to revise the scope of the service. Specifically, in December 2021 the government proposed that the internet access speeds that must be offered by the universal service provider be increased to 80Mbps/8Mbps (download/upload) from its current 10Mbps/1Mbps. Swisscom's current license due to expire at the end of 2022 but due to the ongoing amendment process the regulator noted that 'there is no stable legal basis for reallocating the universal service license'. As such ComCom opted to extend the current license, with no changes to the content of the license, until the end of 2023.

(May 19, 2022) commsupdate.com

United Kingdom

The telecoms regulator Ofcom is consulting on proposals to allow satellite operators to access more spectrum so they can provide a wider range of broadband services, including in hard-to-reach areas. According to the watchdog, amid increased consumer demand for satellite services, it is seeking to support innovation by extending spectrum access under its Earth Station Network license to include the 14.25GHz-14.50GHz band. Ofcom claims such a move would double the capacity available to satellite operators in the Ku band and would support improved broadband services for more rural premises. Under its proposed approach, Ofcom has said new conditions would be introduced to protect existing radio astronomy sites making observations in the 14.47GHz-14.50GHz band from interference. It also plans to introduce temporary conditions to protect any fixed links remaining temporarily in the band. Ofcom's consultation on this matter will run until 31 August 2022. In a related matter, Ofcom has also announced that it has received license applications from Starlink for six non-geostationary satellite earth stations. Consideration is now being given to Starlink's submissions, including whether they can coexist with other satellite systems in close proximity, and any potential risks to competition. Ofcom has invited comments on the license applications by 19 July 2022. (June 22, 2022) commsupdate.com

Ofcom outlined an ambition to make mmWave spectrum available to the UK's mobile industry by 2024, as it launched a consultation on opening access to the 26GHz and 40GHz bands. In a statement, the regulator

pointed to the advantage of deploying 5G in the bands for faster speeds and greater capacity in crowded areas, citing transport hubs, busy streets and entertainment venues. Ofcom noted it could also enable high-speed fixed wireless access services in hard to reach areas and be deployed in private networks for applications including factory automation and smart agriculture. In the UK, the 26GHz band is already used for fixed point-to-point links; a satellite earth station; level crossing radars used by railway operators; ultra-wideband radar; a range of short-range devices; and for special events. Ofcom added the UK Ministry of Defence also has access to the band but currently doesn't have a use for it. The consultation outlines an ambition to offer a range of very local and city-wide licenses for the 26GHz band. In high density usage areas where fixed link licenses are already active, Ofcom plans to issue a five year notice period to revoke them. In low density areas, it aims to allow existing fixed link users to continue with current activities. Other users of the band, it added, are expected to co-exist with 5G and other mobile services. Ofcom explained the 40GHz band had been allocated in 2008 with Hutchinson 3G UK, Mobile Broadband Network, and MLL 40GHz holding the licenses. However, the trio are not allowed to deploy mobile services in the band and currently use it for fixed links. The regulator's consultation provides a number of options for the 40GHz band, from changing existing licenses to clearing and reallocating it. Alongside general views on allocation for mobile use, interested parties have also been invited to make comments on a potential auction format, competition considerations and license lengths. The consultation closes on 18 July 2022 with a provisional timescale of making spectrum available by 2024.

(May 9, 2022) mobileworldlive.com

United States

In an official statement issued by the White House, President Biden and Vice President Harris have announced that they have secured private sector commitments that will lower fixed broadband costs for millions of American families. The statement explains: 'The Biden-Harris Administration has secured commitments from 20 leading internet providers – covering more than 80% of the US population across urban, suburban, and rural areas – to either increase speeds or cut prices, making sure they all offer Affordable Connectivity Program (ACP)-eligible households high speed, high-quality internet plans for no more than USD30 per month … From large providers like AT&T, Comcast, and Verizon serving dozens of states, to smaller providers serving rural areas like Jackson Energy Authority in Tennessee and Comporium in North Carolina, the commitments will allow tens of millions of ACP-eligible households to receive high speed internet at no cost.'

(May 10, 2022) commsupdate.com

The Federal Communications Commission (FCC) has granted 4,041 flexible-use licenses for mobile services in the 3.45GHz band to the winning bidders in Auction 110, which closed in January. The FCC notes that 13 of the 23 companies with winning bids qualified as small businesses or as entities serving rural communities. In addition, compared to the prior 5G auction of spectrum in the 3.7GHz band, this auction saw a substantial increase in the number of winning bidders per market: over one-third of the top 100 markets have at least four winning bidders, compared with 10% of the top 100 markets for Auction 107 (3.7GHz). The 3.45GHz auction generated gross proceeds exceeding USD22.5 billion. FCC chairwoman Jessica Rosenworcel commented: 'Building on the success of this auction, we are hard at work preparing for the 2.5GHz auction starting in July. Our continued focus on making mid-band spectrum available illustrates our commitment to the broad availability of 5G in the United States.' (May 6, 2022) commsupdate.com

The Federal Communications Commission (FCC) has removed 19 licenses from its Auction 108 inventory, after establishing that the list published on 21 March list did not account for all 'cancelled, terminated or expired licenses that were granted waivers for late-filed renewals'. Further, the watchdog issued the following warning to prospective bidders: 'We remind interested parties to conduct their own due diligence regarding licenses available in Auction 108. We note, in particular, that there will be a substantial number of licenses in inventory where the amount of unassigned area or unassigned spectrum is very small.' As previously reported by CommsUpdate, Auction 108 will include 5G-suitable spectrum in the 2496MHz-2690MHz (2.5GHz) band and get underway on 29 July. The auction, which will utilize an 'ascending clock' format, will offer approximately 8,000 new flexible-use, county-based overlay licenses. These concessions cover mostly rural areas, with the spectrum unassigned following a Rural Tribal Priority Window, which resulted in the grant of 335 licenses to serve Tribal communities. (April 20, 2022) commsupdate.com

Uruguay

The Regulatory Unit of Communications Services (Unidad Reguladora de Servicios de Comunicaciones, URSEC) has authorized five cable operators to offer broadband internet services. Cable Montevideo (Montecable), Tractoral (TCC), Korfield, Praimar and Riselco (Nuevo Siglo) are now permitted to offer broadband to consumers after filing a legal action challenging the constitutionality of Article 56 of the Law on Audiovisual Communication Services, which prohibits TV operators from also offering voice and data transmission services. In 2016 the Supreme Court of Justice ruled in their favor but the article remained in place due to lack of political support for its elimination. Until now, state-owned national telecoms operator Antel was the only firm permitted to offer fixed broadband services, but an unnamed 'local expert' told that URSEC's move to authorize the five cablecos could pave the way for the elimination of Article 56 as part of the national accountability project, which is set to be analyzed by congress at the end of June. The decision to only give authorization to the firms that had taken legal action will create a market asymmetry that could put pressure on lawmakers to level the playing field, the expert said. (June 17, 2022) BNamericas

The Regulatory Unit of Communications Services (Unidad Reguladora de Servicios de Comunicaciones, URSEC) has revealed that a total of 22,725 mobile phone numbers were successfully transferred to another network provider in the three months since the launch of mobile number portability (MNP) at the start of this year. State-owned Antel saw 9,594 numbers ported to and 8,556 from its network by 31 March 2022 (a net gain of 1,038 subscriptions), while 5,643 numbers were transferred to and 5,732 from the network of Claro (a net loss of 89) and 7,488 subscriptions were ported to and 8,437 from the network of Movistar (a net loss of 949). The launch of MNP officially took place on 12 January, enabling the country's cellular customers to retain their number if they switch provider. Mobile operators bear the cost of the number transfer process, which should take no more than three business days to complete. Users will be able to port their number between companies a maximum of three times per year. The Ministry of Industry, Energy and Mining said the launch of MNP will encourage competition between mobile operators Antel, Movistar and Claro, and will promote the rights of consumers.

(May 3, 2022) commsupdate.com

Zimbabwe

The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) has implemented a new traffic monitoring and revenue assurance system to stem financial leakages from telecoms services. Previously, operators made voluntary declarations of traffic levels, which the regulator said was no longer adequate as it could lead to inaccurate taxation. POTRAZ added that the system will also be used to curb fraudulent activities in the telecoms sector, such as illegal call routing. (June 8, 2022) commsupdate.com

The Postal and Telecommunications Regulatory Authority of Zimbabwe (Potraz) is promoting the creation of online content in local languages to support inclusive internet usage. Addressing the World Summit of Information Society Forum (WSIS) on Wednesday, Potraz director-general Gift Machengete said the localized internet content would be shared through community information centers. "In order to maximize the benefits of community information centres to local communities, there is need for these centers to have local content relating to localized economic and social activities including local tourism, produce markets, weather patterns and community meetings, among other things," Machengete said. "The advent of information communication technologies saw the development of the digital divide, as content especially on the internet follows a cultural and linguistic perspective of content creators. As a result, the divide actually keeps widening as the internet does not promote cultural diversity, heritage of minority groups, linguistic diversity and local content creation. In fact, the internet promotes the widening of the gap between cultural and linguistic groups." Machengete bemoaned limited investment in translating content into minority languages, which had caused the dominance of content in a select few languages. "As long as there is not enough investment in translating content on the internet to all languages then others will always be left behind," Machengete said. "Irrelevant content which reflects language, lifestyles and concerns that do not address the needs of residents of developing countries, is a challenge that needs to be addressed," he added. (June 5, 2022) bulawayo24.com

The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) says that infrastructure sharing between mobile operators is now active at 267 sites across the country. A report from TechZim says that all three of the country's cellcos are participating, while fixed line incumbent TelOne is also sharing tower infrastructure with mobile providers Econet, NetOne and Telecel. In addition, operators are leasing infrastructure from entities such as utility group Powertel, National Railways of Zimbabwe, Transmedia, ZIMRA and local authorities. Network sharing was implemented in Zimbabwe in an effort to keep rollout costs down for telcos as they look to expand network coverage.

(May 11, 2022) commsupdate.com

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