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SAMENA TRENDS

EXCLUSIVELY FOR SAMENA TELECOMMUNICATIONS COUNCIL'S MEMBERS

BUILDING DIGITAL ECONOMIES

A SAMENA Telecommunications Council Newsletter



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Group CEO
Batelco

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Group CEO
STC

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Customer Trust and Privacy - Rethinking Relationships with Customers



Complex human interactions in the digital, smart environments are essential for developing and enriching a nascent digital society and the emerging global Digital Economy. In fact, complex interactions, whether human to human, human to machine, or machine to machine, form the very foundation of the connected world, we all are aspiring to build.

Among many things required to build a better connected world included are the understanding and appreciation of what our industry has achieved to date, mustering strength to pinpoint where we are lacking and requiring adjustment in our visions and perspectives, and the realization that connectivity and communications demands of today also demand better communication across all stakeholders in the industry as well as the value chain, so that areas of important consideration for one group can be better understood and aligned with areas of focus by another. However, there is yet another very important element that is a key part of our stride toward building a better connected world: It is building better relationships and trust, especially with the ultimate stakeholder, the customer, the citizen.

We are now in that part of our digital evolution where end-users are well-aware of how data created through their activities and behaviors is becoming a source of wealth and innovation for businesses. In this regard, some business have shown fundamental understanding of human need for privacy and trusted exchange of information, and have aligned their business strategies so that customer needs for privacy and trust are not undermined. However, there are many more businesses that are not intent on, or may feel it may not suit their business models, following a transparent customer data acquisition model. Such a mindset will have to change, for protection of privacy and integrity of customer data are the next priority items on the global agenda.

We have allowed ourselves to get engulfed with rapid expanding opportunities for innovation and creative new services. It may be understandable, for innovation allows for the creation of new markets and new products, and encourages

better understanding of consumers and citizens. This approach, unfortunately, has also allowed us to overlook security and data privacy risks, without addressing which through close public and private-sector stakeholder engagement, we will not succeed in creating a sustainable digital world. The complex and unforeseeable, or unintended, consequences of rising complexity in interactions among humans and among machines have to be placed among the list of priorities that we are to address. It is on the understanding of these challenges and need for data protection that we must build our digital world, driven by trustworthiness.

Telecom operators, which have an ever important role as the key enablers of digital world, have a tremendous business opportunity ahead, and it is directly linked to improving their trustworthiness in the eyes of the consumers. Forward thinking telecom operators will place winning customer trust at the top of their customer experience strategies.

Together, what we want to achieve are limitless possibilities that allow for the betterment of the human society at large, and the realization of the dreams that many have dared to dream for the creation of sustainable digital world. Such limitless possibilities are not only linked to goals that we have now globally come to embrace as the sustainable development goals, but also include many others that relate to creativity and the human penchant for imagination that cause us to improve upon human safety, convenience in travel and transportation, efficiency in the use of energy resources, mobility inspired entertainment, and many other areas.

Without bringing trust-building into the equation, it simply will not be possible to excel at the pace we now must.

Yours truly,



Bocar A. BA
Chief Executive Officer
SAMENA Telecommunications Council



Dr. Khaled Biyari
Group CEO
STC



Dr. Khaled H. Biyari serves as Group CEO of STC effective 27 April 2015. Dr. Biyari serves currently as the Senior Vice President for Technology and Operations at STC. He is also the Chairman of STC Advanced Solutions, Vice Chairman of STC VIVA Kuwait, Vice Chairman of OTL, and a Board member of both Turk Telecom and Avea. Prior to joining STC, he served as the Senior Vice President and General Manager at Advanced Electronics Company (AEC). From 1990 until 1995, Dr. Biyari was a Professor of Communication Systems at the Electrical Engineering Department at King Fahad University of Petroleum & Minerals (KFUPM).

Professionally, Dr. Biyari is an active member of a number of professional organizations and has lectured and published papers on Communication and Information systems. He has also lectured on numerous occasions on Technology Management, Innovation, as well as ICT industry-related issues. He was twice-elected Chairman of the IEEE Saudi Section.

Dr. Biyari also served as a member of the Committee responsible for developing the Long Term National Plan for Electronics Industry in the Kingdom. He was also a member of KFUPM Executive Committee responsible for KFUPM's long-term strategic plan. In 2009, he was elected by the Council of Ministers to the BoD of the Electricity and Cogeneration Regulatory Authority (ECRA) in Saudi Arabia. Dr. Biyari obtained his Ph.D. in Electrical Engineering from the University of Southern California, Los Angeles, USA in 1990 and his B.S. and M.S. in Electrical Engineering from KFUPM in 1983 and 1985, respectively.

We thank you in advance for sharing your vision with your SAMENA Council's team and with the readers of SAMENA Council's TRENDS newsletter. The following questions are submitted for your kind responses:

Q: Please share your executive vision as the CEO of one of the large telecom groups in the world and now as the new elected Chairman of a known telecoms industry association of telecom operators.

A: We are living now in a world that is transforming in a big way. Our industry is enabling the tremendous increase we are seeing in innovation and efficiency in our economy today. Our industry has fundamentally changed the lives of billions and will have an even more important role in driving this change over the next decade. Our industry is expanding across the information technology landscape as the worlds of communication, broadcasting and information processing coalesce; all as a result of the digitization of the economy, or the so called fourth industrial revolution.

Q: What are the challenges that lie ahead for telecom operators over the course of the next 2-4 years?

A: I see four major challenges. First, for our companies to be able to adapt to the new digital economy realities, they need to adopt new business models that can bring in value through new products and services. Second, we need to have new capabilities and skills that fit the new areas and business models driven by the digitization revolution. Third, we need to start having "partnership" as a major business driver as delivering new services to the different verticals does require us to work with partners in order to deliver the new end-to-end services our customers increasingly require. Sometimes, we need to partner even with direct competitors to deliver a complete service such as a ubiquitous mobile payment service for a banking client. Finally, for all of this to work, governments need to ensure that we have a regulatory environment that is pro-investment and that takes into consideration the new realities of the new economy models. Regulations can make it or break it for whatever digital transformation initiatives that countries want to make. At the heart of such transformation is the basic need of broadband connectivity which requires extraordinary investments from operators.

Q: What are most critical regulatory and policy challenges that we continue to witness in this region, despite a clear rise in understanding and willingness from government bodies to do more to encourage digital development in their markets?

A: I do believe that, at the highest levels of most governments, there is a clear recognition of the enormous value that can be driven by further digitization. In fact, in the last World Economic Forum in Davos, it was shown

that there is almost a \$100 Trillion worth of value to the world by 2025 coming from digitization. These leaders also acknowledge there is a huge investment and innovation that will be required by our industry to unlock this value. However, there is not always alignment across the various government agencies on what is needed to encourage this investment. In particular there seems to be a lack of understanding of how the regulatory and policy settings can either encourage or indeed stop the required investment in the digital infrastructure of the future. The key issue here is that some regulators are not balancing the need for competition with the equally important need to promote infrastructure investment. We have seen the result of this imbalance in Europe which is now significantly lagging the US and many parts of Asia in broadband investment.

Q: Are we continuing to face the challenge whereby operators' visions or expectations don't necessarily match those of their own regulatory teams and those of the regulators?

A: The three Key stakeholders involved in the Telecom sector i.e. the Government policy makers, Regulators, and the Operators, each have a distinct role to play. The government works on the macro level to enable the development and advancement of the sector, the national economy and society as a whole. It sets the main sector objectives, issues the legislative levers and addresses the policy issues of national concern to investors and Operators. The Regulatory authority acts as a guardian for the sector. It implements the national policies, develops the regulations, monitors and reports on sector growth. The telecom Operators by actively participating in the regulatory processes, help shape the development of a well-adapted, market specific policy and regulatory environment. If anyone from the stakeholders group fails adequately to fulfill its role, the balance and stability of the regime will be threatened.

Q: Given the innovative technology and business solutions in the industry and the expanding broadband economy, what is your perception of where the telecom sector is headed and how strategically equipped are operators to create new value for themselves?

A: Strategically, I think the sector is very well positioned as the enabler of the new economy. However, we need to be able to move quickly to recognize and build the ecosystem we require to take advantage of our position. Some years ago, we were being told that we were destined to be the dumb pipe; however we are seeing more and more opportunities to leverage those valuable pipes across the ICT landscape. To do this, we will continually have to build, buy or partner for new capabilities. This is not easy for a traditional telecom operator. The telecom operator that can master this will have a true sustainable advantage in the market.



Q: In your opinion, what are some of the most critical factors that now define the success of telecom service providers?

A: I have already mentioned the need to continually build new capabilities and this requires a different culture for the operator. Also, as networks have always been a key national asset, government regulation has been a major determinant of the success of many operators. To be successful, operators need to build a true partnership with the government not just the regulator. We recognize that competition has been very good for the industry and our company. We need to focus, with the government, on driving the economy by promoting a healthy industry. We have a lot of work to do in many of the markets in the region on gaining this alignment. It not only requires a new mindset from the government and the regulator but also from telecom operators as well. I think SAMENA can play a very important role in helping to better align the industry with governments.

Q: What are some of the technology and customer-centric initiatives that STC as an operator has embarked upon to help create better value for both consumers and its shareholders?

A: Enhancing the customer experience has been a driving force behind many initiatives that we have taken at STC. We are big believers in the need to digitize our own business, not just our customer's. We are driving a digital first strategy for all of our services. For example, we want our customers to be able to order, upgrade, and fix their

services from their mobile device, without the need to walk into one of our offices or even talk to our call centers. This is not only what they want, but what we need in order to continually drive down our own costs. We have seen big improvements in our customer satisfaction scores from the continued enhancement of the MySTC mobile application that now enables consumers to manage most of their services anywhere and anytime.

Q: Please share your vision on what truly symbolizes SAMENA Council and how it can best add strength and value to STC and to other members of SAMENA Council, in order to support their ambitions and contributions as telecom operators of the future.

A: The SAMENA Council was created with a vision to help create a healthy environment for the Telecom industry in its regions. Therefore, it has to explore means of identifying critical policies and regulatory strategies within the Telecom & ICT landscape in these regions, and then provide support to its members to create the right regulatory strategies. This should come through providing advocacy support programs focusing on regulatory and industry governance that would help members overcome the hurdles they face across strategic fronts. Also, I believe that the Council should focus on strengthening the collaboration among SAMENA members, enabling close communication among all stakeholders and, thus, harmonizing their efforts.



Mr. Ihab Hinnawi
Group CEO
Batelco



Ihab Hinnawi was appointed as Group CEO in December 2015, having led the Group as Acting CEO since February 2015. Ihab joined Umniah as Chief Executive Officer in 2009, drawing on over 20 years of extensive managerial experience to lead the company's industry-pioneering operations. Prior to assuming the CEO role at Umniah, Mr. Hinnawi held the role of General Manager Enterprise Division at Batelco Bahrain and subsequently the role of CEO at Batelco Jordan. In 2004 Mr. Hinnawi helped to establish Umniah as a key member of its initial management team, and continued to work as the Operations Director of Umniah until 2007.

His repertoire of key expertise portfolio includes increasing revenue, effecting management change, developing new businesses, managing high stake negotiations, strategic planning, developing key partnerships, building corporate and marketing strategy, effecting risk management, and leading organizational restructuring.

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Q: Please describe your current business focus as one of the region's recognizable telecom brands.

A: Batelco is focused on the emerging needs of the growing digital economy. Digitisation is one of the key pillars of our strategy across the group and we are investing in our transformation to become a leader in this field. Batelco was first in the Kingdom of Bahrain to add Cloud services as part of our business solutions portfolio to empower businesses to digitise their processes and improve their operational efficiencies. Delivery of superfast broadband over our expanding fibre network, with speeds of up to 300Mbps is also high on our agenda.

Across the group, we respond to market needs by investing in and launching the relevant services for each location. For example, in Jordan we have invested in a fixed LTE network covering the 3500Mhz spectrum and a mobile LTE network covering the 1800Mhz spectrum, and over the next couple of years will continue to expand and modernise all our networks there. Furthermore, we are also investing in LTE networks for the Maldives through Dhiraagu and for the Channel Islands through SURE.

Q: Given the innovative technology and business solutions in the industry and the expanding broadband economy, what is your perception of where the telecom sector is headed and how strategically equipped are operators to create new value for themselves?

A: Within the telecommunications industry there is a shift of power from the operators to the consumers, with customer requests driving the delivery of new services and solutions. Accordingly throughout the region, we are seeing the development of the digital era, where solutions will all be hosted in the cloud and the rise of the Internet of Things (integration of everything technological) is evolving very quickly. This is shaping the future of the industry and telecom companies are well equipped because we can bring all the necessary elements together through fixed and mobile networks. Fixed mobile convergence is a key enabler for the global drive of the IoT. With their inbuilt capabilities, telecoms can diversify into the added value sphere with revenues generated from the experience sold to customers rather than just the product.

Q: In your opinion, what are some of the most critical factors that now define the success of telecom service providers?

A: I believe the most critical factors include having state-of-the-art technology networks, having agile and efficient operations and also having the capability to create digital services and products that cater for customers' changing needs. Additionally, customer experience and satisfaction can be considered among the critical factors that differentiate one provider from the next.

Q: What are some of the technology and customer-centric initiatives that you as an operator have embarked upon?

A: We are a customer centric business and everything we do is with customers first and foremost in our minds so from the development stage upwards we are analyzing market needs and listening to feedback from our customers. In Bahrain and other Opcos we are making huge advancements by implementing the type of services each region requires. Amongst the current most important technological initiatives are Cloud Services, Fibre Rollout and OTT Services such as Batelco TV services in Bahrain which we launched at the beginning of the year. In Jordan we have introduced Mobile Wallet, 'Mahfazti' for financial services, and with an estimated 75% of the population unbanked, the potential there is huge. Throughout the entire Group we have carried out NPS (Net Promoter Score) measurement as part of our customer centric strategy. All such initiatives are in line with the Group's on-going commitment to provide the best and most innovative services to customers and delight them by exceeding their expectations.

Q: How has the telecom industry helped create a framework for the achievement of the 17 Sustainable Development Goals of the UN, and what role do you envision playing in their fulfillment, both individually and collectively?

A: Every individual and company can play a role in at least some of the 17 sustainable development goals set out by the UN in September of 2015. As a telecoms company, Goal 9 - Industry, Innovation and Infrastructure is an obvious one where we can contribute in a major way, but Goal 3 - Good Health & Well Being and Goal 4 - Quality Education, are also areas where we have the ability to make a difference. Batelco's investment over many years in building the backbone of the communications network for Bahrain has placed Bahrain as a key hub for investment and business opportunity. The availability of modern communication solutions enhances lifestyles for the general population and supports key segments of the community, including health and education. Higher Broadband connectivity is linked to higher GDP and higher quality of life as putting the relevant communication tools in the hands of greater numbers of the population gives them the capability to utilize a greater range of services such as health services and mobile payment services for example. It's interesting to note that for every 10% increase in internet penetration there is a corresponding increase in the GDP by 1%.

Q: Do you launch the same services across Batelco Group's overseas segments, and what particular initiatives are working well overseas?

A: The Group's operations are located in 14 different geographies which have very diversified requirements. Our challenge is to always respond to market demands and introduce relevant services. One size does not fit all!



For example, in Jordan during the past year, we invested heavily to introduce 4G wireless networks and as part of our goals to keep up with global trends such as IoT and M2M communications, Umniah introduced solutions such as smart home automation and tracking systems. SURE, in the Channel Islands and Isle of Man, launched wholesale line rental across all three markets with excellent results, performing ahead of expectations. At SURE, South Atlantic, 2015 saw significant milestones being reached with mobile services, including LTE being launched on Saint Helena and Ascension Island. In the Maldives, Dhiraagu completed its nationwide mobile broadband project with a 1200 km fibre-optic submarine cable, supporting the nation's largest 3G and 4G LTE network.

Q: Please share your view on what truly symbolizes your ambitions and contributions as a telecom operator of the future.

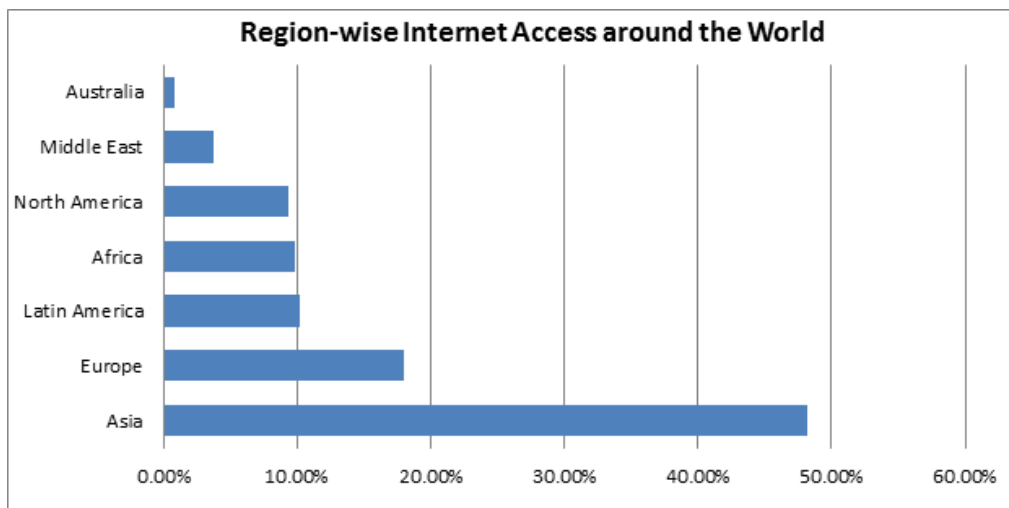
A: Telecoms companies through the sophisticated infrastructures that they built are the key enablers for all other industries and services and the more we have high internet speeds on both fixed and wireless the greater the ability and capability other industries have to capitalize, particularly in the fields of Health, Finance, Education and Ecommerce. So as a leading telecom we are focused on playing a major role in this provisioning and also providing the services of the digital era.

Q: You have recently been elected to the Samena Council Board of Directors as Vice-Chairman. How important is the Council's role in the region's communication industry.

A: I am delighted and honoured to be chosen for the prestigious role of Vice-Chairman of the Samena Council Board and very much look forward to collaborating with the Council's members to push forward their collective goals and aspirations. The Samena Council continues to be an invaluable organisation for communications companies in the region, by providing a platform to inform and share ideas. Such opportunity leads to the development of beneficial solutions that benefit member organisations and supports them in meeting their commitments to their customers. The challenges that face all the telecoms companies are being unified so the more we work collectively together in facing these challenges it will help us support the economies we operate in. Batelco considers the Samena Council's direction and progression to be of much strategic significance.



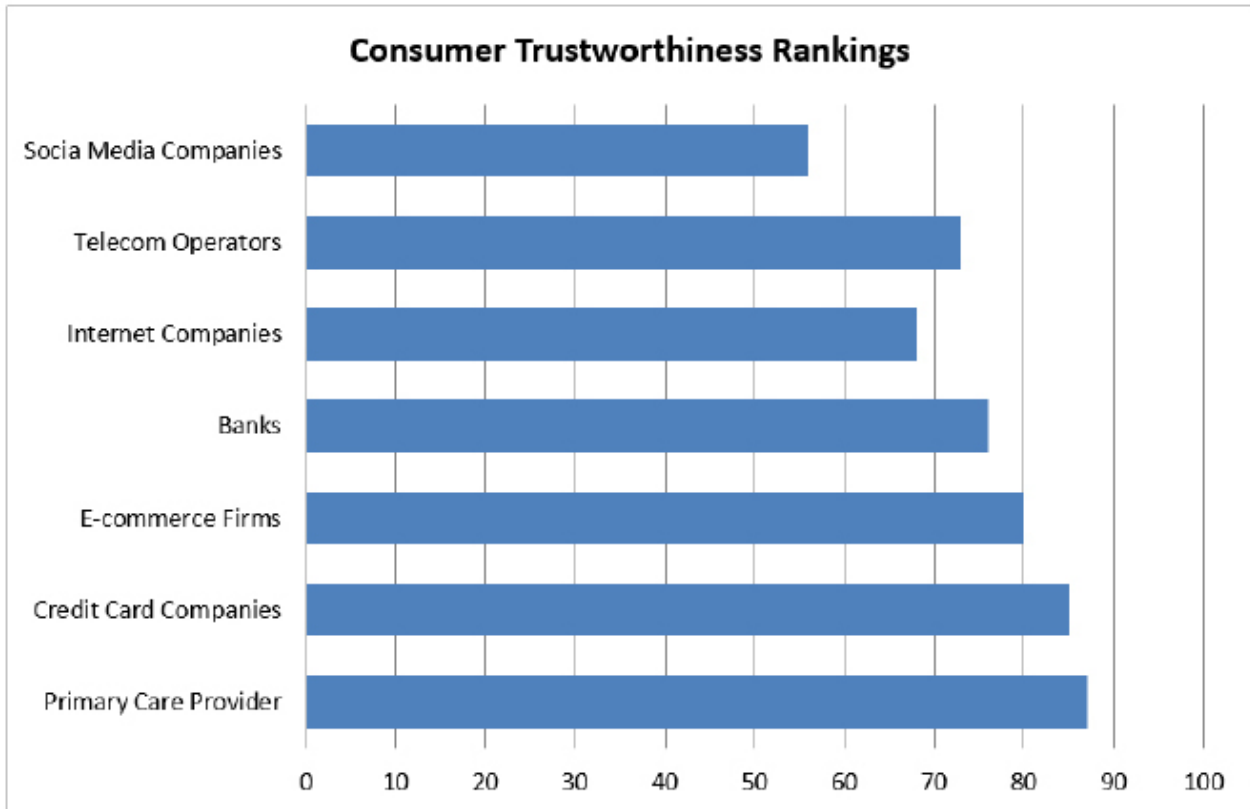
⌵ NECESSITIES IN A DIGITAL ECONOMY: INTERNET ACCESS, CONSUMER TRUST



Source: internetworldstats.com

Research Note:

Nearly 44% of the world population is connected to the Internet. Number of years to reach the next billion have been consistently decreasing since 2005, when the first billion was reached. The second billion mark was reached in 2010, the third billion in 2014, and the fourth billion is expected over the course of another year. In many countries, focused on the development of their digital economies, access to the Internet has become a national imperative. Moreover, apart from telecom operators, alternative internet players, including SpaceX, Facebook, and Google, have also started contributing to the development of the Internet across the world, with particular emphasis on developing economies.



Source: Based on survey analysis by Harvard Business School, "Customer Data: Designing for Transparency and Trust"

Research Note:

Users are increasingly aware that their online and offline data are being swept up by companies operating in the internet space. Some companies have adopted policies on data privacy in line with shifting consumer preferences and attitudes. However, many continue to keep consumers in the dark, following a "forgiveness over permission" approach. Silent data acquisition, without the consumer's knowledge, also continues. For the creation of a truly digital economy, data privacy carries significant implications. Given the trustworthiness indicated by consumers, as shown above, it may be of strategic interest to telecom operators to further improve upon their trustworthiness rankings and attempt to come at the same level as that of organizations that consumers trust the most: their primary care providers.

Though some companies are open about their data practices, most prefer to keep consumers in the dark, choose control over sharing, and ask for forgiveness rather than permission. It's also not unusual for companies to quietly collect personal data they have no immediate use for, reasoning that it might be valuable someday.



MEMBERS NEWS



Turkcell to launch '4.5G' in 81 cities, ten days ahead of schedule

Turkcell, Turkey's leading cellco by subscribers, has confirmed it is ready to launch '4.5G' technology across cities in all 81 provinces on April 1, 2016, the date on which the country's three mobile operators' new mobile broadband frequency licenses become valid for commercial services. Speaking at a press conference earlier this week, Turkcell CEO Kaan Terzioğlu said: 'We have invested heavily in the spectrum auction held on 26 August in order to bring the fastest mobile internet to our customers all over Turkey ... Today we are able to announce that the Turkcell network is ready for 4.5G in 81 cities ten days ahead of schedule.' Turkcell's website displays a countdown clock indicating that its 4.5G network will go live at 00:00 AM on 1 April. Vodafone Turkey's website displays an almost identical countdown clock, while Turk Telekom has also confirmed 1 April as its scheduled switch-on date, indicating that all three cellcos will launch their commercial 4.5G services simultaneously. In comparison to Turkcell, Vodafone's

4.5G coverage map shows expected initial coverage of eight major regions in Turkey (including the largest cities), but Turk Telekom has indicated that on 1 April it will offer all of Turkey's 81 provinces 4.5G-speed services (at least matching Turkcell's claim), supported by its superior high speed fibre transmission reach; Turk Telekom's online marketing (see link below) underlines the widespread initial footprint by adding that its 4.5G launch 'will benefit 17 million mobile customers', while highlighting the potential for upcoming 'gigabit' speeds. Turkcell says it has achieved LTE mobile data speeds of above 350Mbps (download) and above 45Mbps (upload) on its new multi-band network using carrier aggregation. Turkey's three incumbent mobile network operators (MNOs) Turkcell, Vodafone and Turk Telekom (Avea) each won multi-band 4G spectrum in the August 2015 tender held by the Information and Communication Technologies Authority (BTK), collectively bidding a total of more than EUR1.14 billion (USD1.3 billion) for the frequencies. Turkcell revealed in December 2015 that it would launch commercial 4.5G mobile broadband services in April 2016 with theoretical peak speeds of up to 375Mbps by aggregating three frequencies. It also said that further upgrades will support speeds of above 1Gbps near the end of 2016.

MEMBERS UPDATES



Cisco completes Jasper acquisition

Network giant's new IoT cloud unit aims to foster ecosystem growth, address enterprise, telco demand. Cisco completed its US\$1.4 billion (€1.26 billion) acquisition of IoT platform provider Jasper, and outlined its Internet of Things strategy going forward. Jasper forms Cisco's new IoT cloud business unit, which is tasked with helping enterprises, telcos and ecosystem partners capitalize on the IoT opportunity. Cisco said it plans to enhance Jasper's platform by adding support for enterprise WiFi, low-power wide-area networking (LPWAN) and advanced IoT security. "Cisco already has the network equipment, cloud, analytics and security layers, and the addition of Jasper brings the critical IoT service platform layer needed to provide enterprises with a complete digitization strategy," said Carrie MacGillvray, vice president of mobile and IoT at research firm IDC. Cisco says it wants to help enterprises to transform their products into connected services, creating new business models and tapping fresh revenue streams. The combined strengths of Cisco and Jasper will also help telcos and service providers address the IoT needs of their enterprise clients. In addition, "Cisco and Jasper will provide an industry-wide interoperability platform that ecosystem partners can build on, accelerating the creation and deployment of IoT services by enterprises," Cisco said, adding that IBM, Microsoft, Salesforce and SAP already use Jasper's platform. "This acquisition provides value for both Cisco and Jasper's enterprise customers, their service provider partners and broader IoT ecosystem partners," said MacGillvray. Meanwhile, an internal email from Cisco CEO Chuck Robbins was published by Business Insider on Tuesday, and revealed that the networking giant is restructuring its engineering division to focus on four areas: Networking and Market Segments; Cloud Services and Platforms; IoT and Applications; and Security. Networking and Market Segments will comprise Cisco's core hardware and software units, the enterprise and service provider

segments, and the technology and architecture department. It will be led by engineering head Pankaj Patel. Kelly Ahuja, who has been with Cisco for 18 years, most recently heading up the service provider group, will leave the company, and will be replaced by Yvette Kanouff, who will lead "an expanded service provider organization", Robbins said. Until now, Kanouff has been SVP and general manager of cloud solutions. Cloud Services and Platforms will be headed up by Zorawar Biri Singh, who will also continue in his role as CTO of platforms and solutions. David Goeckeler will be in charge of the Cisco division, while IoT and Applications will be led by Rowan Trollope. "Cisco is deeply focused on innovation, and we are continuing to make the changes needed to accelerate our growth," said Robbins in his email. "As a team, we will continue to evolve to deliver against our customers' needs. This will ensure we will be the most strategic partner to our customers in their transition to digital."



Microsoft launches latest ERP solutions

Microsoft announced the launch of its next-generation cloud enterprise resource planning (ERP) solutions, Microsoft Dynamics AX and CRM Online at the Dynamics Summit 2016, held in Dubai, UAE. Now available in 137 markets with support for 40 languages, the enterprise-grade suite is built on and for Microsoft's cloud platform Azure and harnesses all the power and advantages of the cloud, for businesses everywhere, said a statement from the company. Dynamics AX forms yet another

milestone in Microsoft's cloud journey, and offers businesses access to the kind of intelligence that will allow them to transform their operations. Built with all business departments in mind – from the shop floor to the back office – Dynamics AX and CRM deliver slick interoperability with Microsoft Office 365 and Power BI, for the best possible productivity and collaboration experiences available, it added. The Dynamics Summit reinforced Microsoft's commitment to the future of technology solutions in the region, exposing customers and partners to the true power behind Dynamics and the cloud, and highlighting the sweeping changes to technology solutions architecture taking place across the Gulf and wider Middle East, it said. Karim Talhouk, Microsoft business solutions director, Gulf, said: "As governments across the GCC embark on more and more ambitious e- and m-government programs, it will fall upon businesses to keep up with citizens' expectations." "By placing the power of Dynamics in the cloud, Microsoft is bringing a core operations component to these businesses and allowing them to achieve more. Collaboration and business analytics have never been easier, now that we've introduced the most seamless integration yet with Office and Power BI," he added. The Dynamics Summit featured keynote sessions by Talhouk; Christian Pederson, Microsoft general manager- Enterprise ERP; and Jujhar Singh Microsoft general manager, Dynamics CRM-Worldwide, highlighting the capabilities of Dynamics AX and CRM Online, and how they can be leveraged to advance productivity as well as create intelligent customer engagements in Middle East businesses. Microsoft customers, partners and suppliers working within the business and technology sectors were present at the summit, and made good use of networking opportunities,

as well as presentations on Microsoft Dynamics solutions tailored to the growth and innovation of regional organizations. A panel of key Dynamics customers and breakout sessions hosted by Microsoft partners and business groups, proved particularly beneficial to attendees.



Customers across the Gulf region are already using Dynamics AX to run their business processes in the cloud. The new Dynamics AX moves beyond traditional business solutions and brings ERP, business intelligence, infrastructure and database services together in a single offering, enabling organizations to run industry-specific deployments of the suite that are extendable through bespoke partner solutions. Talhouk said: "Our Middle East customers consistently report tangible gains from using the Microsoft Dynamics suite." "Also we launch the latest version at a pivotal moment for cloud computing in the region. Figures released earlier this month by Gartner show the Middle East and North Africa (Mena) cloud-services market growing 18.1 per cent in 2016, to more than \$860 million, and software-as-a-service [SaaS] is expected to show a 26.4 per cent surge. This is a forceful indicator that regional organizations are embracing the cloud and we believe the next generation of Dynamics is the perfect travelling companion for this migration," he added. Customers can sign up for the new Dynamics suite today via a monthly subscription with a choice of three simple versions: a self-serve user; a task user and an enterprise user. Subscribers can get up and running in no time and add business processes and users as their organization grows, it stated.



Zain Iraq launches #HassaEliya, a multi-faceted program to inspire and empower Iraqi youth

Zain Group, a leading mobile telecom innovator in eight markets across the Middle East and Africa, announces that Zain Iraq, the country's leading operator, has launched a multi-faceted program dubbed "Hassa Eliya", (Now for Me). This initiative is focused on inspiring and empowering young Iraqi talents by encouraging them to explore their potential and skills, and equipping them with the necessary tools to help achieve their goals. The program aims to recognize and

showcase Iraqi youth achievements to the world. The program is based on the use of many innovative methods to stimulate and develop the relationship between Zain Iraq and the youth in Iraq, and among many initiatives, a Facebook page that serves as a platform for young Iraqis to voice their ambitions was just launched (five million views in just 72 hours). The Facebook page provides the youth with the opportunity to submit their ideas, projects and dreams and Zain Iraq will select a number of those suggestions and support their future development. Zain Iraq's "Hassa Eliya" program will also incorporate a number of youth-focused activities including a motivating media campaign highlighted by the launch of a compelling television commercial with future plans to launch a career program on YouTube, as well as a community focused health, sports and innovation program. The program's television commercial is dedicated to the Iraqi youth, in a bid to motivate and inspire them to achieve their dreams, with Zain Iraq keen to send a message to the country's youth that their skills and contributions to society are recognized and appreciated. It was developed with three underground bands made up of 17 young Iraq talents who never produced an official song or video before. Zain Iraq offered them the opportunity to work with professionals and produce a song that symbolizes the values of Zain as a company while at the same time speaking the youth's language. It also showed that by offering the needed support, hidden talents could be brought to the world. Ali Zahid, Chief Commercial Officer at Zain Iraq emphasized the role Iraqi youth play in shaping the future. "It is time the youth took the lead. Zain Iraq, through "Hassa Eliya", aims to spread hope among younger generations, and make them feel that they have the necessary support and means to develop their abilities and talents. After all, this program is an incubator for young people's potential, creativity and dreams. It provides them with the opportunity to communicate with the world and to present their ideas and projects to a much wider audience." It is envisaged that "Hassa Eliya" will touch upon multiple youth-oriented activities and disciplines including music, literature, scientific research, innovation and technology. Ultimately, Zain Iraq would like to have "Hassa

Eliya" serve as an invitation and call to action to all young people across the country to treat the program as a channel through which they can share their aspirations and ideas. The program also falls in line with Iraq's vision for the year 2020 as well as with Zain Group's own drive to inspire and empower the communities in which it operates.



Batelco Group AGM approves US\$110.29 million cash dividend

Batelco Group, the international Telecommunications Group with operations across 14 countries, today held its Annual General Meeting (AGM) for the twelve-months ended December 31, 2015 ("the year"). The meeting, held at Batelco's Hamala headquarters, was attended by Shareholders, Company Directors and executive management. The Group's 36th AGM saw shareholders approve the recommendation of the Board of Directors for a full year cash dividend of BD41.58 (US\$110.29M), at a value of 25 fils per share, of which 10 fils per share was already paid during the third quarter of 2015 with the remaining 15 fils to be paid in the coming weeks. Speaking on the occasion, Batelco Chairman Shaikh Hamad Bin Abdulla Al Khalifa said: "We are pleased to continue to build and return value to our shareholders as demonstrated by the dividend payment, in spite of facing demanding market conditions across a number of our operations." "During 2015 the Group remained resilient and ended the year with net profits of BD49.5M (US\$131.3M) in line with 2014 net profits. At the end of the year, the total subscriber base stood at 9 million across the 14 geographies of the Group." "Going forward, we are optimistic that our cost containment activities, investment in new and enhanced networks and also our digitization plans, will boost subscriber numbers and consequently the bottom line," Shaikh Hamad added. Shaikh Hamad extended thanks to the shareholders for their attendance saying that their ongoing support for Batelco's strategies was

much appreciated. The Chairman also extended his sincere thanks to his colleagues on the Board of Directors for their unwavering support and to the management teams and employees across the Group for their dedication and efforts. "For the year ahead, our goal is to play a pivotal role in enabling the integration of the latest technologies in all Batelco Group's operations to deliver the products, services and solutions relevant for each geography that we operate in. With our strategy we are fit to respond to new trends and technologies with emphasis on the field of digitization," he said. "We remain focused on our customers at home and overseas to ensure our provisioning exceeds their expectations. Furthermore, we also remain focused on strengthening our performance to better serve all Batelco Group stakeholders," Shaikh Hamad concluded.



du demonstrates state-of-the-art LiFi technology

UAE-based telecommunications service provider, du, and UAE-born brand Zero1 recently successfully demonstrated the capability of state-of-the-art Light Fidelity (LiFi) technology in Dubai - the latest technology in data communication. LiFi is a wireless optical networking technology that uses light-emitting diodes (LEDs) for data transmission instead of radio waves, reportedly giving it the data transmitting potential of up to 224GB per second. According to research from Mordor Intelligence LiFi is 100 times faster than WiFi technology as well as being significantly cheaper. In addition, LiFi complements WiFi technology, by minimizing the risk of loss of data in a high density area in a confined region. In doing so, it will be adding significant value to du's wireless broadband portfolio capabilities in both indoor and outdoor data transmissions. The integration of LiFi enables du to provide solutions for its business customer across municipal, commercial and industrial environments. du has demonstrated three use cases over LiFi technology

including internet over LiFi, video and audio streaming over LiFi. Saleem AlBlooshi, Executive Vice President of Network Development and Operations at du, said "With the Global LiFi market expected to reach \$80 billion by 2021, we expect to see demand for this technology increasing exponentially over the coming years. We wanted to ensure our customers were aware of this technology and the demonstration of LiFi technology complements our broadband portfolio for the business segment. We are currently working with major businesses to create tailor-made LiFi solutions and to test and validate the applications so that we can ensure we offer the latest in innovation to our valued customers." The new innovative LiFi technology is particularly suitable for environments where safety and data security are paramount such as hospitals, company headquarters, transport, and security agencies. LiFi uses Visible Light Spectrum (VLS) which has a huge data capacity (about 390 Tera Hertz (THz) of bandwidth available), and is unimpeded by radio interference and generates no electromagnetic smog. This makes it a superior option for intrinsically hazardous environments such as refineries, oil platforms or petrol stations. AlBalooshi added "The recent demonstration of LiFi adds further impetus to the initiative of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and Ruler of Dubai, in establishing the UAE as a global leader in all aspects and as an innovator in technology in the Middle East region." du and Zero1 are developing a number of LiFi-enabled solutions which provide a variety of analytics, communication and management systems, and customer engagement solutions. The outdoor deployment of LiFi enables motion detection, geo-localization and camera networks through street lights while the indoor deployment supports retail, healthcare, education, and cultural centers. Discussing the demonstration, Marc Fleschen, CEO, Zero1, said: "We are thrilled to work with du on LiFi technology to create a powerful platform which will provide tangible and long-lasting solutions for du's business partners. We are honoured to be part of the LiFi integration for different applications, which will place the UAE at the forefront of LiFi enabled environments."



Cisco to invest \$100 mln in India's digital push

Cisco Systems Inc will invest over \$100 million in India to support the country's ambitious plan to connect thousands of its villages to the internet and create jobs, Executive Chairman John Chambers said on Friday. India's Prime Minister Narendra Modi has launched a series of initiatives under the 'Digital India,' 'Skill India,' and 'Startup India' schemes to connect millions of Indians to the Internet, create more tech jobs and move more services online. Chambers said the company will work with federal and provincial governments in India to launch incubation centers for entrepreneurs and training students. Cisco will invest \$40 million of the total planned investment into funding early and mid-stage startups.



New Board declares SAMENA Council's role for telecom operators indispensable; sets future vision

The new Board of Directors of the South Asia, Middle East, North Africa region's telecommunications industry association, SAMENA Council, now being led by Dr. Khaled H. Biyari, Group CEO of Saudi Telecom Company (STC), as the Chairman, and Mr. Ihab Hinnawi, Group CEO of Batelco, as the new Vice Chairman, has acknowledged SAMENA Council's indispensable presence within the industry, to help advance and better represent the business interests and challenges of telecom operators. SAMENA Council's continuing role as an alliance of telecom operators working toward engaging private sector entities with policy-makers and global institutions for the betterment of the ICT industry also received the Board's acknowledgement and affirmation to take SAMENA Council

to the next level. The new Board termed the period 2016-2017 as being a very challenging time for telecom operators, thus requiring effective understanding of cross-stakeholder priorities and bringing together of all stakeholders and players of the value-chain. Such cooperation has the potential to support operators' need for innovation, and to help avoid any conflicts arising within the industry, which, at times, get created to the operators' disadvantage. The first announcement of the new changes in SAMENA Council's Board Leadership was made during Mobile World Congress 2016, following the election of four new members to the Board and, subsequently, the election of the Chairman and Vice Chairman through a unanimous vote. This, in SAMENA Council's 10th year of existence, marked a new beginning of a new leadership and new visions, with TurkCell, through Mr. Kaan Terzioglu, CEO; Turksat, represented by Mr. Ensar Gul, CEO; Viva Kuwait, represented by Mr. Salman Al Badran, CEO; and Zain Group, represented by Mr. Scott Gegenheimer, Group CEO, having become the newest members of the Board. The new members of the Board will contribute their visions for the welfare of the telecom operator community of the SAMENA Council as well as the industry, at large. The new Board of Directors of SAMENA Council is now constituted by STC, Batelco, Etisalat, Omantel, Ooredoo Group, Orange-Jordan, Turk Telekom, TurkCell, TurkSat, Viva Kuwait, Zain Group, and Mr. Bocar A. BA the CEO of the Council. All operators are amongst the largest network operators and the most recognized brands in the SAMENA region. The new Board of Directors has been elected by peers, chief executives of telecom operators, to provide leadership and an overall strategic direction for the Council, to deliver leadership points of views on regional telecom business matters in support of telecom operators, whose business interests and voice SAMENA Council is designed to represent on global fora and both policy-maker and regulatory circles. The Board establishes policies for the Council's operations and makes its recommendations to its membership on issues and matters that concern the telecom business, and concerns raised throughout the industry. The current Board of Directors will remain active until 2018, after which a new election

will be held to elect new rotating members of the Board as well as new leadership.



New base stations in Muscat and Al Batinah boost Ooredoo's high speed network

Ooredoo has completed the first wave of new 4G/LTE 800 coverage in Muscat and along the Al Batinah coast. Now, between Muttrah and Liwa, more than 100 new 4G base-stations have significantly boosted Ooredoo's high-speed mobile data network. The additional LTE (4G) 800 MHz spectrum, acquired at a cost of OMR 9.6 million, is an enhancement to Ooredoo's 4G network capabilities, building on their award-winning customer experience and bringing state-of-the-art service quality. The new base stations have brought unparalleled benefits to customers by improving the 4G indoor coverage and data speeds. These speeds are important when downloading or streaming videos or receiving high definition pictures or documents. It also provides an enhancement to Ooredoo's extensive network



modernization program, which has been underway for the last three years. And now, the second wave of new 4G base-stations, improving the indoor and outdoor high-speed mobile data coverage further, has already been started in all Wilayats across Oman. As customers increasingly demand faster download speeds, seamless video streaming, online gaming and more, the additional spectrum and new base stations are providing a whole

new experience. Speaking on the completion of this first phase, CEO of Ooredoo, Greg Young, said "One of our aims is to provide innovative and best-in-industry technology and services to our customers. This new spectrum is significantly enhancing speed and indoor 4G coverage. Our customers will be able to use 4G in many more areas and feel the difference when it comes to streaming, downloads and staying connected. And there is more to come, as we roll out this richer experience to other areas of the country." "This investment and improvement also future-proofs our network with the necessary spectrum to underpin cost effective capacity increases to keep pace with accelerating 4G demand."



OSN partners with Eutelsat for more HD channels and sets stage for Ultra HD services in MENA

OSN, the leading pay-TV provider in the Middle East and North Africa, is ramping up capacity on the powerful EUTELSAT 8 West B satellite operated by Eutelsat Communications (NYSE Euronext Paris: ETL). Additional capacity at the Middle East's flagship TV neighbourhood will support more expansion for OSN, including new High Definition channels and the introduction of Ultra HD services. The new contract was announced at CABSAT 2016, the broadcasting convention taking place in Dubai from March 8-10. OSN will take advantage of the additional capacity to introduce Ultra HD services that will bring the most cutting-edge TV experience to viewers in the Middle East, offering true immersion with an image quality four times richer than Full HD. OSN also plans to ramp up its HD offer, with eight new channels announced recently and several new premium and exclusive channels to be launched soon. Building on its



10-year partnership with Eutelsat, OSN has built a platform of premium content broadcast exclusively from the 7/8° West video neighbourhood that reaches into homes from Morocco to the Gulf. Commenting on the new contract, Mark Billinge, CTO, OSN said: "We are enthusiastic about this additional capacity which will allow us to offer superior TV quality to our viewers. Our plans to move into Ultra HD reflect our continuous ambition to raise the bar and be at the forefront of the latest TV technology." Michel Azibert, Eutelsat's Deputy CEO and Chief Commercial & Development Officer, added: "Following the launch in August last year of the powerful EUTELSAT 8 West B satellite, this contract marks a new milestone in the growth story of the most popular satellite TV neighbourhood in the Middle East. We are honoured to celebrate 10 years of collaboration with OSN and are committed to furthering our longstanding presence and strong partnerships across the region, including playing our part in the roll-out of HD and the launch of Ultra HD."



Ministry of Education and Microsoft join forces on smart learning

The Ministry of Education has signed an agreement with Microsoft Gulf, comprising initiatives which will serve six main priorities of the Ministry to integrate smart learning into the education system. The objective of the agreement is to enable public schools to receive the most out of ICT and curriculum integrations which enables schools to benefit from modern communication systems as well as deal with any challenges related to

smart learning. The initiative include empowering teachers and educators, enhancing smart schools, encouraging the use of best educational practices, enriching teaching and learning experiences whilst applying the best international educational practices, and making the student home an extension of the classroom. Hussain al-Hammadi, the UAE Minister of Education said "Building a modern education system that is based on knowledge and innovation and transforms towards smart learning is what is needed in local schools. It is important to integrate the basic elements and tools into the education system enabling the teachers and students to acquire advanced skills through the use of technology and enhance the learning methods." One of the initiatives includes the "Fursati" program, where Microsoft will train 25 students to provide them with core skills and experience, with access to a network of potential career opportunities. Students will be given three month internships at Microsoft Gulf where they can secure potential career opportunities. Also the "DreamSpark" initiative that provides a complete platform for software design and development at no cost for students, and enables them to join Microsoft innovation incubators to enhance their ideas. Samer Abu Ltaif, regional general manager at Microsoft Gulf said "At Microsoft, we believe that individuals can achieve great milestones if they are given an opportunity to leverage technology. Use of modern tools and solutions such as Minecraft helps in the skill building process for students and enables them to achieve more. We are honored to partner with the Ministry of Education as we share the same vision of providing a better future for students and nurturing the spirit of innovation by facilitating the best programs for teachers and educators." The agreement also includes provision of MINECRAFTEDU and Kodu Micro:bit for coding skills which makes the United Arab Emirates amongst the one of the first to use this system after the United Kingdom. The agreement was signed by His Excellency Mohammed Gheyath, Director General of the Mohammed Bin Rashid Smart Learning Program and Samer Abu Ltaif, regional general manager at Microsoft Gulf, on the sidelines of the Global Education Forum (GEF) and Gulf Educational Supplies and Solutions (GESS).



Batelco Group CEO elected as Vice-Chairman of SAMENA Council Board of Directors

Batelco Group CEO Ihab Hinnawi has been announced as the new Vice Chairman of the Board of Directors of SAMENA (South Asia, Middle East, North Africa) Telecommunications Council. The announcement of the new Board, which includes leading figures from the region's major telecommunications companies, was made during the Mobile World Congress, which took place in Barcelona from 22 to 25 February. The election of the top seats marks the beginning of a new leadership and new visions in order to drive forward SAMENA Council's future contributions to the telecommunications industry. Mr. Hinnawi has over 25 years of experience in the region's telecommunications industry, having held the role of CEO of Umniah and CEO of Batelco Jordan prior to his current position at the helm of the Batelco Group of Companies. Upon his election as Vice-Chairman of SAMENA, Mr. Hinnawi said that he was delighted and honored to be chosen for the prestigious role and very much looked forward to collaborating with the Council's members to push forward their collective goals and aspirations. Expressing his satisfaction at the conclusion of the election process, Bocar A. BA, CEO of SAMENA Telecommunications Council, stated that the Council has had an outstanding board leadership since the past election. "It is due to the vision and achievements of the board members that we now have a very powerful and dynamic leadership, constituted by the largest communications service providers in the region." "The Year 2016 has been very good so far, and under our new leadership, moving forward, I foresee SAMENA Council reaching new heights to witness an exciting future of region-wide co-operation and collaboration, and digital economic development," he added.



Sudatel Group signs a partnership agreement with Al Jazeera Media Network

SUDATEL Group signed a partnership agreement with Al Jazeera Media Network under which the Group shall appear across the platforms of Al Jazeera News Network, Al Jazeera English and Al Jazeera Mubasher channels to contribute in consolidating the name of SUDATEL in the minds of viewers inside and outside Sudan. The agreement allows the group to sponsor some of the programs consistent with the main policy and directions adopted by SUDATEL in terms of encouraging the entrepreneurship programs among young people and its valued contributions in the social responsibility field. Also, the agreement provides a partnership opportunity between Al Jazeera Media Training and Development Center and SUDATEL Telecom Academy (Sudacad) owing to Group's interest in building skills and human resources training. Eng. Tarig Hamza Zain El Abdein, Chief Executive Officer of the group, signed on behalf of SUDATEL and Mr. Abdulla Al Najjar, Executive Director of Global Brand & Communications, signed on behalf of Al Jazeera Network; in the presence of Dr. Abdul Rahman Dirar, Chairman of the Board of Directors of SUDATEL and Dr. Mustafa Suwaq, Managing Director of Al Jazeera Media Network. Following the signing ceremony, the CEO of SUDATEL Group expressed his gladness of such strategic partnership that linked SUDATEL as a national economic edifice, who succeeded in attaining leadership abroad over its investments in West Africa, and Al Jazeera Media Network as a powerful Arabic media gate who acquainted globally. On the other hand, the CEO of SUDATEL Group highlighted that the partnership with Al Jazeera Media Network, is undoubtedly serving the Group's strategy in terms of openness to foreign markets and expanding the investment activities, which is in the interest of the shareholders who symbolize the forefront of SUDATEL Group.



Turkcell CEO Terzioglu sets the target of serving 100 million customers in the region

CEO Kaan Terzioglu gave a keynote address at the Mobile World Congress, GSMA's biggest gathering held annually in Barcelona. In his speech, Terzioglu called on telecoms companies to embrace change and focus on providing real experience of connectivity to their customers, combining services and superior network. In Barcelona, Terzioglu also announced Turkcell's target of serving 100 million customers in the region. "To meet the challenge of OTTs, we need to offer real, meaningful connectivity" In his keynote speech, Turkcell's CEO explained the three pillars of the company's growth strategy: Growing as an integrated operator, taking its experience in Turkey to the countries where Turkcell Group operates and to the rest of the region, and increasing its global relevance through OTT products and services. Drawing on the example of BiP, Turkcell's IP-based communication application which has already reached more than 6.2 million users, Terzioglu said: "We have to catch the opportunity to provide real, meaningful connectivity to our customers and become the platform through which they enjoy a full experience of communication. BiP combines the best qualities of a number of different communication applications, plus it comes with the support of a fully licensed operator. In the future, we'll enrich the BiP experience with a feature that enables calls to landlines. BiP is an example of the success that an OTT product can achieve when properly backed by a telecoms operator." "We focus on regional growth to have a larger global footprint" Terzioglu emphasized that Turkcell's experience in providing services – including BiP, music and personal cloud apps as well as Turkcell TV+, the company's highly successful TV platform - will be among its biggest asset as the company increases its regional and global relevance. When asked about functioning in a highly competitive environment, Terzioglu said it is a "blessing" that pushes

Turkcell to constantly question the status quo and to be more innovative. Turkcell has recently reiterated its appetite for M&A, submitting a non-binding offer for the majority stake of FINTUR currently owned by Telia Sonera. FINTUR, a Turkcell-Telia Sonera partnership, operates in 4 countries: Kazakhstan, Georgia, Moldova and Azerbaijan. However, Turkcell does not limit its goal of increasing regional relevance to M&A: Terzioglu talked about the opportunities provided by digital services, citing the number of BiP downloads in Iran, Germany, Azerbaijan and Ukraine. "Up to 375 Mbps mobile broadband speed will make us one of the top operators globally" Turkcell's CEO also underscored the need for operators to support the services layer with the best-in-class network technologies. Reminding the audience that Turkcell will launch 4.5G in Turkey on April 1st, Terzioglu said "we will launch 4.5G in 81 cities – that is, in every city in our home country Turkey. We will offer up to 375 Mbps mobile broadband speed thanks to our LTE-A investment and spectrum advantage – we will be the only operator in Turkey and one of the very few operators globally to achieve this. with our current spectrum configuration we aim to take this upper limit to 1.2 Gbps when the handsets allow it."



PTCL and ZTE announce strategic alliance for setting up Joint Innovation Centre in Pakistan

Pakistan Telecommunication Company Limited (PTCL) has signed a strategic memorandum of understanding with ZTE Corporation for setting up a Joint Innovation Center (JIC) on Big Video in Pakistan. The JIC is a key initiative of PTCL and ZTE for Smart TV development, empowering PTCL to provide high quality video services to customers on TV and mobile devices. The Joint Innovation Center, first of its kind in big video services in Pakistan, will allow both PTCL and ZTE to share resources, exchange knowledge and tap into the potential

of the latest available technologies. Now PTCL will be able to further enhance its Smart TV offering, bring in more value and provide new, value-added services to customers. The MOU was signed by Adnan Shahid, Chief Commercial Officer PTCL and Frank Fang, Vice President Multimedia Product & Services ZTE. The PTCL-ZTE agreement will also serve to strengthen the PTCL digital ecosystem based on video Solutions and will support the convergence of the PTCL ICT infrastructure to counter emerging OTT technologies and improving competence and innovation levels with an eye on future planning. This partnership shall also establish a process of research and development which would lay down an operation model for PTCL to create the best experience for customers in terms of Smart TV usage in addition to offering superior services such as 4K Ultra High Definition TV. Commenting on the establishment of JIC, Mr. Adnan Shahid, Chief Commercial Officer PTCL, said: "PTCL has been a leader in providing digital entertainment. Big video JIC in Pakistan will enable us to provide new and innovative video services for people in Pakistan with local research and development to meet our local, cultural and digital requirements" PTCL offers state of the art digital TV with time-shift and video on demand services. PTCL Smart TV app using ZTE platform was nominated for the Best Mobile App in the Media, Film, TV/Video category of GSMA Global Mobile Awards (GLOMO) 2016 recently at Mobile World Congress in Barcelona. Mr. Zhu Jinyun, Senior Vice President Cloud Computing & IT ZTE, said on the occasion: "ZTE is a market leader in Video OTT in the world. We are pleased to see PTCL using our platform to offer live TV and videos to its customers. We feel excited to further collaborate with PTCL in various domains including PTCL Smart TV offering for creating superior user experience for customers in Pakistan." Pakistan Telecommunication Company Limited (PTCL) is the largest ICT services provider in Pakistan, encompassing fixed line voice telephony, Wireline and Wireless broadband internet, Broadband and multimedia services, digital television and a wide array of corporate solutions for businesses and enterprises. ZTE Corporation is a leading provider of telecommunications equipment and network solutions around the globe, with operations in 160 countries.



DE-CIX announces Zain's increased capacity at two key global internet exchanges

DE-CIX, the world's leading Internet exchange operator, announces today that Zain, a leading telecom innovator in eight markets across the Middle East and Africa, has increased capacity at two key global Internet exchanges: DE-CIX in Frankfurt, Germany, and UAE-IX in Dubai, UAE. Zain Group joined DE-CIX in March 2013 and since then has substantially upgraded its capacity in order to offer millions of customers an outstanding mobile experience. In addition, Zain will use its network to connect additional networks to both of these exchanges. Henri Kassab, Managing Director of International Wholesale & Roaming, Zain Group outlines, "The massive data growth projections for the Middle East have prompted a rethink of the industry's business model, with Zain focused on ensuring Internet traffic is transported and managed across a reliable, diverse and secure network. That is why DE-CIX and UAE-IX are key elements to our strategy in providing greater value and a better Internet experience to our partners and the whole value chain." "Internet traffic growth is exploding in the Middle East," adds Harald A. Summa, DE-CIX CEO. "We welcome such a robust carrier to DE-CIX Frankfurt and UAE-IX in Dubai because of the important traffic that Zain will transport to and from the Middle East. Zain has a critical role in ensuring the high quality of the Internet in the Middle East. We look forward to working with them to expand the number of service providers that can interconnect and peer with key global carriers in both regions."



Digital transformation to generate \$100 trillion by 2025

Speaking at the Jeddah Economic Forum 2016, Khaled H. Biyari, CEO of Saudi Telecom Company (STC), stressed on developing a diversified economy and explained the role of telecom operators in digitalizing the Kingdom's economy. "Telecoms can play leading and supportive roles in three digitalization layers to address the needs of various segments and vertical markets," said Biyari. "STC's framework for digitalizing a nation is done through enabling several platforms, ICT infrastructure and Innovation infrastructure." In his keynote address, Biyari explained that the mobile industry is fast changing the Kingdom's economy by introducing connected cars, smart homes, home 3D printers, drones, payments and robots. "The combinatorial effects of these technologies: Mobile, cloud, artificial intelligence, sensors and analytics, among others — are accelerating progress exponentially." Biyari stated that the global GDP for sectors is being deeply impacted by the digital shift whereas the Kingdom's economy is also undergoing the digital economy. "Twenty-two percent of Saudi businesses are implementing or expanding cloud services, 30 percent of Saudi enterprises have business apps on mobile and 30 percent of businesses have unified communications." "Cloud services increase competitiveness and productivity of businesses," said Biyari. "Cloud solutions are also a major cost-reduction for enterprises, delivering faster results and ensuring the flexibility and scalability for the business." "By building scalable platforms such as Cloud Computing, App Enablement, M2M/IoT, we offer a broad span of horizontal offerings across key vertical markets," he said. "Through cloud services and end-to-end ICT solutions, STC intends to help boost the Kingdom's competitiveness and productivity. At the same time, continue to be the shaper of the Kingdom's knowledge-based economy to drive the digital economy." He further stated that the digital transformation of industries is expected to generate up to \$100 trillion by 2025, with society set to gain more than business. "The digital transformation of industries is an immense opportunity for the industries and the society," said Biyari. "Today's digital startups reach a billion-dollar valuation in just 4 years while it used to take Fortune 500 companies an average of 20 years to hit the record." He added that the digitalization in

the Kingdom is driven by vertical market needs. "STC provides a broad spectrum of services and solutions through partnerships and in-house innovation." "Driving innovation is at the heart of STC's strategy that aims to promote economic growth and development of the Kingdom towards a knowledge-based economy," said Biyari. "Concluding his keynote speech, Biyari explained that telecom operators are the enabling platform of the digital economy, where connectivity will become increasingly the basis for knowledge. "Operators must be allowed to continuously invest in connectivity infrastructure and in order to evolve, continued investments in training and education are needed and more people mobility is required."



PTCL announces the appointment of new President & CEO

The Board of Directors of Pakistan Telecommunications Company Ltd. (PTCL), Pakistan's leading telecommunication and ICT services provider, has announced the appointment of Dr. Daniel Ritz as President & CEO of the PTCL Group with effect from 3rd March 2016. He succeeds Mr. Walid Irshaid, who was President & CEO of the PTCL Group since March 2007. Mr. Azmat Ali Ranjha, Chairman PTCL Board said "I am pleased to announce that Dr. Daniel Ritz will be leading PTCL through the next phase of its growth and development. I would also thank Mr. Walid Irshaid who steered PTCL during tough times and helped grow the company in challenging telecom era of Pakistan." Commenting on his appointment as President & CEO of the PTCL Group, Dr. Daniel Ritz said: "I am truly excited to join PTCL. Taking over from a worthy predecessor in Mr. Walid Irshaid, I plan to position PTCL as an integrated telecom provider of Pakistan. The new position is a challenge that I plan to take on with all the enthusiasm and energy." Before being named as President & CEO of the PTCL Group, Dr. Daniel Ritz was working with Etisalat Group as Chief Strategy Officer to lead and direct the

Group's Corporate Strategy, Business Development, Mergers & Acquisition and Strategic Project Management functions since 2012. He also serves as Board Member of a number of Etisalat's international subsidiaries. Aged 50, Dr. Daniel Ritz holds a Ph.D (magna cum laude) from the Hochschule St. Gallen in Switzerland and was a visiting Ph.D student at Harvard Business School. Prior to Etisalat, he was with Swisscom as a member of the Group's Executive Board where he also held non-executive board positions at national and international subsidiaries. In 2008-09, he was Chief Executive Officer of Swisscom Central & Eastern Europe. He started his career with The Boston Consulting Group, rising to Partner & Managing Director. The outgoing President & CEO of the PTCL Group, Mr. Walid Irshaid has over 25 years of telecom experience and he served PTCL for nine years. Upon joining PTCL, Mr. Walid Irshaid transformed the organization from a state-run monopoly operator into a highly competitive, advanced and integrated service provider in Pakistan's private sector. Under his leadership PTCL started Broadband Internet services in fixed and fixed wireless domain along with multimedia service. Talking about his years at PTCL, Mr. Walid Irshaid said: "I took over PTCL when it was privatized and I had to contend with all the pains of transformation along with my other colleagues who had moved over from the public sector. By the grace of Allah, we have together taken PTCL through all the ups and downs and today it is a very profitable company and Pakistan's leading telecommunication and ICT services provider. It has really been fulfilling working for PTCL and sharing my time with an amazingly gifted team which has been fully aligned to achieve the highest standards from day one. I will certainly miss their commitment and dedication. I wish Dr. Daniel all the best, who is not new to PTCL as he has been a board member of PTCL"



Ooredoo Group FY results hit by forex but customers up 9%

Ooredoo Group has reported a net profit of QAR 2.120 billion for 2015 compared with QAR 2.134 billion in 2014. Excluding the foreign exchange impact, net profit would have increased by 6 percent year on year, it said. Supported by an improvement in emerging market currencies towards the end of the year, the net profit was QAR 360 million in the fourth quarter, up 551 percent from QAR 55 million in the final quarter of 2014, which was hit by one-off customer acquisition and handset costs in Algeria. The consolidated customer base stood at 117 million, up 9 percent from 107 million at the end of 2014. Revenue decreased by 3 percent to QAR 32.16 billion from QAR 33.21 billion in 2014. Excluding the foreign exchange translation impact, 2015 group revenue would have increased by 4 percent year on year, compared with a decline of 3 percent the year before. EBITDA increased by 1 percent to over QAR 13 billion in 2015 with an improved EBITDA margin of 40 percent. Excluding the foreign exchange translation impact, EBITDA would have increased by 8 percent year on year. In the fourth quarter, EBITDA increased by 11 percent to QAR 3 billion. Group earnings per share stood at QAR 6.61 in 2015, compared with QAR 6.66 in 2014. Group data revenues demonstrated robust growth in 2015 as Ooredoo enhanced network speeds and coverage across markets and focused on data package offerings to customers. Data revenue increased to QAR 12 billion in 2015 and now represents 37 percent of group revenue, up from to 25 percent in 2014, which Ooredoo said confirms the success of its early adoption strategy.



Saudi Telecom Awards OSS Contract to Ericsson

Mobile data traffic will surge 8-fold over the next five years, according to Cisco Visual Networking Index (VNI) Ericsson and STC, Saudi Arabia, have signed an extensive operations support system business support system (OSS BSS) deal. The deal includes a range of Ericsson products, including Ericsson Charging System,

Mobile Broadband Charging, Multi Mediation, Session Border Gateway, Service-Aware Policy Controller, Composition Engine, Catalog Manager, Order Care and Multiservice Delivery Platform. Services provided by Ericsson under the agreement include solution design, project management, technology consultancy, service enablement, business configuration, development and customization, solution integration and verification, and load testing and acceptance. Ali Eid, Head of Ericsson Saudi Arabia, says: "This is Ericsson's largest regional deal so far in OSS/BSS. We have had a continuous and successful partnership with STC in the OSS/BSS domain since 2005 and this deal marks another significant milestone that strengthens our partnership."



Zain Group becomes signatory to the GSMA's Humanitarian Connectivity Charter

Group, a leading mobile telecom innovator in eight markets across the Middle East and North Africa, has become a signatory to the GSMA's Humanitarian Connectivity Charter, which was launched at Mobile World Congress in Barcelona in 2015. The industry-wide initiative is geared at demonstrating the commitment of the mobile industry to supporting customers and responders before and during humanitarian emergencies. Through the Charter, mobile network operators (MNOs) will commit to a common set of principles and work towards the adoption of initiatives focused on humanitarian connectivity. The aim of this initiative is to create a more coordinated and predictable response to disasters. A signing ceremony to honor the occasion was held at the Mobile World Congress in Barcelona between Zain and the GSMA attended by Zain Group Chairman, Asaad Al Banwan; Zain Group CEO, Scott Gegenheimer; Zain Corporate Sustainability Head, Jennifer Suleiman and senior executives from both Zain and the GSMA, as well as industry

figures and international media. Zain is one of the most active companies, across sectors, in corporate sustainability and social responsibility within its region of operation, and the aspirations and principles expressed the Charter align seamlessly with its own efforts to render assistance wherever possible and improve the lives of people consistently. With respect to the Charter's principle to enhance coordination within and among MNOs before, during and after a disaster; Zain will engage with the other MNOs in its respective operating territories to facilitate coordination. Emergency measures such as access site sharing, mobile base station sharing, and waiver for inter-operator call/SMS charges will be explored for humanitarian connectivity. Commenting on becoming a Charter signatory, Zain Group CEO Scott Gegenheimer commented, "Zain has and shall continue to work rigorously to improve the conditions of people in distressed or unfortunate situations. However, throughout history has been made abundantly clear that the pooling of efforts and resources often achieves more positive results than what can be done individually, and we are thus looking forward to contributing our efforts and resources under the Charter." Another principle included in the Charter is to strengthen partnerships between the mobile industry, government and the humanitarian sector, and Zain, with the support of the GSMA, will lead the development of a partnership framework engaging MNOs, telecommunications regulators, government and humanitarian bodies (Red Crescent, WHO) within its region of operations to provide effective response capabilities to society at large. Jennifer Suleiman, Head of Corporate Sustainability & Social Responsibility at Zain Group said, "We live and operate in a region where the cost of human suffering as a consequence of war and natural disaster is all-too apparent. Thus it is not just our responsibility but our duty to band together and render whatever assistance is possible, particularly at times of extreme need, and we are up to working closely with our peers to achieve this under the banner of the Charter." The principle to scale and standardize preparedness and response activities across the industry to enable a more predictable response has seen Zain establish a Business

Continuity Management & Disaster Recovery program in line with ISO 22301 for uniform implementation across its operating companies. In order to sustain mission critical services (voice, SMS, data), the underlying network elements & IT platforms are designed with geographic resiliency and Zain's technical teams and partners are capable of execution of disaster recovery plans to restore services within acceptable timeframes. At Zain, we have considerable experience in overcoming challenges that have resulted from crisis situations. One example is in Iraq, when on August 23, 2014, an explosion resulted in major damage to one of Zain's core sites located nearby. The result was a complete outage of 850 network sites across six Iraqi provinces. Swiftly implementing our contingency plans allowed us to restore connectivity to three and a half provinces by the following day, with full service restoration achieved within two days. The launch of the Humanitarian Connectivity Charter reflects the growing recognition within the mobile industry and among government and responding stakeholders of the crucial role that mobile plays during humanitarian crises. Mobile devices are often one of the first things people reach for when disaster strikes. Over the last decade, 1.8 billion people have been affected by disasters around the world. The challenges posed by these crises are too large for any single entity to address individually and the Charter will provide a vehicle for driving collaboration and partnership both within the industry and with external partners. In this context, ensuring preparedness and resiliency is critical from both a sustainability and business perspective. The Charter is supported by the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), the UN Emergency Telecommunications Cluster (ETC) and the International Federation of the Red Cross and Red Crescent Societies (IFRC). It was created following two years of industry workshops and collaboration facilitated by the GSMA Disaster Response program, in association with UN agencies, mobile operators, vendors and non-government organizations (NGOs).



Cisco to buy cloud startup CliQr for USD 260 million

Cisco has announced its intention to acquire San Jose-based cloud management software specialist CliQr for USD 260 million. CliQr provides an application-defined cloud orchestration platform to model, deploy and manage applications across bare metal, virtualized and container environments. Cisco said the startup's technology will help its customers simplify and accelerate their private, public and hybrid cloud deployments. CliQr is already integrated with a number of Cisco's data centre switching and cloud offerings, including its Application Centric Infrastructure (ACI) and Unified Computing System (UCS), with Cisco confirming that it will continue to integrate CliQr across its data centre portfolio. The networking giant expects the CliQr acquisition to close in the third quarter of its fiscal with the CliQr team joining Cisco's Insieme Business Unit as part of the deal.



Orange to deploy VoLTE, Wi-Fi Calling across Europe

Orange has announced that it is planning to roll out voice-over-LTE (VoLTE) and Wi-Fi Calling across its European footprint. VoLTE technology, which is already available in Romania, will facilitate dramatically reduced connection times (from approximately eight to two seconds) and improved simultaneous use of voice and high speed data, while Wi-Fi Calling will offer customers greatly improved indoor coverage. The services will be activated in Orange's remaining European operations over the course of 2016 and early 2017. TeleGeography notes that Orange currently operates in several European markets, including France, Spain, Belgium, Luxembourg,

Poland, Romania, Slovakia, Moldova and Armenia.



Etisalat and Huawei to collaborate on Etisalat Cloud Factory

Etisalat Group - a leading telecoms operator in the Middle East, Asia and Africa - and Huawei - a leading global ICT solutions provider - have announced plans to work on the first ever Proof of Concept and design for an all-inclusive network architecture for the Etisalat Regional Cloud Factory. Once developed, the enterprise solutions provided by the innovative Cloud Factory will be offered to businesses across Etisalat's international footprint. The initiative will examine the technical and business requirements of virtualizing Etisalat network functions; such as Operations Support Systems (OSS), Value-Added Services (VAS) and Policy and Charging Rules Function (PCRF). The Etisalat Cloud Factory will also focus on the centralization of these functions onto a distributed data center platform, enabling easier sharing of resources amongst the 18 operating companies in Etisalat Group's footprint. Etisalat Group CTO, Hatem Bamatraf, said: "The Cloud is a concept that offers great potential for businesses and governments in the era of big data. Working in partnership with industry leaders, like Huawei, we intend to be the first to develop the feasibility of pooling the infrastructure resources, which will realize the enterprise solutions, providing our customers with a competitive edge. Etisalat's Regional Cloud Factory is a strategic priority and another example of how Etisalat Group is at the forefront of delivering innovation that adds value for our customers." Peng Xiongji, President of Huawei Etisalat Global Key Account, added: "Building on our long-term relationship with Etisalat, Huawei is committed to supporting the wider transformation from more traditional architecture to cloud-based platforms of the future. New designs developed through the Etisalat Cloud Factory will make services and processes more agile and support

Etisalat to prepare for market changes, promote innovation, and help its own customers achieve business success in the digital era." Cloud Factory refers to centralization of certain network/IT services, application and functions from a number of Etisalat Operational Companies into one unified and converged Cloud platform. The Etisalat Cloud Factory will be based on the use of distributed virtual data centers as part of new network architecture. The move comes in line with Etisalat's pursuit of its Network 2020 vision to be service ready for future consumer and business requirements. This vision encompasses pioneering initiatives in the areas of Software-Defined Networks (SDN) and Network Function Virtualization (NFV) to drive Etisalat service agility, expenditure savings, and to better leverage its investments in existing infrastructure. In this regard, Etisalat and Huawei have already worked together to publish a white paper and carry out a proof of concept for certain scenarios that validate the Network 2020 architecture and move it closer to reality.



Turkcell submits binding bid for TeliaSonera Eurasia ops

Turkish mobile operator aims to take control of Fintur and TeliaSonera's direct stake in Kazakhstan's Kcell. Turkcell late last week announced it has submitted a binding bid for TeliaSonera's stake in Fintur, a company that holds telecoms assets in four Eurasian countries, in addition to a direct stake in Kazakhstan. The Turkey-based mobile operator made the announcement to the Istanbul Stock Exchange, but did not provide any further details, including on the price of its offer. The news came three months after Turkcell submitted a non-binding offer for the assets, again without disclosing any financial information. TeliaSonera revealed plans to exit its Eurasian operations on a market-by-market basis, with a view to focusing on its domestic and wider European businesses, in September last year. Turkcell, which already has a stake in some of those operations



through Fintur, immediately expressed its interest in making a bid. TeliaSonera holds 58.55% of Fintur and consolidates the results of its mobile operator subsidiaries in Azerbaijan, Georgia, Kazakhstan and Moldova with its own. Turkcell owns the remaining 41.45%. In addition, TeliaSonera has a 24% direct stake in Kcell in Kazakhstan. Turkcell's offer also includes that stake. Should the deal go ahead, Turkcell would control 75% of Kcell. It would also gain 100% of Georgia's Geocell, all of Moldova's Moldcell, and 51% of Azercell in Azerbaijan. However, it could face competition from other interested parties. Last year TeliaSonera said it had received interest in its Eurasian businesses, including the Fintur operations, from a number of angles.



Arthur D. Little and SAMENA Council equip telecom operators with new insight into the MENA opportunity landscape

As the smartphone becomes the de facto standard for accessing the Web and over-the-top (OTT) services, it disrupts traditional telecom revenues. A new report from global management consultancy Arthur D. Little (ADL) and SAMENA Telecommunications Council (SAMENA Council) urges Middle East and North Africa operators to ride the OTT wave, and, in parallel, look for new revenue streams to grow

sustainably. In The OTT conundrum for MENA telecoms: Achieving sustainable growth in a digital world, ADL and SAMENA Council report that new digital disruptions will increasingly dictate new norms within the business. Building on SAMENA Council's earlier initiatives to help bring telecommunications operators together, the report draws attention to accelerating the pace of adoption within the changing digital space. Insight from the report reveals that with slowing population growth, falling prices and regulatory changes, the environment will become harder to navigate. According to the analysis presented within the report, there is no agreement within operator circles on the approach towards providers of OTT services. The report urges operators to take the lead to initiate collaboration and partner with OTT players in messaging and voice, and make every effort to rebalance revenue towards more data. At the same time, the predominant approach for an OTT video content play is to have pan-regional scale. For companies to continue growing in a sustainable way, though, the report from ADL and SAMENA Council points at tapping into adjacent revenue streams such as ICT services and smartization, while increasing efficiency. A digital transformation might increase efficiency by 30%, whereas bad debt optimization might bring an EBITDA uplift of 1-2%. "The telecommunications market environment in many of the MENA markets will change," said Karim Taga, Global Practice Leader in ADL's Technology, Information, Media, and Electronics (TIME) Practice. "Operators around the region should quickly rebalance their revenue mix towards more data and explore opportunities around smartization and ICT. Radical transformation might become an imperative for many players in this digital age." "The much-talked-about business transformation model for operators has to materialize now," said Thomas Kuruvilla, Managing Partner of ADL Middle East. "A number of efficiency measures should be at the top of operators' agendas in order to navigate the digital future. In this reality, policy-makers and regulators will need to be balanced between consumers' interests, return on investment for telecom operators, and the revenue needs of state budgets."

"SAMENA Telecommunications Council feels that highlighting the market and growth dynamics of the MENA region will prove to be insightful for the telecom operators," said Bocar BA, Chief Executive Officer of SAMENA Telecommunications Council. BA reconfirmed SAMENA Council's recommendation to approach over-the-top services, an important fact of digital life today, with openness to collaboration and developing partnership among the key stakeholders. "The OTT challenge may be one of those rare opportunities through which we can realize true collaboration and understanding among telecom operators, OTT players, policy-makers, and regulators."



▼ REGIONAL NEWS

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Selling towers may allow operators to reduce Capex and Opex

Telecommunications firm Zain Saudi is considering joint ownership or a sale of its mobile transmitter towers, its chief executive said. Telecoms operators are increasingly keen to dispose of towers that now provide little competitive advantage due to broadly similar network quality and coverage, although no such deals have been completed in the Middle East. The comments from Hassan Kabbani follow a report by Saudi financial news website Maaal last month that Zain Saudi, along with the kingdom's two other telecom operators, Etihad Etisalat (Mobily) and Saudi Telecom Co (STC), were in talks to establish a company that would share ownership of their towers. "We hear like you hear that our competitors are also considering this," Kabbani told reporters on the sidelines of a conference. "Many tower companies are very much interested by the Saudi market for this kind of activity." Citing sources familiar with the matter, Reuters reported on March 16 that Kuwait's Zain, Zain Saudi's parent company, was narrowing the field of potential bidders for its towers in Saudi Arabia and Kuwait. Proceeds from any sale of Zain Saudi's 7,000 towers would be used to pay off some debt, the sources said. Selling towers can also allow operators

to reduce their capital and operating costs. Kabbani didn't say whether joint ownership or a sale was more likely for the company's towers, but said both options were under consideration. "I cannot talk about where we are on that potential activity, but can tell you that we are considering this as one option," he said. "All operators are considering tower sales because the network has reached a level of maturity. Most operators are sitting on passive assets so maybe if they sell these assets, they can be optimized." Under a joint ownership arrangement, tower companies usually buy towers from one operator and then attract others as tenants. Such a move has been particularly popular in Africa, where operators face high costs in powering generator-run towers, sites are tough to access due to poor transport links and phone use and coverage are relatively low and so there is significant market growth potential. The benefits are likely to be more modest in Saudi Arabia, where mobile penetration is already 180 percent, the sixth-highest globally.

Qatari operators unveil new IoT, ICT strategies

UK-backed Vodafone Qatar has introduced its Global Machine to Machine (M2M) Platform and Internet of Things (IoT) solutions to the local market, offering Qatari businesses a global M2M

SIM card with worldwide roaming; an interactive portal for end users; secure solutions; access to more than 1,300 M2M experts; a broad portfolio of M2M terminals; application enablement/ development/testing and deployment from a single supplier, all under a single contract. Particular areas of focus in Qatar include 'smart city' applications and the transportation sector as the country attempts to deal with its growing traffic problems. The Vodafone Group currently offers its M2M services to local customers in 40 countries. Meanwhile, Ooredoo Qatar has unveiled sweeping ambitions to be 'the leading integrated ICT provider in Qatar and the region', aiming to fully transform its offering for businesses and government institutions, the Peninsula reports. To accomplish this vision, the company says it will become an 'ICT innovation engine' for Qatar, building best-in-class capabilities in-house while engaging with an ecosystem of innovative partners. The goal is to fundamentally transform the depth and range of ICT services offered to organizations and enterprises in Qatar and in the Gulf region. Waleed Al Sayed, CEO of Ooredoo Qatar, declared: 'The moment is right for Ooredoo to take the quantum leap from its position as the leading [telecoms] operator in the country, to becoming the premier information technology company in Qatar and ultimately the region. IT and telecoms are converging around the world, and Ooredoo has partnerships with almost all of the world's leading technology companies, supported by incredible infrastructure assets such as the Ooredoo Supernet [convergent high speed transmission network]. This means that we can provide a fully-integrated offering that is unmatched by any other company.' Ooredoo adds that it is aiming to capitalize on its long-standing links with large and small companies and organizations across Qatar to create a 'one-stop-shop' for all ICT services, encompassing everything from connectivity to data centers, through to full system integration services, while it also says it will 'help raise Qatar's profile as a hub for innovation and ground-breaking technology, including becoming a world-reference for smart cities and in the rollout of IoT.' Both Ooredoo and Vodafone stated that their latest initiatives in fields such as IoT, smart cities and integrated telecoms/ICT

solutions, will support the Qatari government's 'Qatar National Vision 2030' goals including knowledge-based economy targets.

Etisalat protects organizations against security risks

Etisalat highlighted the significance of organizations sharing their digital risk with trusted service partners as the company presented its unparalleled portfolio of digital security solutions at International Exhibition for Security and National Resilience (ISNR) held in Abu Dhabi from March 15 to 17, 2016. The event is the world's largest exhibition for homeland security and national resilience. UAE is at the forefront of the digital revolution. Enterprises, small and medium businesses (SMBs) as well as federal and local governments are embracing disruptive technologies such as machine-to-machine (M2M), Internet of Things (IoT), and smart business solutions migrating to public and private clouds for the creation of smart communities. This paradigm shift to digital is putting immense pressure on traditional enterprise security controls and management structures. Francisco Salcedo, Senior Vice President of Digital Solutions at Etisalat said: "A major portion of information that flows within and from an enterprise is digital in nature. Therefore, securing the network and the path of information flow assumes cardinal importance.

Telenor takes sole ownership of Pakistan's Tameer bank

Telenor this week announced the acquisition of the 49% of Tameer Microfinance Bank that it does not already own, giving a boost to its financial services offerings in Pakistan. Telenor already offers a range of mobile financial services in Pakistan in partnership with Tameer. The bank now becomes a wholly owned entity within the telco group, and Telenor will immediately transfer the management of its Easypaisa mobile money service to Tameer. The two companies launched Easypaisa as a joint venture in 2009. "This acquisition gives us an even stronger platform to provide wide scale financial services to the unbanked population in the

country," said Tine Wollebakk, head of financial services at Telenor Group, in statement on Thursday. "It also strengthens our leadership position in digitizing financial services in Pakistan," she said. Telenor did not disclose the terms of the transaction. As part of the deal, Tameer founder Nadeem Hussain will step down from the president and CEO role, but will take a seat on the firm's board. Telenor said Ali Chaudhry will replace him as President and Chief Executive, presumably referring to its senior advisor for group financial services. However, the changes in senior management are subject to the approval of the State Bank of Pakistan, the firm said.

Afghan Wireless taps Cataleya for IP networking

Afghan Wireless Communications (AWCC) will deploy a session and application management platform from Epsilon Global Communications subsidiary Cataleya to support its migration to an all-IP infrastructure. Cataleya's Orchid One platform will be initially deployed in Kabul, with plans to expand its roll out to additional cities in Afghanistan. AWCC is the first mobile operator to deliver enhanced voice connectivity in the country and will use Orchid One as an international voice-switching platform, addressing quality of service (QoS), quality of experience (QoE), interworking, and transcoding. Founded in 2002 as the first mobile services company in Afghanistan, AWCC has more than four million mobile subscribers. It offers 2G and 3G services including wireless voice telephony, mobile internet access, fixed wireless internet access, video calls, HD Voice and mobile TV. "There is a tremendous opportunity in supporting IP networking in developing markets, and in enabling our customers to offer the best possible QoS and QoE," said Jay Jayasimha, CEO at Cataleya. Orchid One was specifically designed to enable the delivery of IP communications services and high-performance applications. It offers service providers full end-to-end QoS and QoE with visibility from the transport to applications layers, which is critical for the delivery of advanced communications services. "As we increase the number of deployments in the field, we are also expanding and evolving our capabilities," said Jay. "Over the last 12 to 18 months,

we have deployed Orchid One in 13 networks globally, and we are developing new solutions for fraud identification and mitigation as well as other IP-based solutions.”

Dubai to become smartest city in the world by 2017

In his capacity as Ruler of Dubai, Vice President and Prime Minister of the United Arab Emirates His Highness Sheikh Mohammed bin Rashid Al Maktoum issued Law No (2) of 2016 establishing Dubai



Data Establishment. The new Law supports the Dubai Smart City strategy to transform Dubai into the smartest city in the world by 2017. Furthermore, Crown Prince of Dubai and Chairman of Dubai Executive Council His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum approved the Executive Council's Resolution No (12) of 2016 appointing Younis Abdul Aziz Al Haj Mahmoud Al Ali as CEO of Dubai Data Establishment in addition to his position as Deputy Director General of the Dubai Smart City Office. Dubai Data Establishment aims to enhance Dubai's capabilities in the field of publishing and exchanging data, and contribute to establishing a knowledge database to serve the public and private sectors, as well as oversee, regulate and coordinate between government entities to ensure implementation of the articles of this Law. Pursuant to the new Law, Dubai Data Establishment, a subsidiary of Dubai Smart City Office, is responsible for the enforcement

of this Law and may carry out any prescribed activities in this regard in collaboration with the Dubai Electronic Security Center. The Law also outlined the authorities and responsibilities of the Board of Directors of the Dubai Smart City Office and its Chairman and approved the organizational structure of the Dubai Data Establishment and the authorities of its CEO. The new Law also authorized the Dubai Data Establishment to establish partnerships with public and private entities to fund the Establishment's programs, initiatives and projects. According to the Law, Dubai Data Establishment will establish and manage the structure for the data that comes under the purview of this Law. This Law annuls any other legislation that contradicts or challenges its articles. This Law and Resolution are considered effective from the date of their issuance, and will be published in the Official Gazette.

Airtel to acquire spectrum from Videocon for \$659M

India's largest operator Bharti Airtel announced today it will acquire spectrum in six regions from smaller rival Videocon Telecom for INR44.28 billion (\$659 million). The agreement, which is valid to 18 December 2032, covers 10MHz of 1.8GHz frequencies in Bihar, Haryana, Madhya Pradesh, Uttar Pradesh (East), Uttar Pradesh (West) and Gujarat, the Economic Times said. The spectrum purchase is intended to boost Airtel's holdings as it expands its 4G footprint ahead of Reliance Jio's nationwide 4g launch 4G. The transaction is subject the standard regulatory approvals, including confirmation from the Department of Telecom, Bharti said. The announcement comes just a day after Idea Cellular and Videocon agreed to terminate a spectrum trading agreement that would have seen the number three operator buy spectrum in the same band in two regions from the smaller player for INR33.1 billion. That trading deal, signed in November, covered spectrum in Uttar Pradesh (West) and Gujarat. Videocon, an operator with less than a 1 per cent market share, had held talks with a number of operators, including Airtel, Telenor India and Vodafone India, to sell spectrum in order to raise funds. Last week India's state-run BSNL reportedly was discussing sharing spectrum with

Airtel in four regions – Rajasthan, Uttar Pradesh (West), Bihar and Assam – by June. The deal, which crosses over with the Airtel-Videocon agreement in two service regions, is unlikely to go ahead in its current form. BSNL is the country's fifth largest operator with 82 million mobile connections. Airtel in late January reportedly was close to finalising a deal to buy 4G spectrum from smaller rival Aircel for about INR38 billion (\$357 million). The agreement to buy Aircel's 2.3GHz spectrum in eight service areas, where Airtel doesn't currently own airwaves in that band, would expand its 4G spectrum holdings from 15 to 18 regions.

FDI in Telecom Declines Massively

In Pakistan Foreign Direct Investment (FDI) nosedived for Telecom Sector with a mere US 138.3 million dollars invested during the first eight months (July-February) of 2015-16, down from US 939.4 million dollars during same duration last year. Net FDI, however, remained somewhat consistent with a total net FDI of US 54.1 million during the reported period, slightly down from US 59.2 million during same period last year. According to statistics released by the State Bank of Pakistan (SBP), \$9.6 million inflow and \$29.3 million outflow was registered in information technology sector during July-February (2015-16). Net FDI in software development remained at \$3.2 million and in hardware development it measured at \$1.1 million. On other hands, FDI inflows for IT services remained at \$5.2 million and outflow at \$29.3 million thus registering negative \$24.1 million investment. According to the SBP data, FDI remained at \$74.1 million in telecommunications after \$128.7 million inflow and \$54.7 million outflow during the period under review. The postal & courier services registered negative net FDI after outflow of \$0.3 million. According to SBP data, FDI increased by 5 percent in the first eight months of this fiscal year (FY16) as the country fetched FDI amounting to \$751 million in July-February of fiscal year 2015-16 compared to \$716 million in same period of fiscal year 2014-15, depicting an increase of \$35 million. During the period under review, FDI inflows stood at \$1.334 billion as against outflow of \$583.2 million.

Tower firms eye Zain's assets in Kuwait, Saudi - sources

Kuwaiti telecoms group Zain is narrowing the field of potential bidders for its mobile transmitter towers in Kuwait and Saudi Arabia, sources familiar with the matter told Reuters. Should a deal be concluded for the 7,000 towers owned by Zain Saudi, the proceeds will be used to pay off some debt, the sources said, speaking on condition of anonymity. "Several tower companies have expressed an interest. Zain Group is assessing these to create a shortlist of serious potential buyers," said one of the sources. "Whether a deal will happen or not, it's too early to say." Another source said about half a dozen potential buyers had been identified for Zain Saudi's towers, including companies from the United States, Europe, Africa and the Middle East. Citigroup is advising Zain Group, which is also in the process of selling its 1,900 towers in Kuwait, he added. No tower deals have been completed in the Middle East, but operators are increasingly keen to dispose of assets that now provide little competitive advantage due to broadly similar network quality and coverage. Saudi's Mobily is also trying to offload its towers and there could be first mover advantage for buyers and sellers in the kingdom. "If Mobily and Zain both sell towers, there is a strong likelihood of there being duplicate locations within their tower portfolios, which would then reduce the value of those locations," said Amy Cameron, Head of ICT Research at BMI Research. Zain Saudi, the kingdom's No.3 mobile operator by revenue and 37 percent owned by Zain, had long-term debts of 11.07 billion riyals (\$2.95 billion) at the end of 2015, mostly associated with buying its \$6.1 billion license. "A sale would help improve the company's balance sheet," said the first source. Four tower deals agreed in more populous India in 2009-12 valued towers at \$60,000-103,000 each, a report by consultants A.T. Kearney shows. Taking the lower end of this range, Zain Saudi could expect to raise around \$500 million from selling its towers - little new tower infrastructure is required in Saudi where mobile penetration is 180 percent and 4G is readily available, so there is less growth potential for tower companies. The first source

said a deal, if agreed, could be signed this year, though such transactions are complicated with thousands of assets to be valued and transferred and telecom regulatory approval is required. American Tower Corp is among the world's largest specialized tower companies, while in Africa, the industry is led by Nigera's IHS. Tower companies can benefit from economies and scale and reliable revenues from telecoms operators.

Mobile, Smartphone penetration growing in Lebanon

A survey conducted by the U.S.-based opinion polling think tank Pew Research Center indicated that 88 percent of Lebanese own a mobile phone, constituting the 20th highest share among 40 countries globally and the 11th highest share among 29 emerging countries covered in the survey. The share of participants who own a mobile phone in Lebanon is similar to the global median and is



higher than the emerging economies' median of 83 percent. The trend improved slightly from the 2013 survey when 86 percent of Lebanese respondents owned a mobile phone. Further, 52 percent of adults in Lebanon have a Smartphone, representing the 15th highest share globally and the sixth highest share among emerging countries. The share of Lebanese who have a Smartphone is higher than the global median of 43 percent and the emerging economies' median of 35 percent, as reported by Lebanon This Week, the economic publication of Byblos Bank. The trend improved from the 2013 survey when 45 percent of Lebanese adults owned a Smartphone. Also, the survey showed that 74 percent of Lebanese who are between 18 and 34 years old own a Smartphone, while only 37 percent of those older than 35 years have such a phone. Further, 79 percent of Lebanese who have a high

level of education own a Smartphone, while only 17 percent of those who are less educated own one. In addition, 85 percent of Lebanese with a high level of income own a Smartphone, while 20 percent of lower-income citizens have one. In parallel, the results show that 66 percent of Lebanese participants in the survey access the Internet occasionally or own a Smartphone, constituting the 21st highest share globally and the 10th highest share among emerging economies. The share of participants who access the Internet occasionally or own a Smartphone in Lebanon is lower than the global median of 67 percent, but is higher than the emerging economies' median of 52 percent. The trend improved from the 2013 survey when 57 percent of Lebanese respondents accessed the Internet occasionally or owned a Smartphone. The survey showed that 89 percent of Lebanese aged between 18 and 34 years access the Internet occasionally or own a Smartphone, while only 50 percent of those older than 35 years do so. Also, the survey pointed out that 90 percent of Lebanese who have a high level of education access the Internet occasionally or own a Smartphone, while only 34 percent of those who are less educated do so. Further, 92 percent of Lebanese with a high level of income access the Internet occasionally or own a Smartphone, while 41 percent of those who generate a lower income do so. In addition, the survey showed that 92 percent of Internet users or Smartphone owners in Lebanon access the Internet on a daily basis, constituting the highest percentage among countries worldwide. The trend improved from the 2013 survey when 90 percent of Internet users or Smartphone owners in Lebanon accessed the Internet on a daily basis. In parallel, the survey indicated that 75 percent of Internet users or Smartphone owners in Lebanon access social networking sites, constituting, along with Senegal and Vietnam, the 21st highest rate globally, and the 20th highest rate among emerging markets. The share of Internet users or Smartphone owners in Lebanon who access social networking sites is lower than the global median of 76 percent and the emerging economies' median of 80 percent. The trend improved from the 2013 survey when 72 percent of Internet users or Smartphone owners in Lebanon accessed social networking sites.

April launch for Bangladesh's first satellite TV service

Beximco Communications is set to launch Bangladesh's first direct-to-home (DTH) satellite TV service in April 2016. Called RealVU, the service will initially be available in cities and metropolitan areas, with country-wide coverage following 'in time', according to the Daily Sun. "We are ready to provide DTH services under the RealVU brand name very soon which will drastically change the viewing experience of the Bangladeshi TV audience," said Dmitry Lapitskiy, CEO, Beximco Communications. The DTH service will cost around BDT300 (US\$3.83) a month, and provide subscribers with over 100 channels. These comprise more than 26 local channels and a number of major international networks, along with five HD channels. The price of the set-top box required to receive the service has not yet been disclosed. RealVU is a joint venture between Beximco and the Russian investment and industry holding company GS Group. It follows the award of a DTH license by the Bangladesh Government in December 2013. Buyers Media Ltd was also awarded a license to operate a satellite TV service at the same time. Operators will be able to operate a maximum 12-month lock-in period where customers are obliged to use their service, following DTH guidelines issued by the Bangladesh Telecommunication Regulatory Commission in September 2015. In return, DTH operators must provide a service centre at every district headquarters. Furthermore, distributors and operators must provide two years of repair and maintenance to subscribers without any charge.

Telecom Egypt to sell stake in Nokia Egypt for \$1.5 million

Telecom Egypt plans to sell its stake in Nokia's Egyptian unit for 11.5 million Egyptian pounds (\$1.5 million) approximately, senior sources from investment bank, EFG Hermes told Amwal Al Ghad. Telecom Egypt has a 10 percent

stake in Nokia Egypt, with book value worth around 7.5 million pounds. EFG Hermes has estimated in a study the Telecom Egypt's anticipated deal between 11.5 and 11.8 million pounds. Nokia may buy Telecom Egypt's stake in Nokia Egypt, as part of the Finnish telecom gear maker's plan to complete its acquisition of Alcatel-Lucent worldwide, the sources added. Earlier, Finland's Nokia announced last January it had gained control of French rival Alcatel-Lucent following its 15.6-billion-euro (\$17 billion) all-share offer and the two telecom equipment makers had combined on January 14. The French stock market authority said interim results showed Nokia holds nearly 80 percent of Alcatel shares.

Mobinil becomes Orange in Egypt

Orange has announced the launch of the Orange brand in Egypt, replacing the Mobinil brand. Egypt is the French operator's largest operation in terms of customer numbers (33.4 million at the end of 2015) and contributes over 27 percent of its revenues for the Middle East and Africa region. Orange



Egypt CEO Yves Gauthier, speaking at the launch event in Cairo, said that in addition to benefiting from group-wide synergies and know-how, the Egyptian operator is adopting the Orange strategy to place the customer experience at the heart of what they do, so that they can deliver on their promise "to connect our customers to what is essential in their lives". Orange will leverage its extensive technical, marketing and business know-how to benefit its Egyptian operation and improve the quality of service for customers, he said. Gauthier also said he was concerned about the Egyptian government's plans to award a fourth mobile operator license to Telecom Egypt, the paper Ahram Online reported. As Orange has experienced in

its home market France, "all countries where there are four operators see their market contract due to pricing wars, with negative effects on investments," said Gauthier. He noted as well that Telecom Egypt may face difficulties importing equipment for building a new network given the current dollar shortages in Egypt. The operator also announced that the rebranding includes the launch of the first 'Orange Smart Store', at Nile City Towers where Orange Egypt has its headquarters. Egypt is the seventh country to launch Orange's smart store concept. Orange completed the acquisition of all of Mobinil last year from local company Orascom Telecom Media and Technology.

Intelsat and DETASAD enhance broadband connectivity for corporate networks in Saudi Arabia

Intelsat, operator of the world's first Globalized Network, powered by its leading satellite backbone, announced that Detecon Al Saudia Co. Ltd. (DETASAD) has renewed and expanded its contract for Ku-band satellite services to deliver broadband and internet connectivity to corporate networks operating in and outside of Saudi Arabia. Under the multi-year contract, DETASAD will leverage Ku-band services via Intelsat 15 at 85° East and Intelsat 20 at 68.5° East to guarantee access to the highest levels of broadband connectivity for its enterprise customers. DETASAD incorporates Intelsat's satellite services into the largest financial transaction networks in the region, supporting a very large number of Automated Teller Machines (ATMs) located throughout Saudi Arabia, among other applications where high reliability and security are critical to success. "We partnered with Intelsat to complement our existing telecom infrastructure as Intelsat's satellite solutions have a strong track record of seamlessly and securely connecting broadband networks across a vast area," said Adel Al Gidawi, CFO, Detecon Al Saudia Co. Ltd. (DETASAD). "Intelsat and DETASAD have been in the VSAT business together since 2003. Throughout our relationship, Intelsat has proven to be a strategic and trusted partner that has

helped us meet the high standards of our customers across multiple sectors. As the demands placed on us by broadband users in Saudi Arabia continue to grow, extending our relationship with Intelsat will provide us with the bandwidth necessary to extend our network, grow our business and, most importantly, support the needs of communities and businesses located throughout the region." Along with powering Saudi Arabia's ATM networks, DETASAD serves a wide range of corporate networks that are used by small and medium enterprises, maritime operators, oil and gas companies, government agencies, and Internet Service Providers (ISPs) to help power the country's economy and deliver services to urban and remote areas. "We understand that DETASAD's customers are diverse in nature and as such, have unique requirements," said Jean-Philippe Gillet, Intelsat's Vice President, Europe, Middle East and Africa. "The breadth and depth of Intelsat's globalized network enable us to tailor our services to meet the broadband requirements for companies and communities across sectors. With the demand for broadband connectivity only increasing in the Middle East, we look forward to working with DETASAD to deliver high quality, reliable and secure internet and broadband connectivity to corporate enterprises and customers across the banking, oil and gas and government sectors.

UAE operators to join forces for "Taawun"

The power of two is all set to rule the telecom world of the UAE. In an ambitious plan to combine competencies, Etisalat and du have announced 'Taawun', a joint initiative to support the long-term vision of the government in developing smart infrastructure and giving customers an opportunity to select their operator of choice for telecom services. It initially includes more than 50 Projects and will serve as the model for all new greenfield areas in the country. The first phase of the program has been implemented at the upcoming Dubai Sustainable City. 'Taawun' will establish a robust telecom infrastructure as a backbone for property developers, deploying advanced fiber-optic and passive telecom solutions. It aims

to contribute to the UAE Vision 2021 to rank the nation among top ten globally in the overall ICT infrastructure, Online Services Index and the Network Readiness Index, in time for UAE's celebration for 50 years since formation. It also aligns with the UAE government's 'smart city' initiative. Saleh Al Abdooli, CEO of Etisalat UAE said, "Customer choices will be key to the development of new telecom infrastructure in the UAE, embodied by the Taawun initiative, which is of strategic importance to the country's telecom industry as well as the real estate sector. Etisalat is keen on this initiative, which aligns with our commitment to support the government's smart vision and development of a smart environment across the country. It will ensure that the newly developed infrastructure will meet the current and future connectivity requirements of smart homes and systems in new property developments. Such initiatives are vital in positioning the UAE on the global map as a leader with a futuristic outlook in telecom and technology." Osman Sultan, CEO of du, remarked: "Taawun marks a major milestone in our progress towards a fully competitive telecommunications market in the UAE. I am extremely pleased that, through Taawun, all new real estate developments across the UAE will be served by competitive state-of-the-art passive infrastructure and residents of these new development projects will now be able to make a choice between operators. This strategic initiative will enable realization of the UAE's Smart Cities' vision and will further strengthen the UAE's positioning as a global leader in the telecommunications sector."

Pakistan Tops Asian Telecom & Investment Destinations: World Bank Report

Good time is coming for Pakistan as World Bank reported this week that Pakistan has topped the South Asian countries list with more telecom users, also becoming a favorable investment destination and successfully established several multilateral institutions. The report elaborates that Pakistan is leading the region in digital finance and branch-less banking, e-commerce etc. The

increased usage of mobile phone is no doubt an ultimate indicator of how well the telecom sector is booming in Pakistan. The Government has tried its best to make the internet access more easily available even in the far-flung areas of Pakistan like Gilgit-Baltistan. The present Pakistani telecom market has successfully attracted many foreign investors and hence became the No. 1 investment destination for them in the South Asian region. The current market is vigorously changing to one while using all varieties of mobile telephony, telecom and ICT related products and services. The report also highlights that Pakistan is on its way to manufacture or assemble its own products as soon as possible. This production setup will further strengthen Pakistan's position while making it from least connected to most country in the region. PCA chairman, Munawwar Iqbal while focusing on local manufacturing said: "Our proposals will encourage legal import of IT products; remove taxes relating to the Generalized Scheme of Preferences. It will provide the IT industry a level playing field, reduce consumer prices, and cut down large scale smuggling. If the government agrees to levy a fixed tax on each IT product, it will bring Rs5.5 billion a year in the form of new revenue."

Other milestones achieved and highlighted by the World Bank report include:

- IT-mobile telephone services and banking are on rise in the country.
- The broadband subscribers have reached to 26 million and the broadband penetration has also increased 3% to more than 15%.
- The arrival of 3G and 4G has positively impacted the economy of Pakistan.

Public Cloud services in the Middle East and North Africa region forecast to reach \$864.2 million

The public cloud services market in the Middle East and North Africa (MENA) region is projected to grow 18.1percent in 2016 to total \$864.2 million, up from an estimated \$731.6 million in 2015, according to Gartner, Inc. Business process as a service (BPaaS), the largest segment of the cloud services market by revenue in

MENA, is expected to grow 6.4 percent in 2016 to reach \$262.4 million. The largest growing market, cloud management and security services, is projected to grow 27.5 percent in 2016, followed by software as a service (SaaS) and platform as a service (PaaS) with growth of 26.4 percent and 23.4 percent. "The forecast for overall cloud services in the region shows sustained momentum with a projected growth rate of 20.6 percent in 2017. Global market dynamics, currency and exchange rates remain a determining factor in this growth trajectory," said Sid Nag, research director at Gartner. "BPaaS revenue remains the largest segment with enterprises continuing to move to cloud based models as opposed to the traditional business process outsourcing (BPO). Furthermore, growth of SaaS and PaaS is an indicator of organizations and vendors moving away from on premises license based application software and application development platforms to subscription-based SaaS and PaaS models." Gartner predicts that in 2019, total public cloud services spending in the MENA region will rise to \$1.42 billion, with the largest growth coming from cloud management and security at 21 percent, followed by SaaS and infrastructure as a service (IaaS) with growth rates of 20.2 percent and 19.3 percent, respectively.

Taxes Are Killing Telecom Industry: Experts

Telecom experts termed heavy taxation on the sector as the biggest impediment to growth and diversion of foreign direct investment to other regional countries. The government is illegally collecting Rs 40 billion annually as withholding tax from telecom consumers which have brought the sector on the verge of decline, resulting in diversion of foreign direct investment to other regional countries. This was the crux of the 60th meeting of Sustainable Development Policy Institute's Study Group on Information Technology held here. Tariq Sultan Member of

Pakistan Telecom Authority (PTA) proposed to the government that reducing GST may not impact the government revenues in the long run, and giving status of industry to this sector can further improve prospects. He maintained that withholding tax should not be charged from those who cannot afford it. Customs duty on the import of equipment should be brought back to the previous level, he added. There is a discrepancy between landline and mobile phone taxation. In case of landline, except from initial Rs 1,000, there are no further taxes but in case of mobiles, taxes are to be paid on recharge of every Rs 100. He further said that FBR should develop such mechanism to exclude people which according to FBR's own laws do not fall in tax bracket. Dr. Muhammad Saleem Director-General Commercial Affairs, Pakistan Telecom Authority, said the cellular sector in Pakistan falls among the most heavily taxed cellular sectors in the world, which is an impediment to its growth. Rationalization of taxes on telecom sector, he suggested, would lead to enhanced growth, better compliance and increased output in the long-run. Provincial governments impose sales tax on the internet and data services, which is detrimental to the growth of broadband services, he said, adding that in comparison with other sectors, the rates are even higher in the telecom sector; for example, GST and WHT rates on telecom services are up to 19.5% and 14% respectively compared to average GST of 16% and WHT of 10% in other sectors. To capitalize on the rapid growth in the

the past decade. He further said that majority of the subscribers are non-tax filers due to income BTL, hence, cannot get adjustment in their annual tax returns. He further said that GST / FED @19.5% in Punjab, KPK and Balochistan, 18% in Sindh and 18.5% in rest of Pakistan) much higher as compared to average 16% GST on other sectors of economy. Custom Duty on the import of telecom equipment has been increased from 0% – 5% in 2012-13 to the current level of 5%-15%, at a stage when operators are required to up-grade their infrastructure for the speedy roll out and adoption of mobile broadband services in Pakistan, he added. Vice-President of Telenor Aslam Hayat said that withholding tax is imposed on those consumers who either do not fall in the tax bracket or do not file tax returns and ultimately cannot get refunds. During the last 10 years, the telecom sector has given more than USD 8 billion revenue to the government in the form of direct and indirect taxes, he said, adding that the sector is treated differently when it comes to tax collection regime. Hayat said instead of going to the IMF and asking for a tranche of \$ 500 million, the government could have relied on the growth of this sector. He said an average user spends Rs 2,250 annually for his/her cellular services out of which Rs 992 go to the government in lieu of taxes, which has put a bar on the growth of broadband services. "According to the World Bank, in low and middle-income countries, such as Pakistan, every 10% increase in broadband penetration contributes 1.38 per cent to GDP growth." Hayat



telecom sector and the revenues being generated thereof, the government of Pakistan (GoP) gradually increased taxes on the sector. Various consumer and corporate taxes/duties have been levied on the telecom sector during

said the government has yet to fulfill its promises including provision of industrial status to the telecom sector, and reduction in withholding tax from 15 per cent to 10 per cent. He further said that government is

minting Rs 42 billion as advance tax from poor who use telecom services and cannot claim it back. The average user spent about Rs 200/month on telecos, Rs.2250/year & get services worth Rs.1598 out of which Rs. 992 goes to the government. He said that industry apprehended that it may not be able to provide affordable 3G/4G services to people due to heavy taxes. International ICT Consultant Pervaiz Iftikhar briefed the participants about the usefulness and the power of internet, which what he said is clearly visible in the rise from the scratch of today's mega corporations like Facebook, Amazon, and YouTube. He said ICTs touch all aspects of life, and higher taxes on ICTs adversely impact everyone. "The high tax rates are causing smuggling, which can be stopped by tax rate rationalization," he added. "14% of the tax we pay on vouchers is advance tax which the rich can claim but the poor cannot", said Iftikhar, adding that 0.1 million out of 128 million SIMs are owned by the tax filers. Deputy Executive Director of SDPI Dr Vaqar Ahmed said the growth in the telecom sector has stalled due to no significant Foreign Direct Investment in this sector during the recent past. "It is because of the multiplicity of taxes at federal and provincial levels." He highlighted the SDPI's research which says foreign investors are now more interested in other regional economies in South Asia due to rationalized tax burden, lower cost of doing business and investor-friendly regulatory regimes there. Maj-Gen. (Retd) Shazad Alam Malik, the former Chairman of PTA, termed the taxes on telecom sector unfair. He suggested that the government should give immediate relief for a long-term gain. Dr. Abid Suleri, the Executive Director of SDPI, assured the meeting that being member of Economic Advisory Council, he would take these recommendations to the government. He said bringing a balance between revenue and growth is the government consideration, which is under pressure after a massive reduction in the commodity prices.

Sri Lanka Telecom reports 19% increase in operating profit; 38% reduction in post-tax profit

Sri Lanka Telecom (SLT) has reported a 38% slump in post-tax profit for 2015 to 3.7 billion rupees (\$25.6 million) despite a 19% increase in operating profit. The absence of a refund from the regulator's Telecommunication Development Charge (TDC) - a levy for international operators designed to fund network development in unprofitable areas - contributed to the net profit decline. In 2014 SLT received a 1.3 billion rupee TDC refund. Operating profit by contrast improved to 6.7 billion rupees. Revenue also grew 5% to 67 billion rupees. SLT's holding company reached the milestone of 40 billion rupees in annual revenues, up 4% from the prior year. The company accelerated the implementation of its i-Sri-Lanka, program, which aims to ensure island-wide coverage of high-speed broadband, voice and IPTV services augmented with technologies including LTE and FTTH. SLT group CEO Dileepa Wijesundera commented that the operator had fared well during a "challenging" year, and that the company had managed to respond effectively to changing economic and market conditions. Mobile unit Mobitel reported a 6.4% increase in revenue for the year, driven largely by mobile broadband revenue. But post-tax profit declined to 2.7 billion rupees from 2.8 billion rupees, due largely to forex losses. "Overall 2016 remains an exciting year for the SLT Group with high expected growth contributed by demand [for] data, PEO TV, broadband with fiber, LTE and mobile services," the operator said in a statement.

Omantel revises down annual net profit on WorldCall losses

Omantel said its group net profit has been impacted by the impairment of investment in its Pakistan subsidiary - WorldCall Telecom Ltd (WTL). The impairment charge, after adjusting for tax and share of minority interest, amounts to RO55.1mn, Omantel said in its annual company report submitted to the Muscat Securities Market (MSM). The Omantel board

on Sunday approved the audited financial results for the year ended December 31, 2015. Group net profit for the year came in at RO48.5mn, down from RO50.2mn disclosed in the preliminary unaudited results announced last month. Omantel had reported a net profit of RO122.4mn for full year 2014. "The decrease in net profit, by RO1.7mn, is attributed to certain adjustments arising on audit increasing the loss of the subsidiary in Pakistan," Omantel said. Omantel's group revenue for 2015 rose by 6.9 per cent to RO514.3mn. The growth in revenue is mainly driven by broadband revenue, which witnessed an overall increase of around 24 per cent, the company said. Omantel said it has constantly engaged with WTL investment management activities and in monitoring and evaluation of performance on a continuing basis. "However, this has not resulted in the desired returns on account of significant competition and changes in the regulatory landscape," it said. Omantel said its evaluation has indicated that given the current financial situation of WTL, coupled with market challenges, it is not likely that turnaround can materialize without significant capital injection. "Having taken all possible measures, we reflected a loss for impairment in our year-end results in line with IFRS." "On the way forward, the Omantel management is working with WTL management on various strategic options," it noted. WTL's total revenue for the year ended 2015 stands at RO7.2mn, down 19.3 per cent from the corresponding period a year earlier. The company incurred a loss of RO22.5mn, against a loss of RO14.1mn in the previous year. Omantel's share in WTL loss increased to RO12.8mn from RO8mn in the previous year. Omantel said the exceptional items arising out of the impairment of investment in WTL and Omantel's Voluntary End of Service (VEoS) program significantly impacted profitability. The total cost of the VEoS program, which covers 266 employees of the parent company, is estimated at RO12.58mn. "Notwithstanding the above, Omantel's overall financial results show a steadily increasing revenue base from its domestic operations and the wholesale business," Omantel said. Excluding the impact from WTL and the VEoS program, Omantel's group net profit was RO115mn. The company said most of the impairment impact

related to WTL is an accounting loss and will not have any impact on the future liquidity position of the company.

Saudi Telecom Awards OSS Contract to Ericsson

Ericsson and STC, Saudi Arabia, have signed an extensive operations support system (OSS BSS) deal. The deal includes a range of Ericsson products, including Ericsson Charging System, Mobile Broadband Charging, Multi Mediation, Session Border Gateway, Service-Aware Policy Controller, Composition Engine, Catalog Manager, Order Care and Multiservice Delivery Platform. Services provided by Ericsson under the agreement include solution design, project management, technology consultancy, service enablement, business configuration, development and customization, solution integration and verification, and load testing and acceptance. Ali Eid, Head of Ericsson Saudi Arabia, says: "This is Ericsson's largest regional deal so far in OSS/BSS. We have had a continuous and successful partnership with STC in the OSS/BSS domain since 2005 and this deal marks another significant milestone that strengthens our partnership."

Middle East IT spending to reach \$212.9 billion in 2016

Middle East (ME) IT spending is projected to reach \$212.9 billion in 2016 a 3.7 percent increase from 2015, according to the latest forecast by Gartner, Inc. The IT industry is being driven by digital business, and an environment driven by a connected world. Peter Sondergaard, senior vice president and global head of research at Gartner, provided the latest outlook for the IT industry today to an audience of more than 600 CIOs and IT leaders at Gartner Symposium/ITxpo, which is taking place here through March 3, that interconnections, relationships, and algorithms are defining the

future of business. "We see positive IT growth and scenarios in the Middle East despite some level of economic uncertainty in world markets," said Mr. Sondergaard. "The substantial industrial refocusing to generate new economic development beyond the oil industry, with deepening smart cities initiatives and adoption of the Internet of Things (IoT), is of utmost importance in this region. We are witnessing priorities for smart city governments in education, transportation, safety and health." With devices representing close to 19 percent of total IT ME spending (see Table 1), tablets and PCs are showing good momentum in the forecast period. Tables and PC sales are forecast to reach nearly \$8 billion in 2016, and surpass \$10 billion in 2018. Mobile phone sales will grow from slightly above \$30 billion in 2016 to nearly \$37 billion in 2019. With IT services doubling software expenditures in 2016, business IT services will represent 84 percent of the total services segment; while in software, enterprise application software will present the largest growth rate in the forecast period. However, in actual spending dollars infrastructure software will lead. The data center segment market is forecast for relatively flat growth in 2016. This segment includes external network equipment, external controller-based storage, servers, and unified communications. In five years, 1 million new devices worldwide will come online every hour. These interconnections are creating billions of new relationships. These relationships are not driven solely by data, but algorithms. "Data is inherently dumb. It doesn't actually do anything unless you know how to use it; how to act with it," Mr. Sondergaard said. "Algorithms are where the real value lies. Algorithms define action. Dynamic algorithms are the core of new customer interactions." Mr. Sondergaard gave examples such as, Amazon's recommendation algorithm that keeps customers engaged and buying; Netflix's dynamic algorithm - built through crowd sourcing - keeps people watching; and the Waze algorithm that directs thousands of independent cars on the road. "The algorithmic economy will power the next great leap in machine-to-machine evolution in the Internet of Things," Mr. Sondergaard said. "Products and services will be defined by the sophistication of their algorithms and services. Organizations will be valued, not just on their big data, but

the algorithms that turn that data into actions, and ultimately impact customers."

Pakistan's Zong targets 60% 4G coverage, Ericsson wins 5-year Telenor deal in Asia & more

Pakistan's Zong targets 60% 4G coverage

Pakistan's third largest operator plans to invest \$300 million to \$400 million this year to take 4G to 60 per cent of the population and 3G to 100 per cent. The investment, however, is down sharply from the \$1 billion it invested last year as rising taxes have forced it to curb capex, the Express Tribune reported. The China Mobile-backed operator, which has 2,700 4G base stations nationwide, plans to double that number this year.

Ericsson wins 5-year Telenor deal in Asia

Telenor awarded Ericsson a five-year contract to build out dtac's 4G network in Thailand and upgrade Grameenphone's (Bangladesh) and Telenor Myanmar's existing 3G and 2G networks. The agreement covers hardware, software and services, and Ericsson will install its multi-standard radio base station, the RBS 6000, which supports 3G and 4G in a single cabinet. Indoor small cells will also be deployed.

China Mobile opens 5G innovation centre with 11 partners

China Mobile officially launched its 5G joint innovation centre jointly with its first 11 partners last week at the GTI Summit held during Mobile World Congress in Barcelona. The 5G Joint Innovation Centre will include several open laboratories, with the central laboratory to be built at the China Mobile Research Institute in Beijing. Its partners are Ericsson, Huawei, Nokia, Qualcomm, ZTE, Datang, Intel, Keysight Technologies, Haier, Hisense and Beijing Shougang Automation Information Technology. Its focus in the beginning will be on IoT and industrial internet, covering new business innovation and conducting research on environment monitoring, flexible manufacturing, smart meters and smart homes.



▼ REGULATORY NEWS

REGULATORY UPDATES

Madagascar, Comoros to cooperate on telecoms regulations

Madagascar's Agency for Regulation of Technology and Telecommunication (ARTEC, formerly OMERT) and Comorian telecoms watchdog the National Authority of Regulation for ICT (ANRTIC) have signed a memorandum to promote cooperation in the field of telecommunications regulations, reports L'Express de Madagascar. 'This cooperation is to share visions and trends in the field of telecommunications regulation on topical themes such as interconnection, unbundling, universal service, the management of scarce resources, the introduction of new technologies, compliance with a healthy and fair competition,' commented ARTEC CEO Longin Rakotoarivelo. A permanent working group is expected to be established to monitor the implementation of commitments made under the agreement.

Anti-trust authority grants conditional approval for Mobilink/Warid merger

The Competition Commission of Pakistan (CCP) has granted conditional approval

to the merger of Mobilink and Warid, ordering the pair to address a number of competition concerns. The CCP completed a comprehensive analysis of the merger to determine whether the deal would substantially lessen competition in Pakistan's mobile sector and, whilst some of its concerns were alleviated by countervailing factors, the watchdog identified some persisting concerns in areas of spectrum concentration, infrastructure sharing and non-compete obligations. As such, the CCP imposed a number of conditions on the deal. To address spectrum concentration issues, spectrum sharing will be obligatory upon determination of inefficiently or underutilised capacity by the Pakistan Telecommunication Authority (PTA). The enlarged company will also be required to provide wholesale access to potential MVNOs and, concerning infrastructure sharing, Mobilink/Warid have been directed to allow current guest operators on their cell sites the first option to purchase the site either directly, or through an auction if there are several tenants. Finally, the CPP has restricted the terms and scope of the company's non-compete obligations, and 'a firewall has been created between Mobilink and Abu Dhabi Group's other businesses in the telecom industry.' As previously reported by CommsUpdate, Mobilink's parent company Vimpelcom announced in November 2015 that it had agreed to

acquire 100% of Warid's shares, in exchange for which Abu Dhabi Group's shareholders will take approximately 15% of the shares in Mobilink.

Mergers to Hit Telecoms Sector

Mergers and acquisitions are expected to take place in the telecommunications industry in Ghana within the next few years. Chief Executive Officer (CEO) of MTN Ghana, Ebenezer Asante, who predicted this at MTN Stakeholders/Editors Forum in Accra, said the consolidation would take place because of the small size of the Ghanaian market. According to him, the telcos are operating in a very small market in Ghana, which is not sustainable, stating "We hope to see some consolidation in the telecom industry. We expect more partnerships in future." When asked whether MTN is ready to acquire any of the telcos in future, he said, "It depends on the stage, it depends on the synergy...it will be a decision that will be taken at the MTN Group level, and so I am sure when it gets to that stage the company would take a decision. "We will take our chance when it comes up." Ghana currently has six voice/data operators, namely MTN, Vodafone, Airtel, Tigo, Glo and Expresso while the licensed 4G LTE operators are- Surfline, Blu and Busy. Mr. Asante hinted that MTN would commercially operate its recently acquired 4G LTE in the middle of this year. He said the operation of the 4G LTE would provide customers with faster data speed, adding that MTN has already started test-runs for the successful commercial roll out of the 4G LTE. The CEO said about 69 sites for the 4G LTE are operational and located in Accra, Kumasi, Sekondi-Takoradi, Tarkwa and Obuasi. He said the company would deploy sites in the Central, Volta, Northern, Upper East and Upper West regions in the course of the year. Meanwhile, MTN Mobile Money, the leading Mobile Financial Services operator in Ghana, has received the ISO/IEC 27001:2013 certification. MTN Mobile Money is the first to receive this certification in Ghana's telecommunications industry. The certification was granted after a rigorous assessment was conducted by Lloyds Register Quality Assurance (LRQA). The ISO/IEC 27001:2013 is an information security standard published by the International Organization for Standardization (ISO) and the International Electro-

technical Commission (IEC). The certification specifies the requirements for establishing, implementing, maintaining and continually improving an information security management system within the context of Mobile Money operations in Ghana. It also includes requirements for the assessment and treatment of information security risks. The CEO said, "This gives credence to MTN's commitment to conform to international standards in the delivery of Mobile Money services. MTN Mobile Money is working to provide the highest standards of service to its customers."

OFCOM moves to make mobile switching process easier

UK regulator OFCOM has announced new proposals to make it easier and



quicker for mobile phone customers to change provider. It is moving to overhaul mobile switching after research found that around 2.5 million people who changed mobile provider in the last 18 months have experienced at least one major problem during the process (38%). This included difficulties contacting their current provider (11%), cancelling their service (10%), or keeping their phone number (10%), while one in five mobile switchers (20%) temporarily lost service. The research also shows that around 5.9 million mobile customers have never switched, nor considered switching to a new provider in the last year, because of concerns about the current process. OFCOM is now consulting on two alternative options to make the process quicker and easier. Its preferred option is a 'gaining provider-led' process, which places responsibility for the switch, including the transfer of a customer's mobile phone number, entirely in the hands of their new provider. OFCOM is also inviting views on an alternative option to simplify the current process. Under this proposal, customers would no

longer have to speak to their existing provider for their 'PAC' code. They could instead ask to receive their PAC by text message, or online. In addition to overhauling the mobile switching process, OFCOM has also proposed new measures to stop customers from temporarily losing service while moving from one provider to another. This would ensure a customer's old provider does not deactivate a customer's SIM card until their new provider has activated their new one. OFCOM also intends to introduce new measures to help customers manage notice periods and avoid 'double paying'. Under the 'gaining provider led' option, new providers would be required to inform the customer about their notice period and offer them the chance to defer their switch by up to 30 days. Under the 'automated PAC' option, providers would be required to start the clock ticking on any notice period from the date that the PAC is requested. The consultation is open until 01 June, with OFCOM then considering all evidence before publishing its final decision in the autumn.

All internet apps to fall under data pricing rule in India

Telcos and application makers will be able take advantage of the controversial exception to the new rules barring discriminatory pricing of data services, only if they don't offer the app on the internet, said a senior official of the Telecom Regulatory Authority of India (TRAI). The official told ET that the moment an app was available on the internet, it would come under the purview of TRAI's last month order, which banned discriminatory pricing of data services. The order had made an exception for data services offered over 'closed communication network', popularly called the intranet, but the official clarified that for this exemption to prevail, the app would have to be available only on the closed network and not on the internet. "We have only kept Intranet outside our purview, not internet," the official said. "The moment we describe this, we also describe the limitations of the intranet. So, it's quite clear." The exception given to closed networks has given rise to apprehension among supporters of net neutrality a concept under which everyone is guaranteed equal access to the Web that telcos

will use this provision to offer apps at concessional or discounted rates by setting up closed networks for its customers, thus placing other apps of a similar kind at a disadvantage. The official's explanation may ease concerns over introduction of popular apps that are currently available over the internet, on closed user networks at discounted rates. But it appears to pave the way for telcos to develop and introduce dedicated apps for its customers at discounted rates on the intranet. The regulator's position is that its order relates to discriminatory pricing of data services on the internet but does not extend to the intranet. "All content that is available on the internet falls under the new regulation, but any content that isn't on the web, won't be governed by the rule," said TRAI chairman R S Sharma last month. Supporters of net neutrality want a more emphatic statement from the regulator "I think the regulation of the telecom operator very clearly upholds prohibition of discriminatory data tariffs but if the regulator were to come out and clearly say this about the intranet apps, it will bring a lot more clarity," said Prasanth Sugathan of SFLC, a not-for-profit organization for legal services working to protect civil liberties in the digital world. Internet activists fear that the exemption granted to the closed group, could prompt telecom operators into offering certain content to their subscribers (a closed user group in this case) at subsidized rates and charge a higher tariff for similar apps. Such a practice, the activists argued could in effect violate the ban order issued by the regulator as it could lead to creation of differential price layers in the market for the same content.

Kenya to review OTT, MVNO regulation guidelines

Kenya's Ministry of Information, Communications & Technology is reviewing ICT sector guidelines in regards to regulation of over-the-top (OTT) services – such as WhatsApp, Skype and Viber – amidst complaints from telecoms operators over unfair competition, domestic newspaper Daily Nation writes. Under the plan, the ministry is planning to establish three working groups to oversee infrastructure issues, new emerging issues and applications and content. In

addition, the new National ICT Sector Policy Guidelines will include policies regulating the operation of MVNOs in the country. ICT Cabinet Secretary Joe Mucheru was cited as saying: 'We want the final draft complete by June, the policy should be up and running by early next year ... We are taking into account rapid industry changes while reviewing the National ICT Sector Policy Guidelines of 2006 as per the ministry's 2014/2015 performance contract.'

DoT may not auction all 700 MHz spectrum in one go

The Department of Telecom (DoT) is unlikely to auction the entire spectrum in 700 MHz as it feels telecom operators may not bid aggressively for the band due to high reserve price. Also, a DoT committee has found some anomalies regarding the base price suggested by regulator TRAI, which requires further clarification. According to a DoT official, the committee has already prepared its report, which will be discussed by the Telecom Commission in its meeting scheduled for March 28. The official



said DoT committee is of the view that all the available spectrum in 700 MHz should not be put up for auction as it might not get sold. The DoT is soon going to write back to the Telecom Regulatory Authority of India (TRAI) for clarifications on a host of issues regarding the upcoming spectrum auction, the official added. TRAI in its spectrum pricing recommendations for the next auction had suggested a record base price of Rs 11,000 crore per MHz on all-India basis. Spectrum in 700 MHz is considered more economical for providing telephony services compared to other bands like 900 MHz or 1800 MHz. Analysts feel given the evolving ecosystem around the new bands and steep pricing, they expect limited participation from the telecom companies in the

upcoming spectrum auctions. Ratings firm ICRA expects spectrum worth Rs 60,000-80,000 crore to be sold in this auction, which would add to the already sizeable debt levels of the industry. TRAI has suggested a plan for spectrum sale, expected to be held in July, which has a potential to fetch Rs 5.36 lakh crore. It will be the biggest-ever auction in terms of value and is more than double the gross revenue of the telecom services industry. Telecom service providers had gross revenue of Rs 2.54 lakh crore in 2014-15. According to Trai paper, the cost of delivering mobile services in 700 MHz band is approximately 70 per cent lower than 2100 MHz frequency, which is widely used for 3G services.

Charter-TWC merger close to FCC approval, report says

Federal Communications Commission (FCC) chairman Tom Wheeler is expected to circulate a draft order approving Charter Communications' US\$55 billion deal to buy Time Warner Cable (TWC) within a matter of days, the Wall Street Journal reports. The approval, which is likely

to be accompanied by a list of conditions relating to both pay-TV contracts and broadband buildout commitments, will be sent to the four other FCC commissioners for review and modification. The deal is likely to include a requirement for Charter to build or upgrade service to more homes, boosting availability of high speed broadband, the WSJ notes citing people familiar with the matter. Mr. Wheeler has previously indicated that it would help competition if cable companies ventured outside their exclusive regions and opted to 'overbuild' into each other's service areas to better compete. While the specifics of the buildout requirement are still being negotiated, there remain doubts over whether or not the FCC will impose cable-on-cable competition. At this juncture, industry insiders have observed that the reason why Charter is set to succeed where TWC's previous suitor Comcast failed is down to the cableco's willingness to agree to a broader range of concessions.

India spectrum auction to see limited participation from telecom operators

Indian telecom network operators are likely to curb their participation during the forthcoming spectrum auctions due to their huge debt. The spectrum auction, which will be conducted in June / July 2016, will lead to the rise of their debt to Rs 460,000 crore, said credit rating agency ICRA. Top telecoms, which are expected to participate in the spectrum auction, are Bharti Airtel, Idea Cellular, Vodafone and Reliance Jio Infocomm. "Given the estimated level of participation in the auctions, the industry debt would rise to around Rs 460,000 crore, further stressing the capital structure of the industry and deteriorating the debt protection metrics," said Sabyasachi Majumdar, ICRA's senior vice president, Corporate Sector Ratings. The expected sale of spectrum will be worth Rs 60,000 to Rs 80,000 crore. The telecom industry's consolidated debt level rose from Rs 290,000 crore in March 2014 to around Rs 380,000 crore by December 2015. This rise in debt is expected to worsen the gross debt/OPBDITA levels of the industry to around 6.5 times as against the current levels of 5.4 times. The telecom industry is expected to face cashflow pressures and thereby require additional funding to sustain mobile network roll out momentum. Some telecom companies have taken inorganic de-leveraging steps by selling stake in certain assets, which, if successful, can bring Rs 30,000 crore to the industry. Gross Average Revenue Per User (ARPU) fell from Rs 183 in Q3 2015 to Rs 173 in Q4 2015. Data ARPU grew from Rs 145 to Rs 162 during the period under review, while voice ARPU dipped from Rs 140 to Rs 127. Data ARPU of telecoms is driven by increase in usage, while the realizations remain under pressure. Growth in mobile subscriber base and usage is expected to slow down, even though the realizations are not expected to grow materially. The entry of Reliance Jio Infocomm, the 4G venture of Mukesh Ambani, is expected to drive the competition madder and aggravate the already declining voice and data revenue realizations for telecom companies. Both Vodafone and Bharti Airtel announced their 4G marketing campaign this week. Idea Cellular will follow suit soon. The merger/

spectrum trading deals, which can lead to consolidation in the sector, is a ray of hope. Smaller telecom companies looking to sell their unutilized spectrum holdings to larger players interested in improving spectrum holding outside auctions can bring in network efficiencies. Bharti Airtel and Videocon Telecom announced their spectrum deal this week. Fitch Ratings say Aircel, Tata Docomo, among others will face continued pressure in the Indian telecom market place.

Nigeria suspends proposals to regulate OTT services

The Nigerian Communication Commission (NCC) has suspended plans to regulate over-the-top (OTT) services. According to the National Mirror, investigations have shown that the NCC was no longer willing to regulate the services as they are lower in cost than the traditional method of delivery. OTT applications can be seen as disrupting traditional billing models and there is a conflict between companies that offer similar or overlapping services, the daily said.

TRAI asked to submit recommendations on net neutrality; government gears up to finalize policy

The government has asked the telecom regulator to submit recommendations on net neutrality, as it gears up to finalize the policy on this controversial issue. "We have received a letter from DoT (telecom department) on making recommendations on net neutrality as whole, and we will shortly float a consultation paper on it," TRAI Chairman RS Sharma told ET. The development comes over a month after Telecom Regulatory Authority of India barred discriminatory pricing of data services, including zero-rated plans such as Facebook's Free Basics and Airtel Zero, which Sharma said had tackled net neutrality from a tariff perspective. The regulator now plans to define net neutrality and focus on the key concerns at the core of the net neutrality debate the ability of service providers to slow down or speed up access to websites as well as the issue of blocking and prioritizing of data, say sources. Throttling and allowing for fast lanes have already been banned

by the US Federal Communications Commission, although the US, unlike India, hasn't barred zero rated products outright. The regulator's order banning differential tariff for data services fell within its jurisdiction but the issue of net neutrality as a whole falls under the purview of the telecom department. The regulator's recommendation along with the report of the telecom department committee on net neutrality will form the basis of the government's final policy. At present, the government has no policy on the subject, but it is under increasing pressure from backers of a free Internet and political parties to come out with a broad framework which unequivocally backs an open Internet. The government has repeatedly said it will adhere to the principle of net neutrality and Telecom Minister Ravi Shankar Prasad had told Parliament that the government is committed to free, fair and a democratic Internet. TRAI's consultation paper when floated would override its previous paper on regulating over-the-top (OTT) players that was issued under the chairmanship of Sharma's predecessor Rahul Khullar, and which came in for sharp criticism by the advocates of net neutrality. The Prime Minister's Office has been keeping a close watch on the whole issue of an open Internet and has set up a three member ministerial panel under Prasad's chairmanship. In its report on the subject, the internal committee of DoT last year had recommended disallowing the controversial zero-rating plans of telcos and proposed a ban on throttling and any sort of prioritization of Internet traffic. It had also suggested a new law incorporating principles of net neutrality to replace the Indian Telegraph Act. It had, however, called for "regulatory oversight" on certain over-the-top applications, such as WhatsApp's calling service and Skype, which allow local voice calls. Hitting at the heart of the net neutrality debate, the report had further said a balance was required between ensuring Internet openness and reasonable use of traffic management by telcos and Internet service providers (ISPs) for legitimate needs. It recommended allowing legitimate traffic management, but said 'exploitative or anti-competitive traffic management', 'application-specific control within the Internet traffic' and traffic prioritization on paid basis must not be allowed.

Google to urge Congress to help get self-driving cars on roads

The head of Alphabet Inc's Google self-driving car program will urge the U.S. Congress on Tuesday to grant national auto safety regulators new



authority to speed the introduction of self-driving cars on American roads. Chris Urmson, director of Google's self-driving cars program, will tell the Senate Commerce Committee that legislators should grant new authority to the U.S. Transportation Department to help get fully autonomous vehicles on the road, according to his prepared testimony, which was reviewed by Reuters. "We propose that Congress move swiftly to provide the secretary of transportation with new authority to approve lifesaving safety innovations. This new authority would permit the deployment of innovative safety technologies that meet or exceed the level of safety required by existing federal standards, while ensuring a prompt and transparent process," according to the prepared testimony. Major automakers and technology companies are racing to develop and sell vehicles that can drive themselves, but have complained that state and federal safety rules are impeding testing and ultimate deployment of such vehicles. California in December proposed draft rules that would bar autonomous vehicles without human controls and a licensed driver. Google was disappointed by California's action. "If every state is left to go its own way without a unified approach, operating self-driving cars across state boundaries would be an unworkable situation and one that will significantly hinder... the eventual deployment of autonomous vehicles," Urmson's testimony says. Urmson's testimony says many federal safety rules would not be needed with fully autonomous vehicles, like a rear-view mirror requirement. In January, the

U.S. National Highway Traffic Safety Administration (NHTSA) said it may waive some vehicle safety rules to allow more driverless cars to operate on U.S. roads as part of a broader effort to speed up development of self-driving vehicles. NHTSA said Friday in a report there are significant legal hurdles to allowing fully autonomous vehicles without steering wheels. NHTSA will write guidelines for self-driving cars within six months, Transportation Secretary Anthony Foxx said in January. The agency last month said the artificial intelligence system piloting a self-driving Google car could be considered the driver under federal law. Google wants to offer fully autonomous vehicles for use on U.S. roads "soon."

Thai mobile giant to shut down 2G service; 900 MHz license expired

Some 400,000 subscribers of Thailand's largest mobile carrier, Advanced Info Service, face a service shutdown at midnight on Tuesday, after the telecom major hands over the 900 MHz license to smaller rival True Corp., which won a hard-fought auction for the bandwidth in December. AIS CEO Somchai made a last minute appeal at a media conference in Bangkok. AIS's concession on the 900 MHz band had initially expired last September. But Thailand's telecom regulator had offered a grace period, allowing AIS to continue operations while it tried to keep its 2G customers connected. Initially, the company was planning to win back the spectrums in the December auction but as bidding prices shot up to historical highs of over 75 billion baht (\$2.1 billion), it decided to drop out. No. 3 carrier True and industry newcomer Jasmine International were the winners. True CEO Supachai Chearavanont offered on Friday to let AIS use part of its bandwidth for three months, free of charge. But AIS rejected this, saying there could be legal issues. Instead, it insisted on using the spectrums won by Jasmine, as doubts are looming over the newcomer's ability to pay the hefty auction prices by the March 21 deadline. It offered to pay monthly fees based on the auction prices Jasmine had to pay. Supachai reportedly said that it was unfair to use Jasmine's slot without investing the entire price. "If AIS is allowed to use [Jasmine's] bandwidth portion, it

will be an unprecedented move in the world and people will think bidding in Thailand is just a joke," the English-language Bangkok Post quoted him as saying. Since it failed to obtain a license in the auction, AIS has been encouraging its 2G subscribers to upgrade to 3G or 4G services by handing out 3G and 4G handsets practically for free. The number of subscribers with 2G SIM cards have decreased to 8 million from 12 million last year, according to the company. Last week, it signed a "network-roaming agreement" with No. 2 carrier Total Access Communication (Dtac), allowing AIS to continue its 2G service by roaming with Dtac's 1800 MHz band. AIS will pay roaming fees to Dtac. But while 7.6 million of the 8 million 2G subscribers at AIS will be able to automatically keep their connections by roaming on Dtac's network, the remaining 400,000 will be unable to do so due to their original contracts. AIS controls roughly 50% of market share with over 38 million subscribers. The 400,000 subscribers account for a mere 1% of the total, and analysts see that the actual impact on its service will be extremely small. The National Broadcasting and Telecommunications Commission said Monday afternoon that AIS had not made sufficient efforts to update the contracts of the 400,000 subscribers and that its grace period will not be extended. Takorn Tantisith, the NBTC secretary general, said that the watchdog had notified AIS on March 10 to inform subscribers about the service shutdown. "If AIS had asked its subscribers to upgrade contracts or change to other carriers, the consumers would not have been affected," Thakorn said. Just before the NBTC decision was announced, CEO Somchai Lertsutiwong held a media conference at his Bangkok headquarters to make a last-minute appeal. "We are confident that another three months will be enough to upgrade the customers to 3G or 4G networks," he said. He did not say that he should have won the auction. "If we had gone with that price, we wouldn't have been able to keep up our network quality or other investments," he said. A total budget of 8 billion baht has been earmarked for servicing its 2G subscribers this year. A telecom analyst estimated that 5 billion to 6 billion baht of this will be allocated to handset subsidies, while the rest will be for 2G roaming fees for Dtac.

ICANN adopts transition plan away from US management

The Internet Corporation for Assigned Names and Numbers (ICANN) has completed its proposal for the transition to a new governance system at its latest meeting in Marrakesh. The plan was handed over to the US government for approval, ahead of the expected end to US stewardship of the internet naming system in September. Under the new proposal,



a new model has been developed for managing the technical functions of the IANA (Internet Assigned Numbers Authority), which is currently handled by the US's National Telecommunication and Information Administration (NTIA). In addition to privatizing the DNS system, it also proposes ways to enhance ICANN's accountability as a fully independent organization answering to a wide range of stakeholders around the world. The proposal for a new model was first agreed in March 2014, and the final plan results from a year of consultations with the global internet community.

Verizon Wireless Hit by \$1.4 Million Super Cookie Fine

USA based Verizon Wireless has been fined USD1.4 million by the telecoms regulator for using so called "super cookies" without customer's consent. These unique, undeletable identifiers - referred to as UIDH - are inserted into web traffic and used to identify customers in order to deliver targeted ads from Verizon and other third parties. As a result of the investigation and settlement, Verizon Wireless is notifying consumers about its targeted advertising programs,

will obtain customers' opt-in consent before sharing UIDH with third parties, and will obtain customers' opt-in or opt-out consent before sharing UIDH internally within the Verizon corporate family. "Consumers care about privacy and should have a say in how their personal information is used, especially when it comes to who knows what they're doing online," said FCC Enforcement Bureau Chief Travis LeBlanc. "Privacy and innovation are not incompatible." The regulator's investigation found that Verizon Wireless began inserting super cookies into consumer Internet traffic as early as December 2012, but failed to disclose this practice until October 2014. After acknowledging its use of UIDH, Verizon Wireless asserted that third-party advertising companies were unlikely to use these so-called "supercookies" to build consumer profiles or for any other purpose. In January 2015, however, news reports claimed that a Verizon Wireless advertising partner used super cookies for unauthorized purposes - restoring cookie IDs that users had cleared from their browsers by associating them with Verizon Wireless's UIDH, in effect overriding customers' privacy choices. The following month, Verizon Wireless acknowledged the concerns raised by these news reports and committed to work with its partners to address the issue. It was not until late March 2015, over two years after Verizon Wireless first began inserting UIDH, that the company updated its privacy policy to disclose its use of UIDH and began to offer consumers the opportunity to opt-out of the insertion of unique identifier headers into their Internet traffic. Under the terms of the settlement, the company must also pay a fine of \$1,350,000 and adopt a three-year compliance plan.

Supreme Court halts regulator until it hears call drop issue

India's Supreme Court has ordered the government not to take any coercive action against the country's cellcos on the issue of compensation for dropped calls until 10 March, when the court will address the matter, the Economic Times writes. The nation's cellcos appealed to the top court over new regulations introduced by the Telecom Regulatory Authority of India (TRAI) in October 2015 - although they only came into effect in

January 2016 - ordering providers to automatically compensate users INR1 (USD0.015) for each dropped call, up to a maximum of INR3 per user, per day. Operators claim the regulations could cost them upwards of INR30 billion per month and have argued that the TRAI lacks the authority to impose such measures. The TRAI's order was upheld by the Delhi High Court in late February, however, requiring cellcos to begin providing the compensation.

EC completes consultation on telecom regulation review

The European Commission has published a summary of the responses to its public consultation on the review of the telecom regulatory framework. After analyzing the responses, the EC is expected to propose legislation later this year. The consultation completed in December attracted 244 responses, of which almost 28 percent electronic communication network or service providers subject to the telecoms regulations. This is the first review of the framework since the last major reforms in 2009, and the EC noted that the market has undergone significant structural changes since then. Some of the notable issues are a slow transition from copper to fiber, more complex competition with the convergence of fixed and mobile networks, the rise of retail bundles, the emergence of new online players (so called OTTs), and changing end-user expectations and requirements, including an explosion in demand for wireless data. The review centers on the issues of spectrum management, network access regulation, universal services and telecoms governance.

The EC also published the first results of a consultation held at the same time on expected broadband needs. Well over 1,500 responses were received, and many said that their needs in terms of internet speed and quality are not fulfilled. They also expect the use of internet services and applications to increase dramatically by 2025 and called for policy measures to support the development of infrastructure in line with future needs. The consultation sought views on topics including how EU rules could incentivize network roll-out, on spectrum management, on the role of universal service rules and institutional set-up and governance.

Cellcos fined for breaking user verification rules, ordered to begin call drop compensation

The Indian government has imposed fines totaling INR3.24 billion (USD47.82 million) on the nation's cellcos for violations of customer verification rules in the nine months to end-December 2015. The Economic Times cites Telecom Minister Ravi Shankar Prasad as saying that only INR621.5 million of the total had actually been collected, however. State-owned Bharat Sanchar Nigam Ltd (BSNL) was the worst offender, receiving a fine of INR737.6 million, followed by Vodafone (INR502.5 million), Tata Teleservices (INR437.3 million), Idea Cellular (INR417.6 million), Reliance Communications (INR402.0 million) and Airtel (INR387.0 million). In a related development, the Telecom Regulatory Authority of India (TRAI) has given operators until 7 March to submit compliance reports on the compensation of customers for dropped calls. As previously reported by CommsUpdate, in October 2015 the TRAI introduced new rules requiring operators to automatically compensate users for dropped calls from 1 January 2016. The regulations were challenged by the nation's cellcos, but upheld by a Delhi High Court ruling in late February. Although the operators plan to take the matter to the Supreme Court, they must begin paying the compensation in the meantime.

Hutchison to meet EU regulators on March 7 over UK deal

CK Hutchison Holdings Ltd will try to convince European Union regulators at a meeting next week to ease objections to its £10.3bil (RM59.83bil) takeover of Telefonica's O2, a person familiar with the matter said. The closed-door March 7 hearing, organized by the European Commission, will also be attended by British pay TV company Sky Liberty Global-owned cable TV network Virgin Media, TalkTalk, Vodafone and BT, the person said. The hearing had been shifted to March 7 from a tentative date of March 4. Hutchison's potential takeover of O2 would create Britain's biggest mobile operator and cut the

number of networks to three. But the EU antitrust regulator is expected to demand tough concessions. A typical demand is to create or boost a smaller competitor. TalkTalk, which has a wholesale deal with O2, has already said it would be keen to help Hutchison create a new fourth mobile operator in Britain. French telecoms billionaire Xavier Niel's Iliad, which is also eyeing an opening in the British market may also take part in the March 7 proceedings, the person said.

India's operators threaten to take dropped call case to Supreme Court

India's three largest mobile operators are preparing to take the dropped call compensation case to the Supreme Court, after a Delhi High court upheld the ruling, the Economic Times said. The Cellular Operators Association of India (COAI) is reviewing the legal grounds for challenging the ruling in

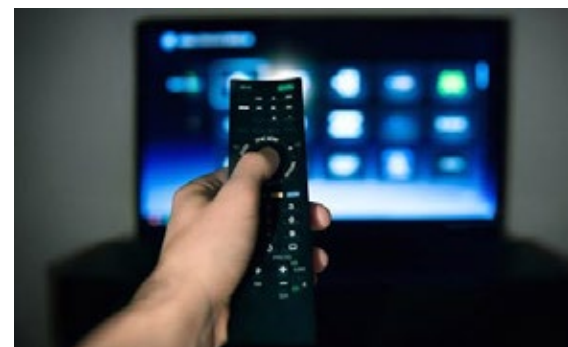


the Supreme Court and will make a decision in the next few days. After India's dropped call problem worsened over the past year, the country's telecoms regulator in October ordered mobile operators to pay customers INR1 (\$0.015) for each dropped call. The regulation, which started on 1 January, limits compensation to a maximum of three calls per customer per day. India's mobile operators have complained to the Department of Telecom that the new penalty would cost the industry INR540 billion (\$8.3 billion) a year and called on the minister to intervene. Despite India's telecoms regulator sending operators a letter reminding them to compensate customers for dropped calls, the Association of Unified Service Providers of India (AUSPI) said in early January members wouldn't follow the new regulation until required to

by the courts. The Cellular Operators Association of India (COAI) said it supported AUSPI's stance and agreed that operators wouldn't compensate customers until the court decides on the matter.

Asian regulations hamper growth of local pay-TV services

Television supply is moving online and policies regulating Asian pay-TV and over-the-top (OTT) services currently disadvantage local operators, a CASBAA study has found. The situation is "unsustainable", according to the authors of the new publication, released to coincide with the multichannel association's third annual OTT summit in Singapore. "Regulators have an incredibly difficult task ahead of them. Root-and-branch reform is needed ... the pay-television industry environment today is radically different from what it was only five years ago, and the hard work of adapting policy instruments and practices has only gotten underway in a small number of markets," said John Medeiros, chief policy officer, CASBAA. Licensed pay-TV companies in Asia face sharp competition from legal and illegal offshore media ventures, even while their hands are tied behind their backs, as a result of heavy burdens from taxes and government mandates on content, advertising, competition and social policy, says CASBAA. Pirate syndicates, operating outside all legal constraints, also deliver a lot of OTT content to many Asian markets. CASBAA is urging governments to review their pay-TV rules "and determine whether existing burdens are still required given the evolution ... of the television market in recent years". The industry association went on to say that governments should seek to "stem the growth and proliferation of illegitimate OTT services". The new



publication details each government's regulatory policy on OTT video, on content censorship, advertising limits, copyright protection, and consumer protection.

Vodacom drops Neotel deal, citing regulatory complexities

South African operator Vodacom's attempt to salvage its proposed

well as opportunities to accelerate our fixed line business."

Indian Government expects billions from telecom spectrum bid in 2016 - 2017

The government has budgeted Rs 55,000 crore for telecom spectrum auction in 2016-17, while the total revenue from communication services has been pegged at Rs 98,995 crore. About Rs 22,000 crore would come from license and spectrum fees levied by the department of telecommunications (DoT) and around Rs 21,000 crore from one-time spectrum fees and arrears from the earlier auction in March 2015, said a senior government official. The government had earlier estimated revenue of Rs 42,866 crore in 2015-16, while the revised estimates are Rs 57,384 crore. Though, the ministry

of 700 MHz DoT is considering the proposals, a decision which would be taken by the Telecom Commission, the policy making body of the department. Subsequently, it will be given final approval by the Cabinet. DoT plans to commence the spectrum auction by June-July. The government has clarified that a service tax on spectrum trading deals will be levied, which can be credited back, providing some needed clarity. Finance Minister Arun Jaitley had said while presenting the Union Budget that assignment of the right to use radio frequency spectrum will not be taken as a sale of intangible goods and, therefore, will be liable to service tax.



acquisition of fixed-line provider Neotel has failed. Vodacom said the deal to buy the majority of Neotel's assets had lapsed "due to regulatory complexities and certain conditions not being fulfilled". The two companies "have agreed that the proposed restructured transaction, announced on 8 December 2015, can no longer be progressed," it added. Following opposition from rivals and concerns expressed by the country's antitrust regulator, Vodacom said in December it would no longer acquire Neotel's valuable licenses and spectrum, although it would continue to acquire its other assets, customer base and staff. Under the restructured deal, Neotel would offer a roaming agreement to all the country's mobile operators, including Vodacom as well as rivals, using its radio frequencies. Vodacom's hope that all parties could accept its restructured offer did not work out. "It is disappointing that we have reached this conclusion despite all our efforts to find a way to deal with the complexities of the restructured transaction," said Shameel Joosub (pictured), CEO of Vodacom. "Our ambition to increase the rollout of fiber-based broadband services to customers remains. We will continue to look for spectrum opportunities, as

of communications could not conduct a spectrum auction in 2015-16, it was able to meet the revenue targets. Brokerage firm Credit Suisse has estimated that the government may get Rs 50,000 crore in next spectrum auction planned to be held in 2016-17. "The arrears of the previous years and receipts from fresh auction are also included in the Budget Estimates 2016-17," the Budget document said. In 2014-15, the government had earned revenue of Rs 1.1 lakh crore from spectrum auction. According to experts, the government could rake in Rs 5.5-6 lakh crore this year from the sale of spectrum. The Telecom Regulatory of India gave its recommendation in January this year on auction for spectrum in various bands --including the premium 700 MHz for the first time, at a reserve price of Rs 11,485 crore per MHz. This is the highest reserve price fixed for a band since the process for spectrum auction started nearly five years earlier. The 700 MHz band is considered a good one for mobile broadband and fourth-generation (4G) technology services. It is much sought for long-term evolution deployment around the world, due to its efficiency and higher penetration inside buildings. Existing operators had opposed the



▼ A SNAPSHOT OF REGULATORY ACTIVITIES IN SAMENA REGION

REGULATORY UPDATES

Afghanistan



President: Dr. Mohammad

Najib Azizi

[Afghanistan]

Telecommunication Regulatory Authority (ATRA)]

Karim Khoja, the CEO of Roshan has described consolidation in the Afghan mobile market as 'inevitable' in an interview with Mobile World Live, noting that the country's economy is struggling to support six cellcos. The official pointed out that a lot of money is currently leaving the country with refugees heading for Europe, whilst at the same time less financial aid is flowing into the country. As such, the CEO said that consolidation makes 'economic sense,' adding that: 'You can't just keep putting money into the ground unless you're getting an economic return.' Mr. Khoja went on to say that Roshan had been investing in the market for ten years, but 'at a certain point in time, you can't just be working to pay taxes, or [to] just keep investing.' Mr. Khoja stated in late 2015 that Roshan would not be leaving Afghanistan, and would likely be a consolidator. Commenting on the challenges facing the market, Mr. Khoja highlighted that issues surrounding security and energy continue to plague the sector, with more than 1,000

of the cellco's sites currently generating their own electricity. Illustrating the difficulties, the CEO explained that the recent destruction of an electricity pylon by the Taliban had left less than 30% of Kabul with electricity: 'Which means our ARPUs have gone down, because most people [who] have Smartphones, cannot charge their Smartphones.' Meanwhile, whilst the official stressed that there was strong demand in Afghanistan for new applications and services, the lack of a 'robust' fiber-optic network is holding back such development. On the subject of LTE, Mr. Khoja hinted that it might leapfrog 4G technology and go straight to 'the next level ... [which] is 5G, 6G'. The official added that Afghanistan 'desperately needs' foreign investment, especially with regard to improving the country's fiber infrastructure, but the government needs to create an 'enabling environment' to promote foreign direct investment (FDI), with the use of tax breaks or other incentives. (March 2, 2016) [telegeography.com](#)

Afghan Wireless Communications Company (AWCC) has selected Cataleya to provide its Orchid One session and application management solution across its network. The upgrade, which will initially be deployed in the capital

before being extended to other cities, will be used to support the cellco's migration to an all-IP infrastructure and AWCC also plans to use the solution to improve quality of service (QoS), interworking and transcoding. Commenting on the development, AWCC CTO Mike Hoban noted: 'No matter what market you operate in, voice quality is critical. We selected Orchid One because it is able to support our vision for high quality mobile services in Afghanistan. We are the leader in mobile in this country and Orchid One will enable us to deliver even more benefits to mobile subscribers, businesses and communities across Afghanistan.' In a press release, Cataleya explained that its Orchid One solution was designed to 'enable the delivery of IP communications services and high performance applications,' adding that it 'offers service providers full end-to-end QoS and quality of experience (QoE) with visibility from the transport to application layers.' (March 1, 2016) [telegeography.com](#)

Bahrain



Chairman: Dr. Mohammed Al Amer
[Telecommunication Regulatory Authority (TRA)]

Telecommunications Regulatory Authority (TRA) of Bahrain has finalized the highly anticipated "National Internet Safety Review" study. TRA commissioned UK based independent researchers, Professor Julia Davidson and Professor Elena Martellozzo, to conduct this study with the purpose of identifying key issues surrounding children's and adult's perceptions of risk and their online behavior. This study also compares the results with the first Study conducted during 2010. "This study sheds light on some crucial insights into various areas of online behavior in the Kingdom.", says Dr. Khalid bin Duajj Al Khalifa TRA's Director of Cyber Security "Compared to our findings in 2010, it's a relief to see that the levels of awareness to online risks have increased. It is, however, concerning to see that Cyberbullying has accumulated a high percentage. This is something that will require greater collaboration between both government and private sectors to address as we all have a stake in this matter." Compared to the 2010 study, 2015's results point to various new developments in online behavior. Overall time online spent by young people has increased, with 47% reporting to spend up to three hours a day compared to one third of the sample in the previous report. Young people are moving away from fixed internet and online activity with a nearly fifty percent reduction in desktop use since 2010. They are also accessing the internet using more fluid, dynamic and mobile technologies in 2015, with nearly four times more reporting using a Smartphone when compared to six years ago. There is an increased use of the internet for activities such as performing homework and research, as well as instant messaging, but there was decreased use of email. There are reductions in the young people's survey data across the majority of risk areas, including sharing personal information with strangers online (16.6% in 2010 vs. 9.9% in 2015). There was a large reduction in the number of young people reporting that they had met an online contact in person in 2010 (43%) and 2015 (16.4%), which comes as a welcome adjustment. Changes in cyber-bullying were difficult to interpret during 2010, however the 2015 study revealed

that a high percentage of respondents (37.9%) have been cyber-bullied. TRA's Manager of Cyber Safety, Ms. Mariam Almannai, stated, "The facts on Cyberbullying which we've uncovered are still alarming. In order for us to make a substantial change, we keenly believe that this change will come from a joint effort across ministries and organizations. TRA is adamant on being on the vanguard of this change, and I have no doubt that the leaders in both government and private institutions as well as the public at large will share our belief in the immediacy and cooperation required." The study consisted of focus group interviews with children aged 7-11, a national survey of children aged 12-18 and a national survey of adults- 1637 young people aged 12 - 18 from schools in the Kingdom participated in the child survey and 98 children aged 7-11 participated in the focus groups. The sample was nationally representative of Bahrain, including a 50/50 gender split. Furthermore, the split was also equal amongst different age groups (the following schools participated voluntarily Al-Wisam School; British School of Bahrain; The Indian School; Modern Knowledge School; Bahrain Bayan School). The official National Internet Safety Review study is due to be published for public viewing in a month's time.

(March 21, 2016) [tra.org.bh](#)

Bangladesh



Chairman: Mr. Sahjahan Mahmud
[Bangladesh Telecommunication Regulatory Commission (BTRC)]

State Minister for Posts and Telecommunications met her Thai counterpart. She also sought support for upgrading telecom networks, sharing best practices in women's access to mobile technology, and reforms in cyber security regulation through technical cooperation. Both ministers agreed to form a joint working group for telecommunication sector cooperation, the Bangladesh embassy in Bangkok said. State Minister also met the secretary general of Asia Pacific Telecommunity in Bangkok and discussed cooperation on cyber security and special project on empowering women through ICT. They also discussed the upcoming 17th South Asian Telecommunications Regulations Council Meeting (SATRC-17) to be hosted in Dhaka this October.

(March 8, 2016) [bdnews24.com](#)

Jordan



**Chairman of the Board of Commissioners/
CEO: Eng. Ghazi Al-Jobor**
[Telecommunication Regulatory Commission (TRC)]

Fourth Generation (4G) services are expected to "boom" in the next few years in the Kingdom due to competitive prices, according to an Orange Jordan executive. The company's deputy CEO and chief marketing and sales officer, Patrice Loze, said 4G penetration in Jordan could reach 70 percent by 2020. Currently, 4G penetration in Jordan is estimated at 11-14 percent. "This will be mainly due to increased demand on data in the country," Loze told on the sidelines of a press conference in Cairo this week to announce the rebranding of Egypt's Mobinil into Orange Egypt. "3G penetration in Jordan is more

than 70 per cent and 4G will pick up more very soon as prices in Jordan are very competitive compared to other regional markets," Loze added. According to the Telecommunications Regulatory Commission, mobile penetration in Jordan reached 152 per cent at the end of June of last year, with some 12.3 million active mobile subscriptions. Orange Jordan forecasts increased voice traffic between the Kingdom and Egypt following the rebranding of Egypt's Mobinil into Orange Egypt. "The rebranding of Egypt's Mobinil into Orange Egypt paves the way for introducing new services and bundles for customers in the two countries," Orange Jordan CEO Jérôme Hénique told reporters. Orange Egypt has some 33 million subscribers, according to Orange Egypt officials, while Orange Jordan subscribers reached 4.3 million at the end of last September.

(March 13, 2016) The Jordan Times

Kuwait



Chairman and CEO: Salim Alozainah
[Communication and Information Technology
Regulatory Authority (CITRA)]

Kuwait's Ministry of Communications (MoC) is set to undergo a belated privatization process, following a proposal to privatize the fixed telephony infrastructure and post services. Undersecretary Hameed Al-Qattan said that once established, the Communication and IT Regulatory Authority (CITRA) would be responsible for offering those services for privatization. If the project is approved, the MoC would only be responsible for 'marine transportations', the official said. Kuwait's telecoms sector is dominated by a dual-mode MoC, which performs the oft conflicting role of monopoly operator and industry regulator. A new regulatory commission – CITRA – was reportedly established in November 2014, though it is yet to officially take charge of the telecoms sector. (March 22, 2016) The Kuwait Times

Lebanon



**Secretary of the Board: Mr. Amine
Moukheiber**
[Telecommunication Regulatory Authority
(TRA)]

Despite persistent reports over the last two years of Lebanon's stalled fiber network upgrades, DSL access speed problems and other broadband network issues, the volume of active xDSL subscriber lines in the country has increased strongly, according to new statistics reported by the Ministry of Telecommunications (MoT). Telecoms Minister Boutros Harb announced at a Beirut conference last Thursday that total DSL subscribers reached 537,135 at the end of 2015, up from 318,750 at end-2013. Mr. Harb also highlighted the deployment of fiber-to-the-cabinet (FTTC) and VDSL infrastructure over state-owned nationwide telco Ogero's network: the number of exchanges equipped with VDSL reached 78 at the end of 2015 (non-existent in 2013), while the number of subscribers served by FTTC (with xDSL connections to their premises) stood at 8,253 at end-2015 (also unavailable in 2013). Lebanese internet service providers (ISPs) now number 112, Harb added. ISPs in Lebanon are permitted to offer connections via the fixed network of Ogero and/or over their own fixed-wireless networks (no recent figures released) as well as reselling mobile broadband access over the cellular networks of Alfa

and Touch Lebanon. Minister Harb also announced that Lebanon's number of fixed line telephony subscribers reached nearly one million in 2015 compared to 870,465 in 2013, while the number of mobile subscribers is now nearing 4.5 million compared to around 3.8 million in 2013. The minister also claimed that mobile data users increased to approximately 2.8 million in 2015 from roughly two million in 2013. At the same conference, Boutros Harb declared that Lebanon's long-awaited high speed fiber-optic broadband network is functioning and has been extended to large institutions, adding that: 'Following the installation of fiber-optics in big cities we will be linking this service to buildings and households.' The Daily Star writes that when Harb became minister in 2014, the country's fiber-optic backbone connecting major switchboards to each other and large institutions was already largely complete. However, work was reportedly suspended under the new minister's initiative. At conference, Harb reiterated that the current installation of fiber-optics is part of the 2020 strategy he launched in July 2015; under that plan, fiber-optic networks are to be installed in Lebanon progressively over five years and the country 'totally connected' with fiber by 2020. (March 23, 2016) The Daily Star

Telecommunications Minister Boutros Harb has declared a crackdown against illegal ISPs in the country, acting on government information that certain (unnamed) parties have been extending cross-border internet access services via illegal networks, which prompted the telecoms ministry to lodge a complaint with the public prosecutor. Hasan Fadlallah, the head of the Lebanese parliamentary media and telecoms committee, was quoted as claiming that the country's security was being threatened by potential foreign infiltration or spying because the anonymous companies in question had installed network equipment to access the internet from abroad and provide unlicensed web services.

(March 14, 2016) The Daily Star.

The telecoms minister Boutros Harb said that the country will enjoy nationwide 4G LTE services by the end of this year. Speaking at the ArabNet 2016 event, Harb stated that networks will be 'ready to cover all Lebanon' by September. LTE services are offered by the two Lebanese state-owned, foreign-managed cellcos, Touch and Alfa, which both launched their commercial 4G networks in May 2013. Harb added in his speech that his ministry will drive the expansion of fiber-optics this year, starting with large corporations, until high speed fiber services reach 'every town in Lebanon'. Harb had announced last year during a conference that fiber-optic networks will be installed in Lebanon progressively over five years and the country will be totally connected through this technology by 2020. (March 7, 2016) zawya.com

Morocco



**Director General: M. Azzine El
Mountassir Billah**
[Agence Nationale de Reglementation des
Telecommunications (ANRT)]

In the Kingdom of Morocco, citizens have taken to social media to voice their anger after telecommunication companies in the country banned Voice over Internet Protocol (VoIP). As a result of the ban, the people have called for a boycott of the telecommunication operators

that enforced the banning of these features. The people are requesting the Moroccan King to intervene and order the country's telecommunication companies to lift this ban. Major companies like Meditel, Morocco or Marco Telecom & Inwi, implemented this ban at the start of the year. Famous VoIP calling platforms such as Facebook's Messenger, WhatsApp, Skype, IMO, and Tango are just a few of the platforms that have been blocked for passing VoIP data over their 3G and 4G networks. Just a month later, the platforms were then blocked-off completely by the ADSL service. However, the organization responsible for this ban – the Morocco's Agence Nationale de Réglementation des Télécommunications – has a different story. According to them, the ban on free internet calls (VoIP) has been issued because it requires a license. Then again, the telecommunication agency's action was regarded as a move that would increase earnings generated from international calls. The ban has driven a large number of Moroccans to become a part of a cruel social media campaign, which aims to object to the agency's decision to ban internet calls. In addition, there is also an online petition that demands the re-installation of the VoIP protocols. Because of the negative online feedback, the telecommunication companies have lost a lot of 'likes' and 'followers' on their social media pages, and within two days of the banning, a campaign labeled #OPEUnLike, was launched by Marouane Lamharzi on Facebook. Lamharzi has developed a website that monitors in real-time the amount of people that are unsubscribing from the social media pages of the three telecom service providers involved. Although losing subscribers may seem unimportant in the internet world, in reality, it pertains a negative image that could potentially become very damaging to the companies. In addition, customers have also begun bombarding the companies' social media pages with damaging reviews. The most frequently posted messages are calling for more people to unlike their pages. According to reports, customers are hoping that by significantly reducing the companies' online support, the companies will realize the full extent of the issue. Numerous people have made many sentimental requests to King Mohammed VI, asking him to re-establish the VoIP services that allow them to keep in-touch with family members and loved ones that live in the Moroccan Kingdom or abroad. Their images, notes, and letters continue to be published on the Facebook page called – Stop the VOIP Ban in Morocco. Movements were also brought out over the internet; a note of objection to the President of Agence Nationale de Réglementation des Télécommunications has currently amassed more than ten thousand signatures. Whereas appeals, petitions and boycotts seem to be the sole solution to the ban of VoIP, Moroccans' tolerance may become depleted over time, and we might see the public going crazy over the money driven corporations.

(March 24, 2016) Moroccan World News

Oman



Executive President: Dr. Hamed Al-Rawahi
[Telecommunication Regulatory Authority (TRA)]

Several websites using the .om domain have been shut down by the Telecommunications Regulatory Authority of Oman (TRA), after being found to have been used

to mislead internet users and take them to websites with malicious intent. "All domains that are known or suspected to have been abused in this illicit intent have been immediately taken offline, while the process of investigation and suspension on similar grounds is continuing," according to a statement from the TRA. Users who visit these websites are redirected to other websites, which contain possible malware or illegal and unethical content, which could be harmful to users. Such acts are forbidden and persons and entities could face legal actions, according to the Oman domain names policy. "We usually shut down the website and the user will not get his money back, as well as bar the user from registering a new domain name," said an official source. "It also depends on the severity of the crime, as it could be referred to the public prosecution and court," the source added. Omani companies and business are only allowed to register for a .om domain name, in which they have to register through one of the accredited registrars. Non-Omani companies can also register for Omani domains, as long as they have a representative in Oman. The source said officials maintain lists with all .om domain names deemed suspicious, and are probably undertaking illegal activities. One such website is Netflix.om, which has been shut down. "Not all Omani domain sites are participating in these activities, but most of them are. We are investigating the issue," said the source, while adding that officials are requesting website owner's documents to prove their legitimacy. The TRA states that strict action against non-compliance of rules and regulations will be taken by the authority, based on investigations and evidence against the entities and individuals who misuse the .om domains. They also reiterated that the TRA is strongly committed to the security and stability of the internet and will not tolerate any domain names that might cause harm to internet users or the internet eco-system, as well as enforcing its role to protect the national identity and reputation associated with .om domain names.

(March 27, 2016) world.einnews.com

Omani citizens and residents travelling in Gulf Cooperation Council (GCC) countries will now enjoy reduced roaming prices for SMS and mobile data, in addition to further reductions in voice call prices, the Telecommunications Regulatory Authority (TRA) has announced. The new price caps will be effective starting April 1. Price caps for mobile data while roaming (per Megabyte) as of April 1, will be 500bz. The reduction in data roaming services prices, when compared with the current charges in Oman ranges from 7 per cent while roaming in Saudi Arabia, to 93 per cent while roaming in Kuwait. Price caps for SMS sent while roaming (per SMS) will be 0.031bz. The reduction in the prices of SMS services when compared with current charges in Oman ranges between 35 per cent while roaming in Saudi Arabia and 87 per cent while roaming in Kuwait. Price caps for calls received while roaming (per minute) will be 135bz. The reduction in prices of calls received when compared with the current prevailing charges in Oman will be up to 76 per cent for receiving calls while roaming in Kuwait. Price caps for local calls within the visited country while roaming (per minute) will be 100bz. At present the rate is 106bz. Calls to other GCC member states, including the home country will cost 246bz. This reduction comes following an initiative of cooperation signed between the GCC regulators under the umbrella

of the GCC General Secretariat to regulate the prices of roaming services within the Gulf countries, and is aimed at facilitating the availability of roaming services within reasonable and affordable price levels, in view of the expected positive impact on enhancing social ties and economic integration between the GCC countries. The first roaming regulation, which covered only voice calls made while roaming, was implemented gradually over a two-year period, with full implementation in February 2012. New price caps for roaming charges were approved by the GCC Ministerial Committee for Post, Telecommunications and Information Technology during its 24th meeting in Doha last year. Reductions of roaming charges for both inter-operator wholesale level and end user retail level will take place gradually, over a three-year period, for voice calls and SMS services, and over a five-year period for the mobile data service. Approved price caps are based on the recommendations of the GCC Roaming Working Group (RWG), which consists of representatives from the telecom regulators of the six GCC countries. RWG has conducted an extensive study on roaming charges. The study was shared with stakeholders and the general public through a public consultation document published on the TRA website in September 2014. RWG had received 17 responses from stakeholders, including mobile licensees in the six GCC countries and an individual beneficiary from Oman. The final report on the consultation was published on the TRA website in mid-2015. Reduction in prices of local calls made within the visited country and for outgoing calls made while roaming to other GCC countries, including home country, is up to 6 per cent and 4 per cent, respectively, while roaming in most GCC countries. TRA is also likely to highlight that the prices shown are ceilings that operators are free to compete within by setting prices below these regulatory caps to provide more attractive and innovative offers to consumers. In addition to these reductions in prices, TRA has also been active in initiating other measures in coordination with service providers to create consumer awareness about means of controlling roaming usage costs and avoiding bill shocks. (March 26, 2016) world.einnews.com

Total number of post-paid fixed telephone lines registered a growth of 1.1 per cent in the Sultanate at the end of February 2016 to stand at 328,811 compared to 325,083 lines as at the end of December 2015. Subscribers of various fixed telephone lines witnessed a rise by 1.4 per cent to stand at 441,102 as at the end of February 2016. Subscribers of mobile service stood at 6,611,895 at the same period, comprising a decline by 0.5 per cent whereas the number of active mobile broadband subscribers stood at 3,267,291 according to the figures issued by the National Centre for Statistics and Information (NCSI). Fixed prepaid telephone lines witnessed a growth at 4.5 per cent taking the total to 58,514. The number of pre-paid public telephones remained unchanged at 6,801 lines whereas the number of integrated service digital networks and wireless fixed lines slightly declined. National Centre for Statistics and Information statistics pointed out that the number of mobile subscribers stood at 6,611,895 as at the end of February 2016. Pre-paid mobile subscribers represented the largest number of the total subscribers to stand at 6,021,576. The number of mobile internet subscribers stood at 2,707,000 as at the end of February 2016 including 2,705,000 as post-paid mobile internet

subscribers. The NCSI figures also highlighted a 4.5 per cent growth in the number of fixed broadband subscribers to reach 243,715 compared with the end of December 2015. (March 20, 2016) world.einnews.com

Ooredoo Oman has completed the first phase its LTE coverage enhancement project in Muscat and along the Al Batinah coast, using 800MHz spectrum acquired last year for OMR9.6 million (US\$24.9 million). The company, which is majority-owned by Qatar's Ooredoo, has rolled out over 100 new 4G base stations between Muttrah and Liwa, in order to significantly boost the indoor coverage and speed of its mobile data network. The second phase of the rollout will see indoor and outdoor 4G coverage improved in all wilayats (provinces) across Oman. 'This new spectrum is significantly enhancing speed and indoor 4G coverage,' commented Ooredoo Oman's CEO Greg Young, adding: 'Our customers will be able to use 4G in many more areas and feel the difference when it comes to streaming, downloads and staying connected. And there is more to come, as we roll out this richer experience to other areas of the country. This investment and improvement also future-proofs our network with the necessary spectrum to underpin cost effective capacity increases to keep pace with accelerating 4G demand.' (March 10, 2016) telegeography.com

Pakistan



Chairman: Dr. Syed Ismail Shah

[Pakistan Telecommunication Authority (PTA)]

Pakistan Electronic Media Regulatory Authority (PEMRA) has finalized the minimum standards / specifications for Digital Cable TV set-top-boxes in pursuance of its endeavor to meet the cable TV Digitalization deadline of September 30, 2016. It is said that maximum facilitation along with protection of subscribers' rights were kept in mind while deciding the minimum standards for the set-top boxes. Furthermore international best practices were also considered to safeguard the ultimate objective such as quality of service, un-interrupted operation of the equipment, safety and competitiveness. PEMRA in its customized standards has made it compulsory for all cable operators and equipment providers to meet certain performance and audio/video decoding requirements, equipment conformity, electronic program guide and logical channel numbering etc. Once the draft standards are approved by the Authority (in its upcoming meeting on March 30th) the same shall be available on PEMRA website for easy access of stakeholders including the public and subscribers. Moreover, PEMRA is already pursuing Federal Government, FBR and provincial governments to facilitate cable TV digitalization by offering Tax Holidays and exemptions on import of Digitalization equipment (such as set-top-boxes) thus facilitating cable operators in meeting Digitalization deadline of September 30, 2016. The Chairman PEMRA also held a meeting with the Chief Minister Punjab last week, whereas, a meeting with the Federal Finance Minister is scheduled next week to fetch maximum support for the cable operators converting to digitalization. It is worth mentioning that Cable Operators Association of Pakistan (COAP) will replace analogue cable system to digital cable TV system by September 2016 across the country, starting with 12

major cities, at estimated cost of Rs 90 billion. With Digital Cable TV, consumers will be able to enjoy high-definition streams on their TVs. However, an additional Set top box — that will cost around Rs. 5,000 — will be needed to get digital cable TV. (March 22, 2016) propakistani.pk

Mobilink has won approval from Pakistan's competition authority for its planned acquisition of rival Warid Telecom, thereby clearing the first of several regulatory hurdles that stand in the way of the closure of the deal. Warid announced on Tuesday that the Competition Commission of Pakistan (CCP) has approved the telcos' merger request, but provided no further details of the body's ruling in the case. The CCP itself has yet to make a formal announcement. Vimpelcom-owned Mobilink in November agreed to acquire 100% of Warid Telecom's shares, in return for Warid owner the Dhaba Group buying 15% of Mobilink's shares. The firms did not disclose the transaction's value. Presuming it goes ahead, the merger will consolidate Mobilink's position as Pakistan's largest operator. It had 37.48 million mobile customers at the end of February, according to telco regulator the Pakistan Telecommunication Authority (PTA), giving it a 28.9% share of the market. Warid is the smallest of the country's five mobile network operators with 10.91 million customers at the same date and an 8.4% market share. Thus, together the operators control 37.3% of the market "The combination of Mobilink and Warid will be a positive step for the development of technology and communications services in Pakistan," said Vimpelcom CEO Jean-Yves Charlier, in a statement. "Together, the future entity will serve more than 45 million customers through a best-in-class mobile and high-speed network, and bring further investment into infrastructure and digital services for consumers in Pakistan as they navigate the digital world," he said. Meanwhile, Mobilink President and CEO Jeffrey Hedberg described the CCP green light as "an important milestone in the merger process [that] paves the way for other regulatory approvals." He added: "We appreciate the role played by the CCP during this process and we look forward to progressing with the remaining regulatory bodies in the coming days." (March 22, 2016) totaltele.com

The arrival of 3G & 4G in Pakistan has contributed a lot in connecting people and increased the internet penetration from 3% to 15% just in short period of 1 year; the Minister of State for Information Technology Anusha Rahman said while addressing UNESCO's Mobile Learning Week Forum at Paris. Internet Penetration in Pakistan Reaches to 15% in One Year. The Minister said: "The information communication technology (ICT) is the key enabler of socio-economic development, adding the government of Pakistan has accorded its highest priority to the development of ICT infrastructure and applications to accelerate the digitization in the country. She also added that: "Recently the present government has issued a long-awaited telecom policy, marked as landmark document by industry experts for the incorporation of numerous measures to accelerate the digitization in the country. The Minister further elaborates that the Government of Pakistan provided billion of rupees to the telecom sector in order to install its infrastructure in both under-served and un-served areas of Pakistan. The Government is trying its best to connect more people through easy and affordable access to internet.

UNESCO DG appreciated the efforts and role of present government regarding IT and telecom services in the country. (March 14, 2016) phoneworld.com.pk

Pakistan's telecommunication industry has recorded an unprecedented growth in the past two years despite facing strict regulations and unfavorable economic conditions. Since the launch of third generation (3G) and 4G services in July 2014, the number of consumers looking to utilize high-speed mobile internet has crossed 23 million. In the meantime, the cellular subscriber base has reached 125 million. Seeing these figures, people will believe that telecom companies (telcos) are doing a handsome business in the country. However, this is definitely not the case. A major trouble for the industry is pricing, which has been brought down by fierce competition amongst the five telcos and has likely reached the edge of sustainability. Prior to the launch of high-speed mobile broadband, it was expected that data charges would push a lot of consumers out of the market as the telcos had spent over \$2 billion on the 3G and 4G spectrum licenses and the rollout of next generation network. But surprisingly, they chose to keep data charges at the bare minimum, in a move, which initially sparked a digital revolution supported by affordable Smartphones, that caused a 12% growth in broadband penetration in 2015, up from a mere 2.07% in 2014. This number is forecast to reach 44% by 2020, which according to the World Bank estimate will add 4.1% to the country's economic output. Although it is not uncommon for operators around the world to set data prices below sustainability levels for certain services, this is mostly balanced out by charging higher rates for other services. In Pakistan, however, the operators cannot follow that path since other major services – voice and messaging – already have OTT (Over-The-Top) alternatives and the consumer does not have the same buying power as in other nations. The conundrum that telcos now face in the light of low data pricing is lower-than-required revenue generation, which is necessary to fuel further network expansion. This is where the regulatory bodies need to favorably review the framework to ensure continued investment in the sector. All telcos are committed to achieving the goals set by the government in the 'Pakistan 2025 – One Nation, One Vision', which calls for increasing internet penetration to over 50%. This will only be possible if mobile operators generate enough revenues for sustaining a higher level of investment. Interestingly, despite being among top 10 countries of the world in terms of mobile users, the share of mobile broadband users in Pakistan is low at 12%, according to the State Bank of Pakistan's first quarterly report for fiscal year 2015-16. While mobile operators are able to keep earning revenues due to higher data usage, margins are greatly affected by taxes that eat about 50% of the revenues. The rest is swallowed by high operating costs, particularly the network and marketing expenses. According to statistics, Pakistan's telecom industry is the fourth most heavily taxed in the world. The fact is that low data pricing, without proper regulatory support, is detrimental for the industry. If taxes continue to eat up revenues, the telcos will be forced to significantly curtail their operating and capital expenses. Some of them have already slowed down infrastructure development after the initial rapid network expansion in more than 200 cities and towns. The government wants to bridge the

digital divide and promote digital inclusion across the country, but it fails to understand a basic concept: such goals are unrealistic when high taxes impact the already strained revenues due to the pricing model. "Heavy taxes coupled with the low data pricing model are a major hurdle to the industry," said an analyst. "Levies such as federal excise duty, internet tax, provincial sales tax and withholding tax are at the higher level in comparison to the region. These make the tax system complicated and add to the compliance cost." Growth in the mobile industry now relies more than ever on persuading the existing subscribers to upgrade their subscriptions for new services and apps including mobile banking. If the telcos and regulatory bodies do not reach a common ground, then it will be the consumer who will face the consequences due to poor service and slowdown in introduction of new technologies and services.

(March 14, 2016) The Express Tribune

Pakistan tops the South Asians as telecom users, and as an investment destination, several multilateral institutions and the World Bank this week said. Pakistan is leading the region in e-commerce, digital finance and branchless banking, as the campaign for the expansion of the National Financial Inclusion Strategy goes ahead. An intense use of mobile telephony and a range of several other equipment goes on, moving into most of the commercial, business, industrial, education, and news media sectors. This sweep is clearly seen from the shores of the Arabian Sea, next door to the United Arab Emirates, to the Himalayan heights and K-2 peaks in the extreme north of Pakistan. In those snow clad regions, home to the world's tallest mountain peaks, e-commerce sights and businesses are now springing up fast. Their Internet sees vendors busy selling fancy Pakistani handicrafts to sites as far away as Germany, Norway and Japan. This massive transformation of the telecom and IT users goes on while Pakistan is the number one investment destination for foreign investors. This market is swiftly changing to one using all varieties of mobile telephony; telecom and ICT related services and products. Alongside these developments, the sister industries including production and assembly of computers, laptops and a wide range of IT equipment are also moving up. These production activities will expand further as the government is considering various proposals to cut down current taxes, and provide several other concessions. Included in this proposal are the ones submitted by the Pakistan Computer Association (PAC). PAC has proposed a withdrawal of some taxes and levying of fixed customs duties and taxes on IT products. "Our proposals will encourage legal import of IT products; remove taxes relating to the Generalized Scheme of Preferences. It will provide the IT industry a level playing field, reduce consumer prices, and cut down large scale smuggling," says PCA chairman, Munawwar Iqbal. "If the government agrees to levy a fixed tax on each IT product, it will bring Rs5.5 billion a year in the form of new revenue." Abdul Rauf Alam, president of the Federation of Pakistan Chambers of Commerce & Industry (FPCC&I) says: "The computer industry in Pakistan plays a significant role in the development and progress of the overall economy. The problems being faced by PCA and other sectors of the private sector are being discussed with Finance Minister Ishaq Dar, who is busy preparing the budget and the tax proposals for the

National Budget for 2016."The budget will be unveiled in June. Meanwhile, the World Bank Group and its 25 associates in the program to reach Universal Financial Access -2020, of which Pakistan is a member, reported that "around six per cent of adults in Pakistan have mobile accounts as compared to South Asia's average of less than 2.6 per cent." Pakistan also has a formal and regulated transaction account. It opens access to other financial services such as savings payments, insurance and credit, all of which can help people better manage their lives and reduce poverty. There are good prospects for both IT-mobile telephone services and banking to move ahead hand-in-hand and enjoy tremendous growth in these and other sectors, which is confirmed by the statistics. The data indicates that 13 per cent of Pakistani adults have a formal account. Less than five per cent of women are included in formal financial sector. Some 27.5 million Pakistani adults cite distance to a financial institution as a barrier to opening a financial account. At the same time 2.9 per cent adult Pakistanis have a debit card. Already, the telecom sector is going up and up, be it in the import of equipment, new connections, innovative and art of the day technology, its private use, or its applications ranging from e-commerce to banking and fintech. The dancing numbers are in millions, the Pakistan Telecom Authority (PTA), World Bank and international data sources say. Broadband subscribers have topped 26 million people, the PTA said. As such, the broadband penetration has gone up from three per cent to more than 15 per cent. The World Bank reports that a 10 per cent increase in high speed internet connections can boost GDP by 1.38 per cent. The arrival of broadband in Pakistan is set to have a very positive impact on its economic growth. All this shows just how fast and big the rate of dividends and profits is to all in this business of modern telecoms, and why they should come and invest foreign and domestic funds in Pakistan.

(March 7, 2016) Khaleej Time

Qatar



President: Mr. Mohammed bin Ali Al Mannai
[Communications Regulatory Authority (CRA)]

UK-backed Vodafone Qatar has introduced its Global Machine to Machine (M2M) Platform and Internet of Things (IoT) solutions to the local market, offering Qatari businesses a global M2M SIM card with worldwide roaming; an interactive portal for end users; secure solutions; access to more than 1,300 M2M experts; a broad portfolio of M2M terminals; application enablement/development/testing and deployment from a single supplier, all under a single contract. Particular areas of focus in Qatar include 'smart city' applications and the transportation sector as the country attempts to deal with its growing traffic problems. The Vodafone Group currently offers its M2M services to local customers in 40 countries. Meanwhile, larger rival Ooredoo Qatar has unveiled sweeping ambitions to be 'the leading integrated ICT provider in Qatar and the region', aiming to fully transform its offering for businesses and government institutions, the Peninsula reports. To accomplish this vision, the company says it will become an 'ICT innovation engine' for Qatar, building best-in-class capabilities in-house while

engaging with an ecosystem of innovative partners. The goal is to fundamentally transform the depth and range of ICT services offered to organizations and enterprises in Qatar and in the Gulf region. Waleed Al Sayed, CEO of Ooredoo Qatar, declared: 'The moment is right for Ooredoo to take the quantum leap from its position as the leading [telecoms] operator in the country, to becoming the premier information technology company in Qatar and ultimately the region. IT and telecoms are converging around the world, and Ooredoo has partnerships with almost all of the world's leading technology companies, supported by incredible infrastructure assets such as the Ooredoo Supernet [convergent high speed transmission network]. This means that we can provide a fully-integrated offering that is unmatched by any other company.' Ooredoo adds that it is aiming to capitalize on its long-standing links with large and small companies and organizations across Qatar to create a 'one-stop-shop' for all ICT services, encompassing everything from connectivity to data centers, through to full system integration services, while it also says it will 'help raise Qatar's profile as a hub for innovation and ground-breaking technology, including becoming a world-reference for smart cities and in the rollout of IoT.' Both Ooredoo and Vodafone stated that their latest initiatives in fields such as IoT, smart cities and integrated telecoms/ICT solutions, will support the Qatari government's 'Qatar National Vision 2030' goals including knowledge-based economy targets.

(March 21, 2016) telegeography.com

The Communications Regulatory Authority (CRA) said it received over 60 complaints against the country's telecom service providers during four days' of a consumer contact program. The program was held at the City Centre mall where the CRA set up a booth to mark March 15 as the World Human Rights Day. The day is observed to promote the basic rights of all consumers. A CRA release said that among the more than 60 consumer complaints were several about billing, network coverage, roaming charges, service discontinuations, spam, premium services and delays in activation and installation. "These complaints will be looked into and investigated as per CRA's complaint-handling process," said the CRA release. With an estimated 50,000 visitors on weekends and 40,000 on weekdays, the CRA was able to engage a larger number of nationals and expatriates at the City Centre face-to-face. The CRA's consumer affairs department is planning more such engagements and outreach activities to enhance consumer awareness. "CRA encourages all consumers to reach out to it if their complaints lodged with the service providers remain unresolved," CRA said. The CRA is easily accessible through a dedicated consumer telecom hotline (103). The CRA's official twitter account is @CRAqatar or it can also be reached via email: consumerveice@cra.gov.qa According to the CRA release, Minister of Transport and Communications Jassim bin Seif Al Sulaiti, visited its booth. The aim of setting up the booth was to help the mall visitors better understand their rights as consumers and CRA's consumer protection initiatives and processes. The Minister was accompanied by Mohamed Ali Al Mannai, President of the CRA, for a familiarization tour conducted by Amel Salam Al Hanawi, Manager, Consumer Affairs Department, CRA. Al Hanawi briefed

the Minister on the CRA's consumer protection initiatives, public services and the upcoming codes on spam and premium rate services. (March 16, 2016) The Peninsula

Following the Passive Civil Infrastructure Access Regulation issued by the Communications Regulatory Authority (CRA) earlier this year, CRA has launched a public consultation to address concerns by the developers likely to be affected by the regulation. The access regulation mandates all entities owning or controlling a telecommunications civil infrastructure to grant access to Service Providers. The Regulation ensures a consistent and efficient access to these infrastructures in Qatar. It requires any Access Provider that receives a request from a Service Provider for access to passive civil infrastructure to produce and maintain a standard access offer. The developers likely to be affected by this requirement in the regulation have requested CRA's assistance in drawing up this Standard Access Offer, and a draft of this offer is the subject of this public consultation. All interested parties are invited to provide their views and comments on the draft of the Standard Access Offer for Developers at the following e-mail address: CRAconsultations@cra.gov.qa by March 30, 2016. (March 8, 2016) cra.gov.qa

As part of its mandate to protect consumers of communication services in Qatar, the Communications Regulatory Authority has launched an industry consultation on draft Codes on spam and premium rate services. The draft Codes are expected to be finalized in the coming months after both service providers - Ooredoo and Vodafone Qatar - have provided their comments. Service providers already have a range of consumer protection obligations under existing regulations. The draft Codes add to these in ways that are intended to reduce complaints about spam and premium rate services. The draft Code on Premium Rate Services proposes a new obligation on service providers to ensure that consumers have expressly consented to receive a service before they are charged for such service. "Most of the consumer complaints we receive are related to premium services, consumer's inability to unsubscribe, spam and scam, among others. Through these two draft Codes, CRA intends to empower consumers in Qatar to have full control of the services and messages they want to receive," said Amel Salem Al-Hanawi, Consumer Affairs Department Manager. "These Codes will further enhance CRA's consumer protection efforts together with the existing initiatives and regulatory instruments. The final documents will be made available to the consumers and other stakeholder in the CRA website," she added. The draft Codes are a result of continuous monitoring of reports in the media and many complaints received by CRA from consumers about being charged for services that they have never requested or received. Through these draft Codes CRA intends to give specific guidance to service providers on issues that are common sources of concern for consumers. Once finalized, these two Codes will further strengthen CRA's consumer protection initiatives and ensure consumers have the right to receive information and to stop receiving any such information through a simple process. Some key consumer protection initiatives towards consumer protection spearheaded by CRA include:

- a Consumer Protection Policy - includes a strengthened system for monitoring and enforcing compliance with the rules, and provision for a dispute resolution process that is independent of operators,
- 103 – a dedicated telecom consumers complaint hotline (operational 24-hours),
- an independent complaints process, which consumers can contact if they are dissatisfied with the way their service provider has treated their complaint, and
- a Code on Advertising, Marketing & Branding to monitor advertisements and promotions of communications products and services.
- a mobile app - Arsel

The Consumer Affairs department within CRA is responsible to receive and investigate telecom consumer complaints by working with both consumers and service providers in a prompt and balanced way to find mutually acceptable solutions. The Consumer Affairs department also responds to consumer inquiries about any issues they have regarding the services provided by their telecom service provider. Consumers can contact CRA if they are first unable to resolve their disputes with their service provider within 30 days. (March 6, 2016) cra.gov.qa

Saudi Arabia



Governor, Deputy Chairman of the BoD:
Dr. Abdulaziz Salem Al Rwais

[Communication & Information Technology Commission (CITC)]

The Saudi Arabian cyber security market is expected to grow to over \$3.48 billion by 2019, at a rate of 14.50 per cent, said the organizers of an upcoming summit in Riyadh. Organized by Nispana, the second annual Cyber Security Summit will take place on April 6 and 7. It will feature an array of presentations and interactive panel sessions from international experts to address current challenges faced and come up with strategies to pave the way for a cyber-safe future. The Cyber Security Summit will present all the participants with an excellent opportunity to network with peers, share divergent viewpoints as well as identify internationally renowned cyber security. As per the National Information Security Strategy, Saudi Arabia has increased cyber security spending and investment across government agencies and local governments. Saudi Arabia's cyber security market exports market alone is estimated to grow to over \$ 37.5 billion by 2016 with a growing rate 10 per cent on IT and software year on year.

(March 24, 2016) TradeArabia News Service

Saudi Arabia's government has passed a decree banning foreign workers from selling and maintaining mobile phones and accessories for them. It is also requiring that retail stores are at least 50% staffed by Saudi nationals within three months, and be entirely staffed by locals within six months. The Ministry of Commerce and Industry said that the deadline to Saudize the telecom sector will come into effect on 2nd July. Violators face up to two year in prison and will be deported. The moves after reports that more than half of phone retailers in the country are owned by a Saudi national in name only, and are fronts for foreign investors. It could also see around 20,000 Saudi's offered jobs in the retail sector, and may be seen as the beginnings of a more aggressive move to

create non-oil jobs for Saudi nationals.

(March 21, 2016) cellular-news.com

Tunisia

President: Mr. Hassoumi Zitoune



[National Telecommunication Commission (INTT)]

The Ministry of Communication Technologies and the Digital Economy (Mincom) has accepted financial bids from Ooredoo Tunisia, Tunisie Telecom (TT) and Orange Tunisia for 4G licenses, and expects to allocate the concessions by the end of the month. Ooredoo offered the highest bid of TND160.000 million (US\$77.96 million), followed by Orange with TND156.331 million and TT with TND155.001 million; no other bids were submitted. The trio has two weeks to provide bank guarantees for the bid amount, whilst the allocation of the licenses is expected to take around four weeks. Attempting to steal a march on its competitors, Orange has already launched a promotion offering customers free 4G USB modems and routers when they trade in their old 3G devices. Both Orange and Ooredoo, meanwhile, have confirmed that their networks are 'ready' for 4G. (March 4, 2016) telegeography.com

Turkey



Acting Chairman: Dr. Omer Fatih Sayan

[Information & Communication Technologies Authority (BTK)]

Rival telecoms operators in Turkey are demanding cheaper access to partly state-owned Turk Telekom's fiber-optic network, arguing that otherwise they cannot compete effectively in a converged fixed/mobile market, but the government's position on the issue is not yet entirely clear. Turk Telekom has spent around US\$7 billion over the last decade on building Turkey's most extensive fiber network and is now aiming to attract users to bundled fixed and mobile services to boost its third-placed standing in the cellular market, as it prepares for the launch of 4G LTE services next month. Turk Telekom has laid 213,000km of fiber, approximately six times more than Turkcell, whilst Vodafone Turkey's fiber span is smaller still. Turk Telekom effectively sets the rates at which it charges its rivals to use the network, and both Turkcell and Vodafone are demanding tighter regulation of wholesale fiber access prices, whilst they are also pushing for the creation of a joint company to manage the network. 'We have to bring fiber to every household and that requires a mobilization for digital transformation,' Turkcell CEO Kaan Terzioğlu told Reuters. He estimated that by working together on building fiber networks, rather than investing separately, operators could save US\$12.5 billion. Echoing this statement, Vodafone Turkey's CEO Gokhan Ogut told Reuters: 'Turkey needs 250,000km more fibre-optic lines in the next five years. To expect that from just one operator is not fair or possible.' Turk Telekom CEO Rami Aslan appeared to dismiss rivals' notions of fiber network sharing, however, adding that he plans to invest another TRY10 billion (US\$3.5 billion) in the next three years. 'Turk Telekom has invested in every single area in Turkey regardless of the region, regardless of the geographical conditions,' Aslan

told a news conference, adding: 'Another operator's [i.e. Turkcell's] fiber network is around 35,000km over the course of their eight-year journey in the business, another [presumably referring to Vodafone] claims there is not enough fiber and I believe they haven't invested at all.' However, Aslan said he would not rule out joint investments with the other two operators in rural areas. It is not yet clear what new formal measures on wholesale and shared fiber access the government will adopt, if any. Reuters quotes Transportation Minister Binali Yildirim telling telcos in February this year to stop 'showing off' about their speeds and network sizes and start working together instead. 'We have to start fiber mobilization,' the minister declared. (March 23, 2016) reuters.com

United Arab Emirates



Director General: Hamad Obaid Al Mansoori

[Telecommunication Regulatory Authority (TRA)]

The Federal National Council of the United Arab Emirates (UAE) has passed a draft law which paves the way for the creation of a new government body to oversee the country's ICT sector. The draft bill proposes the creation of a new IT and telecoms policy council which will be tasked with regulating and ensuring effective competition in the ICT market. The government says the move is designed to strengthen competition in the electronic communications sector, stimulate investment, foster freedom of choice for consumers, and enable them to benefit from innovative services, improved quality and lower rates. A timeframe for the introduction of the new body has not been announced.

(March 3, 2016) Gulf News

United Arab Emirates (UAE) telco Du has revealed that the cost of installing fixed telecoms infrastructure in new developments will now be shared with rival operator Etisalat, meaning both companies can reduce capital outlay by operating over a shared infrastructure rather than deploying two separate networks. Last year, the country's fixed networks were opened to infrastructure sharing for the first time, meaning the two firms could begin to target customers who were not in their traditional franchise areas. According to a report from The National, Du has now confirmed that the cooperation has been extended to deploying new infrastructure, saying the move could reduce its spending on fixed network rollouts by up to 60%. (March 2, 2016) telegeography.com

The General Authority for Regulating the Telecommunications Sector (TRA) hosted a technical training workshop on IPv6 to introduce the region's telecom providers to the future infrastructure for all smart solutions. The workshop was aimed at training Etisalat and du employees who work in departments related to networks and Internet services which are on the transition to IPv6. This aims to reflect on the Internet's speed and quality provided to individuals and companies. IPv6 represents the future infrastructure which is required to provide integrated smart services embedded in smart homes, plus TRA claim the sixth version guarantees the sustainability of the services and secures quality and speed. Also the initiative aims to

facilitate services provided by the government and to support future innovations. "This workshop comes as a result of our continuous efforts focusing on shaping and foreseeing the future, securing the integration between the TRA and the operators, in addition to adopting the necessary plans that respond to the needs of the next phase which will take the country to a new era of massive expansion in Internet use," said Hamad Obaid Al Mansoori, TRA Director General. "The UAE is taking rapid strides towards applying the concepts of Internet of things and smart cities and D2D communications. And in this context, we are working according to a well-defined strategy directed towards IPv6 deployment at the national level and we spare no effort in order to reinforce the UAE's leading position on the global ICT sector stage. We fully recognize the economic significance of this process to achieve the optimum use of the UAE ICT sector's infrastructure as well as provide greater opportunities to benefit from data and digital input and use it efficiently in application development and building future plans and projects that meet the growing demand for IPv6." He added: "In the transition to 4G wireless broadband networks, we need 20 times more Internet protocols than what is required for 3G networks, which obliges the telecom service providers to develop practical strategies in order to deal with these requirements." After completing the workshop, participants will be able to implement IPv6 in their core network, understand the differences and similarities between IPv4 and IPv6 security, know how to configure IPv6 on network equipment, as well as understand different transition mechanisms. This training workshop is one of the key initiatives launched by the UAE National WSIS Committee, which works in collaboration with all government entities and institutions and telecom services providers to ensure the commitment and delivery of WSIS objectives. (February 28, 2016) itp.net



REGULATORY ACTIVITIES BEYOND THE SAMENA REGION

REGULATORY UPDATES

Albania



Sector regulator the Postal and Electronic Communications Authority (Autoritetit Te Komunikimeve Elektronike Dhe Postare, AKEP) has published the results of its auction of frequencies in the 2500MHz-2690MHz range. After two rounds of assessment, the watchdog ranked bids from full service provider Albtelecom highest and will award the operator two lots of spectrum, each consisting of 2x5MHz. The regulator did not publish any details regarding other participants in the sale. (March 18, 2016) teleogeography.com

Argentina



The overhaul of the Argentinean regulatory landscape by new president Mauricio Macri is one step closer, the Buenos Aires Herald reports, after fledgling watchdog the National Entity for Communications (ENACOM) received its first Congressional approval last week. ENACOM has been created via the merger of the Federal Authority of Audiovisual Communication Services (AFSCA) and the Federal ICT Authority (AFTIC). The Congressional approval effectively paves the way for the reform of the Digital Argentina Law, passed in December 2014. According to

the newspaper, the new law will maintain the existing restriction on satellite TV operators entering the telecoms market – a clause that was present in both the 2009 Broadcast Media Law and the more recent Digital Argentina Law. However, the changes will allow cable TV operators to hold a single nationwide license, with no regional limits or other thresholds. The now-repealed Broadcast Media Law established a maximum of 24 licenses – one for each province plus Ciudad Autonoma de Buenos Aires – and prevented cable TV companies from surpassing a 35% market share. Critics have complained that the only clear beneficiary of Mr. Macri's abrupt regulatory overhaul is Grupo Clarin – the media firm that was at loggerheads with former president Cristina Fernandez de Kirchner throughout her tenure. Since Macri assumed power in November 2015, Clarin – which offers broadband services via its Cablevision subsidiary – has moved ahead with its deal to take over mobile market minnow Nextel Argentina – a transaction rejected by the previous regime. (March 3, 2016) teleogeography.com

Australia



A draft determination on nbn's (formerly NBN Co's) revenue controls for the 2014-15 period has been published by the Australian Competition

and Consumer Commission (ACCC). In a press release announcing the determination, the regulator also confirmed that it did not believe prices set by nbn, which is overseeing the country's National Broadband Network (NBN) project, had exceeded maximum regulated prices during the 2014-15 financial year. The ACCC is required to make annual determinations on nbn's revenue controls in accordance with the Long Term Revenue Constraint Methodology (LTRCM) set out in the latter's special access undertaking (SAU); the SAU itself establishes part of the regulatory framework for the NBN and includes important provisions to encourage nbn to incur expenditure efficiently. In making its draft determination, the ACCC is proposing to accept nbn's actual capital and operating expenditure for the year, while the watchdog has also decided to accept the proposed values for regulated assets and accumulated losses. In its proposal, meanwhile, nbn requested a minor amendment to the ACCC's 2013-14 determination to correct for an error in its submission; the ACCC will reportedly consider this proposed amendment in the same process as the draft determination. Stakeholder views have now been invited on the draft determination for 2014-15, including reasons for those views, with submissions due by 15 April 2016. Commenting on the matter, ACCC commissioner Cristina Cifuentes was cited as saying: 'Having assessed nbn's proposal against the methodology in the SAU, the ACCC has made the draft decision to accept the values proposed by nbn for determining allowable revenues for 2014-15 ... Where nbn is unable to recover the allowed revenue in a particular year, any shortfall is put into nbn cost recovery account. Nbn will have the opportunity to recover its accumulated losses over time as the take-up of NBN services increases.' (March 16, 2016) [telegeography.com](#)

Bosnia and Herzegovina



Communications Regulatory Agency (CRA) has published data on the country's communications markets for the year ended 31 December 2015, revealing that mobile subscriber numbers fell by 1.4% against the same date a year earlier. According to the regulator's statistics, there were a total of 3.443 million mobile subscribers in the country at the end of 2015, with a 10.1% increase in post-paid accesses – which totalled 768,784 – failing to offset a 4.2% drop in pre-paid subscribers to 2.675 million. BH Telecom remains the sector leader, accounting for 44.89% of the nation's mobile subscribers at end-2015, with fellow network operators Telekom Srpske and HT Mostar retaining their second-placed and third-placed spots with 40.73% and 13.94%, respectively. Meanwhile, at the end of 2015 there were four active MVNOs in Bosnia and Herzegovina, though none have yet to make any real inroads in the market; of the quarter IZI Mobile remains the largest, though it accounted for just 0.32% of the nation's mobile subscriber total, while Blicnet, Logosoft and Telrad all had less than 0.10% apiece. In the fixed line arena, total voice connections declined by 1.8% to 779,353, with the nation's three 'dominant' operators – BH Telecom, Telekom Sprkse and HT Mostar – controlling the majority (89.9%) of those between them. With regards to fixed broadband, meanwhile, accesses increased by 1.3% against the previous quarter (the CRA did not publish a year-on-year comparison figure) to 634,987. DSL-based connections remained the most popular access type, with 372,767 subscribers signed up to such a service, with cable-based broadband trailing with 200,972 subscribers. (March 23, 2016) [telegeography.com](#)

Botswana



The government has succeeded in selling off a 49% stake in national fixed line and mobile operator Botswana Telecommunications Corporation Limited (BTCL) in an oversubscribed initial public offer (IPO). The state has raised BWP462 million (US\$41 million), selling 462 million shares at BWP1 each, including 212 million government shares and 250 million newly issued BTCL shares. The government received 44,000 applications for BTCL stock and says it is now working on 'a fair and equitable allocation of shares among the applicants', with a stock market listing to take place on April 8. 44% of BTCL's shares were offered to the public, with a further 5% reserved for the telco's employees.

(March 16, 2016) [telegeography.com](#)

Brazil



Luxembourg-based LetterOne Holding (L1 Technology) has issued a statement confirming that its planned investment in the Brazilian telecoms sector has been abandoned, due to a lack of interest from Telecom Italia (TIM) – the parent company of TIM Participacoes (TIM Brasil). In October 2015 L1 Technology, which is ultimately controlled by Russian billionaire Mikhail Fridman, signed an investment pact with Brazilian telco Oi – on the proviso that it agreed to explore a potential tie-up with domestic rival TIM Brasil. A statement released by the would-be investor confirmed: 'L1 Technology's approach was to unlock the potential of this envisaged telecoms deal through a structure within which all companies were aligned. However, without TIM's participation, L1 Technology can't now proceed with the proposed deal as previously envisaged'. If realized, a merger between TIM Brasil and Oi would have created the largest wireless operator in Brazil in terms of subscribers. If the deal had come to fruition, L1 had offered to inject up to US\$4 billion in Brazil. (March 1, 2016) [telegeography.com](#)

British Virgin Island



A British Virgin Islands (BVI) court has issued a judgment granting TeliaSonera's application in regards to the acquisition of shares in Turkcell Holding, which holds a stake in Turkish mobile operator Turkcell. TeliaSonera said in a press release that the judgment was made in proceedings to enforce an arbitral decision from the International Chamber of Commerce (ICC) in Geneva, which ordered Cukurova Group to pay TeliaSonera the amount of USD932 million in damages in September 2011. The dispute dates back to 2005, when Cukurova agreed to sell its 52.91% stake in Turkcell Holding to the Swedish group. The deal, however, collapsed and in 2007 Cukurova secured a US\$1.35 billion loan from Russian conglomerate Alfa (now LetterOne) using its 13.76% indirect stake in Turkcell as collateral. The ownership of the 13.76% indirect stake is now subject to another ongoing legal battle, following Cukurova's default on the loan. *TeleGeography notes that Turkcell is owned by Turkcell Holding (51.00% stake), TeliaSonera (14.02%), Cukurova Holding (0.05%), with the remaining 34.93% of shares publicly traded on the New York Stock Exchange (NYSE) and the Istanbul Menkul Kıymetler Borsasi (IMKB). Turkcell Holding is itself owned by TeliaSonera (47.09%, giving it a 37.09% overall stake in Turkcell) and Cukurova Holding (52.91%, for a 26.98% overall interest). Cukurova Holding is majority controlled

by the Turkish Cukurova Group (51%, or a 13.76% overall stake in Turkcell), with 18.5% held by LetterOne (4.99% overall stake in Turkcell). *TeliaSonera said that the BVI court judgment 'represents one step of many in a long-running series of disputes in relation to the ownership of Turkcell'. The ruling is to be followed by a final sale order, which may be subject to an appeal by Cukurova, though TeliaSonera noted that the judgment 'does not resolve the existing and complex dead-lock between the shareholders of Turkcell'. In the event that a sale of the shares takes place, LetterOne is entitled to receive part of the amount collected by TeliaSonera, in accordance with an agreement from 2009. (March 9, 2016) 4-traders.com

European Union



BEREC, which represents the EU's national regulators, called for a sharper definition of telecoms services in an era where there is a blurry line with OTT offerings.

The EU body argues "the definition of ECS [Electronic Communication Services] should be clarified and/or reconsidered in order to ensure that it keeps pace with current technological development, that it is future proof and is still the correct foundation that determines which services are regulated under the ECN/S framework." The comments, which come from a report on OTT adopted by BEREC, indicate the current EU regulatory framework is not clear on what is covered, with interpretation left to national regulators. The situation becomes more important as OTT services evolve which, BEREC predicts, will make ECS definition more difficult to interpret. A lack of clarity means different conclusions can be drawn about whether an OTT service is in the framework or not. Some existing services, such as OTT voice that can make outgoing and receive incoming calls from the public network, fall under the definition more easily than emerging services. The EU body also adopted a report on enabling the Internet of Things (IoT). Both the OTT and IoT reports followed consultation in late 2015. Both will serve as BEREC inputs into the EC's review of the regulatory framework for electronic communication. In addition, BEREC adopted guidance for regulators and operators on the new international roaming rules introduced last year, as well as an analysis of the wholesale roaming market. (March 1, 2016) mobileworldlive.com

GSA



The Global mobile Suppliers Association (GSA) Executive Committee comprising of Ericsson, Huawei, Intel, Nokia and Qualcomm have agreed to form a global spectrum group to contribute to the international and national spectrum work with the aim to actively participate in the ITU World Radiocommunication Conferences (WRC). The GSA Spectrum Group (GSG) will operate in all regions around the world mirroring closely the ITU-R organization structure. "The GSA Executive Committee recognize that spectrum discussions are of growing importance to the whole mobile industry, and indeed to broadband consumers", said Joe Barrett, President - GSA. "Harmonizing the use of global and regional spectrum removes uncertainty and encourages growth while new spectrum needs to be identified to meet the anticipated future mobile broadband capacity demands for new 5G services and use cases. The GSG will do vital work leading up to WRC-19 and will comprise of some 45 spectrum and regulatory experts from our Executive and Member companies." GSA will form regional groups headed by a rotating Regional

Coordinator from the Executive Member companies. The GSA Executive Committee has appointed Lasse Wieweg as the GSG Global Coordinator. Lasse has over 30 years experience in regulatory and spectrum affairs. GSA is applying for membership of ITU and is correspondingly seeking cooperation and associate agreements with regional standards and regulatory bodies.

(March 7, 2016) cellular-news.com

Iceland



Telecoms regulator the Post and Telecommunication Administration (PTA) has amended 365 Media's authorization to offer 4G services in the 800MHz band due to 'special circumstances'. Following a public consultation on the topic, the PTA ruled that 365's request to amend the terms of its concession should be granted, with the operator now required to offer broadband access with downlink speeds of 10Mbps to 97% of the population by end-2016 (99.5% previously). The operator requested the amendment in May 2015. 365 Media justified its demand by stating that the state of the telecoms market has changed completely following the February/March 2013 auction for 800MHz frequencies, and that the 'uniqueness' that the company has developed in the wake of the tender no longer existed. 365 Media highlighted that it previously considered that it could provide high-speed wireless broadband access in rural areas 'without strong competition', but recent PTA decisions, such as the approval of Fjarskipti/Nova frequency sharing agreement and government's plan to deploy state-funded fiber-optic network in rural areas, have diminished its competitiveness.

(March 18, 2016) telegeography.com

Telecoms watchdog the Post and Telecom Administration (Post-og Fjarskiptastofnun, PTA) has rejected Vodafone Iceland's (Fjarskipti's) request to extend its concession to operate Multichannel Multipoint Distribution Service (MMDS) in the 2500MHz-2690MHz frequency band until December 2018. The regulator said that it plans to assign the aforementioned frequencies for the provision of 4G LTE services in 2016, due to high demand for 4G suitable spectrum. To that end, Vodafone will be required to vacate the band by July 1, 2017. The telco is currently authorized to utilize all 23 channels, each with a bandwidth of 8MHz, for MMDS television services in the south and southwest of the country. Previously, Vodafone was granted a two-year extension (until December 2016) to its MMDS concession in June 2014.

(March 11, 2016) telegeography.com

India



A telecoms tribunal in India has struck down a decision by the Department of Telecom (DoT) calling for Sistema Shyam Teleservices Ltd (SSTL) to pay a spectrum levy of INR35 billion (\$610 million), saying the same rules need to be applied to all operators. The Telecom Disputes Settlement & Appellate Tribunal found the government had relaxed the differential pricing norm in Reliance Jio's case and allowed it to convert its non-contiguous 800MHz spectrum into contiguous spectrum in some regions. The tribunal added that Jio was allowed to reconfigure/rearrange its spectrum blocks with Reliance Communications' non-liberalized spectrum, so there doesn't appear to be any reason why SSTL should be treated differently, the Times reported. The DoT can

challenge the order in court, but department officials said they are still studying it and haven't made a decision. India's fourth largest operator RCom announced in November it would acquire smaller rival SSSL through a stock swap, which would give it an additional nine million subscribers and extend its 800MHz spectrum to an additional eight service regions. The latest decision would allow SSSL to finally convert its non-contiguous 800MHz spectrum into contiguous spectrum ahead of the close of the merger. SSSL fought the DoT last year when it ordered the operator to pay the additional INR35 billion levy to reconfigure the non-contiguous spectrum, citing a clause in the March 2015 auction rules. When SSSL approached the tribunal last year, it noted that previous auctions had allowed reconfiguration of spectrum with other operators without an additional charge, the Times said. (March 7, 2016) The Economic Times

Kenya



Francis Wangusi, Director-General of Kenya's Communications Authority (CA), has disclosed that the authority has received a letter from Orange requesting the transfer of its shares in Telkom Kenya to African private equity firm Helios Investment Partners. However, the official stated that the CA will grant its approval to the transaction only after Orange's debt of KES1.5 billion (US\$15 million) in licensing and spectrum fees for the period 2014-2016 is cleared. Wangusi added that the struggling telco will be issued with another invoice for unpaid licensing/spectrum fees worth nearly KES800 million in July; the regulator is reportedly also considering imposing penalties for 'misuse of frequency and failure to meet set quality standards'. In November last year the French company announced the signing of an agreement with Helios for the sale of its entire 70% stake in Telkom. Under a new deal that has been negotiated as part of Orange Group's planned exit from the country, the Treasury of Kenya and Helios entered discussions in early 2016 for a 10% stake in Telkom, with the treasury aiming to increase its stake in the Kenyan firm to 40%. The government will not pay any money for the additional 10% stake, but instead has agreed not to exercise its pre-emptive rights to buy Orange's 70% shareholding. (March 8, 2016) The Daily Nation

Maldives



The Communications Authority of Maldives (CAM) has announced the introduction of mobile number portability (MNP) across the island nation, enabling customers of the country's two wireless network operators – Dhiraagu and Ooredoo Maldives – to retain their number if they switch provider. Haveeru Online cites Home Affairs Minister Umar Naseer as saying that the two companies have invested USD3 million in the implementation of MNP. Consumers are able to transfer their number once every 90 days for a porting fee of MVR200 (USD12.9) each time. MNP was originally slated for launch on 31 July 2015, but this deadline was missed due to delays in importing the portability equipment, which had to be brought in from abroad.

(March 7, 2016) telegeography.com

Mexico



The bidding process for Mexico's shared network has been postponed as the communications ministry said it needs more time to deal with "the number and complexity of queries and requests for clarification submitted by the contestants," El Universal reported. The terms of the bid were released on January 29. The Secretariat of Communications and Transport wanted to have a meeting to formulate responses to the queries on March 22, but moved the date to 6 April as it needs more time. This caused the deadline for proposals to be moved from August 8 to September 8, and the decision on winners to be announced on September 28 instead of August 24. Interested suppliers include Cisco/Ericsson, Huawei, Nokia, China Telecom, Motorola Solutions and Alestra. Requirements to take part in the process include having assets worth \$890 million and a projected model for the next 10 years. The shared network is a result of the completion of Mexico's digital switchover in December, which freed up the 700MHz band for a shared 4G network. (March 24, 2016) mobileworldlive.com

Mexico's Secretariat of Communications and Transportation (SCT) is set to announce the winning bidders of its tender to build a national shared mobile network on 28 September, over a month later than planned said SCT head of telecoms policy Ezequiel Gil Huerta. The SCT initially said it would announce its decision on August 24 but the sheer number and complexity of the bids submitted has resulted in another postponement to the long-delayed project. The country formally launched the shared network tender in January, announcing that the winning bidder will be awarded 90 MHz of spectrum in the 700 MHz band and a 20-year public-private partnership to build the network in exchange for a commitment to cover at least 85 percent of the population. In July the SCT said it had received a total of 39 expressions of interest to roll out and operate the shared network from providers including Alcatel-Lucent, Ericsson, Cisco Systems, Huawei, Nokia, China Telecom, Motorola Solutions and Alestra.

(March 23, 2016) El Universal

Mexico's Federal Telecommunications Institute (IFETEL) has confirmed the precise Advanced Wireless Services (AWS) spectrum blocks that were awarded to America Movil (AM)-backed Telcel (registered as Radiomovil Dipsa) and AT&T Mexico (registered as AT&T Comunicaciones Digitales) last month. AT&T scooped paired AWS-1 spectrum in the 1730MHz-1755MHz/2130MHz-2155MHz bands, while Telcel has been allocated spectrum at 1710MHz-1730MHz/2110MHz-2130MHz, as well as AWS-3 spectrum in the 1760MHz-1780MHz/2160MHz-2180MHz bands. The two companies now have 30 days within which to pay their preliminary license fees, although the full cost of the concessions will be spread over the course of the license's 15-year lifespan. Initial payments have been set at MXN2.1 billion (US\$117.4 million) for Telcel and MXN1.0 billion for AT&T. In total, the process will generate MXN43.7 billion for the Mexican government, of which Telcel will pay MXN31.0 billion and AT&T MXN12.7 billion.

(March 4, 2016) telegeography.com

Mozambique



Mozambique's three mobile network operators have jointly announced that they have disconnected one million accounts for which users have failed to register the correct details. The disconnection affects SIM cards which were acquired before 20 November 2015; cards bought after that date can now only be activated once the customer submits the required information, which includes user's name, identity card number, date, place of issue and validity, phone number, serial number of the pre-paid SIM card, address and signature. The government has been trying since 2010 to force cellcos to register all SIM details, but operators mCel, Movitel and Vodacom repeatedly called for more time to complete what they say has been an enormous task. Mozambique was home to an estimated 18 million mobile subscribers at the end of September 2015, with users fairly evenly split between the three providers. New regulations mean that SIM cards can now only be bought from authorized dealers, which could seriously affect future take-up in rural areas, where users previously relied on itinerant vendors. (March 7, 2016) APA

Myanmar



Plans to auction additional spectrum in the 2600MHz band are now expected to be delayed, after the Ministry of Communications and Information Technology (MCIT) received an unexpectedly wide 'range of contrasting views on the process,' said a senior MCIT official. The ministry was due to publish a framework for the spectrum sale before the end of February, with the auction to take place in late March, but was caught off guard by the feedback it received from the industry in its public consultation. Whilst the government is keen to sell off the airwaves as quickly as possible, ahead of the handover to a new administration at the end of March, cellcos Telenor and Ooredoo have argued that the tender should wait until a spectrum roadmap is finalized. Although Posts and Telecommunications director U Than Htun Aung stressed that the auction would take more time to finalize, but had not been 'officially delayed', Ooredoo Myanmar CEO Rene Meza, pointed out that: 'With the guidelines being delayed this much, the likelihood of all operators being ready for the auction is probably challenging.' (March 8, 2016) The Myanmar Times

Myanmar's telecom ministry may need to delay a planned auction of 2600-MHz spectrum due to a conflict over whether the spectrum should be allocated before the regulatory framework is finalized. The Ministry of Communications and Information Technology (MCIT) has intended to auction 140MHz of 2600-MHz spectrum by the end of March. But after industry consultations, the government has acknowledged that it may need to delay the process. The consultations brought to light a conflict between those believing that the spectrum should be allocated as quickly as possible to ensure the nation's telecom operators have sufficient spectrum to meet demand, and those believing that a spectrum roadmap should be completed first to give greater clarity to the industry. Both Telenor Myanmar and Ooredoo Myanmar have expressed a belief that the spectrum roadmap should be released before the auction. MCIT posts and telecom director U Than Htun Aung acknowledged that the ministry didn't expect such a range of conflicting views on the matter, and that the auction may need to be delayed as a result of the

conflict. The ministry had last indicated that it planned to conduct the auction on March 24.

(March 7, 2016) telecomasia.net

New Zealand



New Zealand's anti-trust authority the Commerce Commission (ComCom) has formally approved an application by Spark New Zealand (formerly Telecom New Zealand) to purchase the management rights to 70MHz worth of radio spectrum in the 2300MHz band from Craig NZ and Woosh NZ. In a media release on its website, the authority confirmed Spark's intention to use the 2300MHz spectrum to increase and strengthen its fixed-wireless product offerings, noting that as an adjunct to its application, ComCom had 'considered whether the acquisition would affect competition for urban and rural broadband customers'. Having done so, the chairman of the commission, Dr. Mark Berry, ruled that it 'is satisfied that the acquisition will not have, or would not be likely to have, the effect of substantially lessening competition in the affected markets'. Dr. Berry pointed out that while the acquisition may result in Craig NZ not expanding its existing wireless service, it is confident that access to the 2300MHz spectrum will enable Spark to deliver a wireless alternative to rural users and to those in urban areas without access to fiber-optic broadband. 'As a result, this acquisition may have some pro-competitive effects in the market and improve the quality of service to customers on poor quality copper lines. The main competitive tension in broadband markets would also continue,' Dr. Berry said. A public version of the written reasons for the decision will be available shortly on the Clearances Register. (March 24, 2016) telegeography.com

Nigeria



The Nigerian Communications Commission (NCC) has lifted the suspension on regulatory services to MTN Nigeria that had been in force since October 2015, MTN Group announced in a Johannesburg Stock Exchange statement. The restoration of regulatory services will enable mobile market leader MTN Nigeria to 'pursue the necessary approvals, in accordance with the NCC regulatory process, for new tariff plans and promotions as well as other regulatory matters', the South African firm said. The Nigerian watchdog suspended regulatory services to MTN after the cellco was fined for failing to meet a deadline to disconnect around 5.1 million unregistered subscribers last year. The NCC agreed to reduce the NGN1.04 trillion (US\$5.2 billion) penalty by 25% to NGN780 billion in December, although MTN subsequently launched legal action against the fine. In January the Federal High Court in Lagos adjourned the legal challenge until 18 March, in order to enable the parties to try and settle the matter out of court, and in the latest development on the matter, MTN announced last month that it had withdrawn its lawsuit and had made a 'good faith payment' of NGN50 billion to the federal government with a view to reaching a possible settlement. The South African firm says it is continuing to engage with the Nigerian authorities 'in an attempt to ensure an amicable resolution to this matter'.

(March 16, 2016) telegeography.com

Nigeria's National Assembly is seeking to impose a 9% tax on service fees payable by users of electronic communication services. According to PricewaterhouseCoopers (PwC) Nigeria, if enacted into

law, the Communication Service Tax Bill (CST) 2015 will impose charge and collect tax on services including voice calls, SMS, MMS, data and pay-TV, and will be borne by the customers. Service providers, meanwhile, will be required to file monthly tax returns with the Federal Inland Revenue Service (FIRS) with penalties for non-compliance. PwC notes that if it is introduced, the CST would further increase the tax burden on both service providers and customers, as multiple taxation already exists in the sector in the form of an IT tax on profits, an annual operator levy on turnover and VAT on the consumption of telecoms services.

(March 15, 2016) telegeography.com

Nigeria's telecoms regulator shared its plans to auction off spectrum in the 2.6 GHz band for mobile broadband services in May, restarting a process it put on hold a year ago. The Nigerian Communications Commission (NCC) said it aims to carry out the auction during the week beginning May 16, 2016 and has given interested parties until the close of business on 29 April to submit their applications. The regulator plans to sell 14 lots of 2 x 5 MHz of frequencies at a reserve price of US\$16 million per lot, meaning it expects to generate a minimum of \$224 million (€202 million) from the process, presuming all lots are taken up. The NCC has been working on the 2.6-GHz sale for some time. It has a history of postponing the auction and appears to have reserved the right to do so again. "The timetable is subject to change," the regulator said in the information memorandum it published on Friday. "Interested parties are therefore advised to visit the Commission's website on a regular basis to ensure they have the latest information." The NCC had intended to carry out the auction in late 2014, but delayed it until May 2015 for administrative reasons, saying it wanted to ensure the licenses would be available to the winners as soon as the process was concluded. Then, in March last year, it delayed the auction indefinitely, without giving a reason for its decision. Presuming it goes ahead as planned, the auction will be open to existing and new operators alike, although any spectrum winner that does not already hold a unified access service license (USAL) will be required to pay 374.6 million naira (€1.7 million/\$1.9 million) to obtain one. Nigeria is home to four GSM operators, which together served 148.7 million customers at the end of 2015. MTN leads the market with a 42% share, while Glo and Airtel claim 22% and 21% respectively, and EMTS brings up the rear with 15%. The country also has 2.1 million CDMA users and fewer than 200,000 fixed and fixed wireless customers.

(March 11, 2016) totaltele.com

MTN proposed to pay \$1.5 billion of its \$3.9 billion fine to settle an ongoing dispute with Nigerian regulators, reports Bloomberg. The fine, which originally stood at \$5.2 billion, relates to the company's failure to cut off unregistered SIM cards from its network in the country, amid terrorism concerns, and was issued by regulator Nigerian Communications Commission (NCC) in October last year. Latest developments indicate a document was handed to reporters in the Nigerian Senate revealing the settlement offer, and comes after the country's committee on communications concluded that negotiations must continue between the operator and minister of communications, Adebayo Shittu. Earlier this week, Nigerian president Muhammadu Buhari, speaking at a joint press conference with South African counterpart Jacob Zuma, said talks between MTN and the state were still ongoing. MTN last month dropped a legal case against the fine, and also made a "good faith"

payment of \$250 million to Nigeria, where it operates as the country's largest operator. MTN, the NCC and Shittu are reportedly due to report back to the senate in two weeks. (March 11, 2016) mobileworldlive.com

The Nigerian Communications Commission (NCC) has resumed the process for its planned auction of ten-year nationwide licenses comprising 2.6GHz spectrum. The auction was originally due to take place in December 2014, and was postponed for a second time in March last year 'for administrative reasons'. The NCC has now published a revised Information Memorandum (IM) on its website, outlining details of the auction requirements and process, as well as the amended auction timetable. The NCC is offering 14 lots of 2x5MHz FDD paired spectrum in the 2500MHz-2570MHz and 2620MHz-2690MHz bands (totaling 2x70MHz) for auction. The spectrum is available on a technology-neutral basis and each lot has a reserve price of US\$16 million; winning bidders that do not currently hold a Unified Access Service License (UASL) must acquire one for an additional fee of NGN374.6 million (US\$1.9 million). Successful bidders will be required to launch commercial services within one year of the license award and must meet certain coverage obligations. Under the revised timetable, applicants have until April 29, 2016 to submit all the necessary documentation ahead of the start of the pre-qualification stage on May 6. The auction is due to take place during the week commencing May 16, with the publication of the final result expected on June 13. The 2.6GHz auction is part of the NCC's efforts 'to deepen competition and improve broadband penetration in the country towards achieving the goals of the National Broadband Plan', which was approved by President Jonathan in June 2013.

(March 11, 2016) telegeography.com

Serbia



Telecoms watchdog the Republic Agency for Electronic Communications (RATEL) has invited expressions of interest for spectrum in the 3400MHz-3600MHz and 3600MHz-3800MHz bands for broadband fixed wireless access (BFWA) and mobile/fixed communications networks (MFCN). Interested parties have been given 20 days to submit applications, with details of their desired frequency band and block size as well as the technology the airwaves would be used for, including whether the service would be fixed, mobile or nomadic and the intended coverage area and planned number of base stations. (March 2, 2016) telegeography.com

Singapore



Singapore broadband access provider MyRepublic, which is vying to become the city-state's fourth mobile carrier, says that its lower cost base means that it could still enter the black within three years of securing a license, even with a relatively small subscriber base. The ISP – backed by Indonesian telco Sunshine Network and French telecoms billionaire Xavier Niel – is hopeful of signing up 250,000 mobile customers in its first year of operations, if it wins the upcoming spectrum auction later this year, with CEO Malcolm Rodrigues said that MyRepublic is looking to secure a 9% market share, equating to more than 700,000 subscribers, by the end of year five. To achieve this, the newcomer will foreground a range of unlimited mobile internet data plans, he said. MyRepublic is promising a return to the days when

people could browse the web with unlimited data plans – services that Singtel, StarHub and M1 stopped providing in 2012, to the dismay of their customers. Mr. Rodrigues estimates that his company will need approximately SGD300 million (USD214 million) – or less than a third of the ‘conventional’ infrastructure cost – to build out a 4G LTE network island-wide, as MyRepublic intends to utilize facilities already deployed by its broadband internet business. ‘We’ll have a much faster network than the existing players because our network will be less dense,’ he said, adding: ‘We don’t have legacy issues, so our operating costs will be lower.’ The Singaporean broadband disruptor strengthened its bid to secure the nation’s fourth mobile license, launching a 4G data trial in the Jurong Lake District area in October last year. In the two-month live trial, the ISP allowed 1,000 selected users to test its 4G voice and data services using a free Xiaomi 4 Smartphone loaded with a MyRepublic SIM card. Singapore’s telecoms industry watchdog the Infocomm Development Authority (IDA) has set the stage for an auction of mobile airwaves in the third quarter of 2016. Last month the regulator confirmed its plan to sell off 235MHz of spectrum and has set aside 60MHz of bandwidth in the 900MHz and 2300MHz bands for a new entrant, ahead of a general sale for the three incumbents. To entice a would-be newcomer, the IDA is setting a lower reserve of SGD35 million on the fourth-telco spectrum, representing a 45% discount on the standard reserve price. Along with MyRepublic, another local firm, OMGTel, a unit of wireless systems firm Consistel, has also expressed interest in the auction.

(March 2, 2016) Bloomberg

South Africa



South African company MTN is in talks with the telecoms industry regulator in Nigeria to reduce a \$3.9 billion fine imposed for failing to disconnect unregistered SIM cards from its local network, Nigerian President Muhammadu Buhari said. He made the comment at a joint news conference with his South African counterpart Jacob Zuma at the start of a two-day visit by Zuma. Africa’s largest mobile networks operator, which makes 37 percent of its sales in Nigeria, its biggest market, last month said it had made a \$250 million “good faith” payment towards reaching a settlement after dropping a legal case against the Nigerian Communications Commission (NCC). “MTN had withdrawn their case from the court and decided to go back and renegotiate the fine, which they consider very stiff, with NCC to find ways the fine can be reduced and given time to pay gradually,” Buhari told reporters in the capital, Abuja. Buhari did not say when talks began and Zuma did not comment on the matter. MTN spokesman Chris Maroleng declined to comment. Nigeria imposed a deadline on mobile operators to disconnect unregistered SIM cards, which MTN missed, amid fears the lines were being used by criminal gangs, including militant Islamist group Boko Haram. The fine, originally set at \$5.2 billion on the basis of charging \$1,000 for each unregistered card remaining connected, is the latest sign of tension between the countries which vie for economic and political dominance in Africa. A number of South African companies have said they will leave Nigeria, citing currency restrictions imposed by the central bank in its bid to defend the naira as the country battles the economic crisis caused by the plunge in oil prices. But Zuma said Nigeria and South Africa were forging closer ties. “Our two countries have

signed over 30 bilateral agreements and memoranda of understanding,” he said, in areas including trade, industry, security and immigration. “We have directed the relevant ministers to move with speed in implementing all signed agreements,” said Zuma, who travelled with around 30 business leaders and seven ministers. Military spokesman Brigadier General Rabe Abubakar said South Africa’s defense forces chief also visited his counterpart and promised to help Nigeria with “capacity building, an exchange program and logistics support” to help fight Boko Haram. Relations between the countries have also been strained by claims of South African xenophobia, with Nigerians alleging that Pretoria subjects them to harsh visa restrictions. Zuma said he and Buhari agreed to “work on relaxing visa issuance”. South Africa, like Nigeria, has been hit by the downturn in commodity prices with its treasury forecasting that the economy may expand by just 0.9 percent this year, the lowest rate since South Africa emerged from recession in 2009. In a speech to parliament, Zuma said the downturn had “exposed the vulnerability of our economies and currencies”, increasing the need for greater cooperation between Africa’s two biggest economies.

(March 8, 2016) reuters.com

South Korea




South Korea’s Fair Trade Commission ordered the country’s three mobile operators — SK Telecom, KT and LG Uplus – to pay millions of customers KRW267 billion (\$230 million) in compensation for misleading them over their “unlimited” data, voice and SMS packages. The Commission found that, between 2013 and 2015, services the three operators claimed were “unlimited” were in fact limited, the Korea Herald reported. The operators, for example, throttled data speeds on unlimited LTE data plans when customers exceeded data caps they set. They also levied additional charges or restricted access to services when users of unlimited voice calls or SMS plans exceeded monthly quotas. The three operators agreed on a compensation package that would give 7.4 million unlimited data customers 1GB-2GB LTE data coupons and 25 million unlimited voice subscribers 30-60 minutes of free calls. In addition, SK Telecom and KT will refund additional charges they passed on to subscribers when they exceeded limits on text messaging and voice calls. Customers will be given until 26 April to accept the compensation, which will be paid out in June and July. This is the first time companies involved in unfair business practices have been required to compensate customers directly, the JoongAng Daily reported. In the past, firms were fined by the government and affected customers had to sue the companies for compensation. The Commission, which started the probe in October, was limited to fining each operator KRW500 million (\$430,000), which many consider merely a slap on the wrist. (March 24, 2016) mobileworldlive.com

South Korea’s three mobile operators have put aside their usual fierce rivalries and teamed up to fight the record high reserve price the Ministry of Science, ICT and Future Planning (MSIP) set for the 2.1GHz band in next month’s auction. The MSIP put the base price of 20MHz of the spectrum at KRW382 billion (\$309 million) for a five-year license. The reserve price for the 140MHz of spectrum being sold in the auction exceeds KRW2.5 trillion. The three operators — SK Telecom (SKT), KT and LG Uplus – joined forces after the regulator announced

the highest ever reserve price for a spectrum auction last Friday. The operators said the auction is a huge burden at a time when they need to expand investments to build 5G networks, the Times reported. SKT and KT currently operate 4G services on 60MHz and 40MHz in the 2.1GHz band, respectively. The 20MHz to be auctioned is held by SKT. The MSIP said it will reallocate the remaining 40MHz based on the auction price for the 20MHz block. Although LG Uplus won't be affected by the regulator's reallocation of the 2.1GHz band, it has complained that the reserve price is the highest in history and questioned why the 20MHz block has a five-year license, while other bands up for sale will be auctioned with 10-year licenses. The company claimed a five-year term is not enough for operators to make a return on their investment.

(March 8, 2016) The Korea Times

Thailand



Thailand's telecom regulator said it planned to hold another round of auction for fourth generation (4G) mobile spectrum in late June after Jasmine International failed to pay an initial payment for the mobile license. The regulator will review starting price for the 900MHz spectrum in June and existing operators including True Corp, have the right to join the auction, Takorn Tantasith, secretary general of the National Broadcasting and Telecommunications Commission, told reporters. The regulator will hold a board meeting on April 12 to approve the new schedule of auction plan, he said. Broadband Internet Company Jasmine failed to get financing for the license it won at 75.65 billion baht (\$2.1 billion) in an auction in December.

(March 23, 2016) timesofindia.indiatimes.com

The top bidder in Thailand's recent radio spectrum auction has missed a deadline to make its initial payment throwing the whole process into doubt. Jasmine International surprised many when it bid the highest amount, of RM8.7 billion (US\$2.1 billion) for one of the two 900MHz spectrum licenses last December -- sending its shareprice plunging at the price it paid. With doubts about how the company would afford the license fee swirling, the regulator has now confirmed that it has missed the deadline for its initial payment. Takorn Tantasit, Secretary General of Thailand's National Broadcasting and Telecommunications Commission confirmed that a new auction now needs to be held as the license has been voided by the non-payment. He also confirmed that Jasmine would also forfeit the RM72.30 million (US\$18 million) deposit that it submitted to bid in the auction. The regulator is also considering if it can claim compensation from the company. The country's three top mobile networks, AIS, DTAC and True all saw their shares jump on the news of Jasmine's problems.

(March 22, 2016) cellular-news.com

Telecoms regulator has blocked plans by DTAC to refarm some of its unused 1800 MHz spectrum for LTE services. The regulator said that the proposal would have broken the "concession agreement between DTAC and its concession owner CAT Telecom," DTAC currently leases 50MHz of 1800MHz spectrum from CAT Telecom under an agreement which expires in 2018. It returned 5MHz of spectrum last year, but is still left with 20MHz of unused spectrum. The company wanted to reuse it for LTE services, but the regulator wants to see contracts between the two companies before it

will approve the request. It's not clear at the moment why the two companies had not been able to submit proof that both sides were happy with the plans, but the regulator indicated that it would be agreeable to permit the changes if the documentation is supplied.

(March 7, 2016) cellular-news.com

Timor-Leste



The Timor-Leste government has approved the state's potential purchase of the majority stake in national fixed and mobile operator Timor Telecom (TT) held by Brazilian telecoms firm Oi. According to a government source, Dili will appoint a committee to negotiate the value of the transaction with the relevant parties. The deal involves a 54.01% shareholding in TT, controlled by Telecomunicacoes Publicas de Timor (TPT), in which Oi owns 76%, in addition to a direct 3.05% stake held by PT Participacoes SGPS. The Timorese government currently holds a 20.59% stake in TT, with the remaining shareholders being VDT Operator Holdings (17.86%) and Timorese businessman Julio Alfaro (4.49%).

(March 11, 2016) Macauhub

Ukraine



The Antimonopoly Committee of Ukraine (AMCU) has ordered the Ukrainian State Centre of Radio Frequencies (UCRF) to cancel all decisions taken after the disclosure of proposals in the tender for mobile number portability (MNP) services. If the decision stands, it will mean the result of the UCRF's MNP tender -- in which domestic IT company Dialink was selected to design, develop and implement an MNP database in late-January -- will effectively be annulled and the process must be repeated, further delaying the introduction of number portability in Ukraine. The AMCU received two official complaints about the UCRF's MNP selection process: from qualified bidder T4B (a Polish ICT and electronics group) and SI Center, a Kiev-based IT security solutions specialist which had its application disallowed for violation of tendering rules. In a post on its company website dated 18 March, SI Center states that the antitrust authority upheld its appeal against the MNP selection process, adding: 'Pursuant to the decision of the Antimonopoly Committee [the UCRF] will have to carry out a new assessment [to] select a new winner of the tender'. (March 22, 2016) BizLiga

Ukrainian nationwide fixed network operator Ukrtelecom has won the right to extend its existing local telephony operating license for at least five years after the Kiev Administrative Court of Appeal overturned a ruling from the National Commission for the State Regulation of Communications & Informatization (NCCIR or NKRZI) which had insisted that the telco pay for a new license on the grounds that the existing concession was issued under outdated regulatory terms. Under the court's decision of 10 March, the fixed local access license will be renewed from April 3. In December 2015 the NCCIR refused to renew the concession (last reissued in July 2011) as it said the service definitions specified in the license were inconsistent with current legislation, and told Ukrtelecom to pay a new licensing fee.

(March 18, 2016) BizLiga

United Kingdom



The UK's Department for Culture, Media & Sport (DCMS) has launched a consultation aiming to give the Secretary of State an explicit power to introduce a broadband Universal Service Obligation (USO), while also requiring local telecoms regulator OFCOM to review the USO as and when appropriate to ensure that it 'continues to reflect connectivity needs'. The consultation follows UK Prime Minister David Cameron's November 2015 announcement that the government intends to implement a new broadband USO which would give people the right to request an affordable broadband connection, at a minimum speed, from a designated provider, up to a reasonable cost threshold. Alongside primary legislation allowing for the introduction of a broadband USO, secondary legislation will be developed setting out the scope of the obligation, including specific requirements and guidance for the design of the USO, which OFCOM would then be responsible for implementing. The DCMS is not proposing to specify a minimum speed, quality or other detailed criteria in its primary legislation, noting that secondary legislation can be revised more easily and is therefore 'a more appropriate means to specify the minimum level of service'. The initial aim, meanwhile, is for the minimum speed for the broadband USO to be set at 10Mbps. OFCOM reportedly supports this plan, while the consultation paper also says evidence suggests that in 2016 the digital needs of a typical household could be met with this downlink rate. A public consultation on the matter will run until April 18, 2016, with the DCMS saying it is particularly seeking views from the electronic communications industry and both residential and business customers. (March 24, 2016) [telegeography.com](#)

U.K. regulator aims to make it easier for companies to roll out IoT services in select VHF bands. OFCOM confirmed that 10 MHz of VHF spectrum is suitable for IoT services, and announced new measures designed to encourage the use of those airwaves. The announcement follows a consultation launched by the U.K. telco regulator in September 2015. Its aim was to drive the rollout of IoT services that use the 55 MHz-68 MHz, 70.5 MHz-71.5 MHz, and 80 MHz-81.5 MHz bands. These frequencies are typically used for civil two-way radio communication by private individuals, hospitals, factories, and taxi firms, among others, and are available via a Business Radio (BR) license, which anyone can apply for. OFCOM was keen to emphasize that BR spectrum can be used for more than just voice services, and so its consultation sought views on whether it should devise a new type of license. OFCOM concluded that a new license is not necessary, and that its current BR license is appropriate for providing access to the aforementioned spectrum for IoT and machine-to-machine (M2M) services. However, "we recognize that this might not be clear to stakeholders so we will launch a new product that makes specific provision for IoT/M2M," OFCOM said. "We will also make a web resource available that will provide information and help for those seeking to use spectrum for IoT." The spectrum is particularly suitable for connectivity services targeting the rural, coastal/maritime, and energy sectors, OFCOM said. (March 23, 2016) [totaltele.com](#)

OFCOM said the 700 MHz frequency band in the UK could be cleared for use by mobile data services no later than the second quarter of 2020, after the telecoms and media regulator said analysis suggested that benefits to

users would be greater if the spectrum were available at an earlier date than originally planned. This would also bring the UK in line with proposals made by the European Commission that more spectrum should be made available for mobile services in this frequency band across the European Union by 2020. The UK regulator has now launched a consultation on accelerating the clearance of the 700 MHz band, which is currently used by digital terrestrial TV (DTT) services. The closing date for responses is May 20, 2016. OFCOM first announced in November 2014 that it had decided to make spectrum in the 700 MHz band available for mobile data as soon as practicably possible, in alignment with the approach by the European Union. "Initial plans indicated that it would be possible to make the band available by the end of 2021. However, our analysis suggests that benefits to citizens and consumers would be greater if it was available sooner," OFCOM said. "In this document we set out proposals which would enable us to bring forward the point at which this spectrum is nationally available for mobile data by up to 18 months -- to a target of no later than Q2 2020." The regulator noted that this would involve changing the frequencies used by some temporary DTT services, known as interim multiplexes, which operate in the 600 MHz band (550 - 606 MHz). It is also considering making available 25 MHz of spectrum in the 700 MHz band -- known as the "centre gap" -- for mobile data. OFCOM also revealed that it has updated its code of practice for spectrum clearance activities to take account of 700 MHz clearance. The UK regulator last revised the code in 2010 to include the work that licensees needed to carry out in relation to the clearance of the 800 MHz band. In February, the European Commission (EC) stepped up efforts to coordinate the use of 700 MHz spectrum for mobile services only, proposing that more spectrum is made available for mobile services in this frequency band across the EU by 2020. The recent World Radiocommunication Conference in November 2015 (WRC-15) confirmed that the 700 MHz band should be allocated to both the broadcasting and mobile service in Region 1 (Europe and Africa) as of 2015. However, the view of the EC is that the 700 MHz band "offers a rare opportunity for near-global harmonization of this frequency band for wireless broadband use", and wants to secure it for the future development of 4G and 5G mobile services across the EU. The commission proposed that the 700 MHz band should be assigned to mobile broadband by Jun. 30, 2020 at the latest in all EU countries. France and Germany have already authorized the use of the 700 MHz band for mobile services, while Denmark, Finland, Sweden as well as the UK have outlined plans to repurpose the 700 MHz band in the next few years. (March 14, 2016) [fiercewireless.com](#)

CK Hutchison, the owner of mobile operator Three UK, will attempt to ease European Commission (EC) concerns over its proposed GBP10.25 billion (US\$14.29 billion) takeover of Telefonica's O2 UK at a meeting on March 7. The closed-door hearing, which has been organized by the EC, will also be attended by the likes of British pay TV Company Sky, Liberty Global-owned cable network operator Virgin Media, TalkTalk, Vodafone and BT, the sources said, adding that French billionaire Xavier Niel's Iliad may also take part in the proceedings. Earlier this year, British communications regulator OFCOM had urged European authorities to block the proposed merger of O2 and Three, amid concerns that the tie-up could lead to a rise in bills for consumers. The EC, which opened an in-depth investigation of the deal in October last year, is expected to make a final decision on the matter this month. (March 2, 2016) [reuters.com](#)

United States



US cable giant Comcast has confirmed recent speculation that it will participate in the Federal Communications Commission's (FCC's) 600MHz Broadcast Television Spectrum Incentive Auction, clarifying that the cableco has registered to bid under the 'CC Wireless Investment' name. In related news, satellite TV provider – and long-time wireless market aspirant – DISH Network may also participate in the auction, despite landing in hot water for its tactic of bidding via Designated Entity (DE) companies in last year's AWS-3 spectrum auction; DISH attempted to claim more than USD3 billion in small business discounts due to a technicality. Regardless, Fierce Wireless has reported that one company on the 600MHz bidding list, ParkerB Wireless, is registered under DISH's Denver-area address. FCC has released a list of 104 applicants, comprising 69 complete applications and 35 incomplete applications. Applicants in the 'incomplete' category – including the likes of AT&T Mobility – have until 6 April to re-submit their paperwork. (March 22, 2016) [Fierce Cable](#)

FCC chairman Tom Wheeler said broadband operators must obtain opt-in consent from subscribers before making certain use of their data, although his proposals were more lenient in other areas. The proposals come at a time of heightened interest in privacy and security matters in the mobile industry. They cover mobile and fixed broadband operators but not internet firms such as Facebook and Twitter, which could prove controversial. Today, companies are mostly free to collect subscriber data for their own purposes, and even to share with third parties. The proposal comes in the same week as the FCC fined Verizon US\$1.5 million for violating subscribers' privacy through the use of so-called supercookies. Wheeler's proposal separates the use and sharing of information into three categories. Firstly, there is consent inherent in a subscriber's decision to purchase a provider's service. Under the Wheeler proposal, customer data necessary to provide broadband services, and for marketing the type of broadband service, would require no additional customer consent beyond the subscriber-provider relationship. For example, data can be used to bill for telecommunications services and ensure email arrives at its destination, and a broadband operator may use the fact that a consumer is streaming a lot of data to suggest they may consider upgrading to another speed tier of service. Secondly, broadband operators would be allowed to use customer data for marketing other communications-related services and to share customer data with their affiliates that provide communications-related services, unless the customer opts out. Finally, all other uses and sharing of consumer data would require an express opt-in consent from the subscriber, which is potentially limiting for operators. Wheeler also proposes a data security standard and minimum data breach notification requirements. The proposal will be voted on by the full commission at a 31 March open meeting and, if adopted, would be followed by a period of public comment. (March 11, 2016) [mobileworldlive.com](#)

The head of the U.S. Federal Communications Commission circulated a final proposal seeking approval for a \$9.25 monthly subsidy for low-income Americans to get broadband Internet access. Since last year, the FCC has been considering revamping the \$1.5 billion annual program, called Lifeline, which has helped lower income Americans get access to telecommunications

technologies since 1985. FCC Chairman Tom Wheeler has said he wants to give those receiving the subsidy a choice of using it for phone services, high-speed Internet, or both. But households will get only a single \$9.25 a month subsidy that would apply to both services. The program currently helps about 12 million U.S. households afford landline and mobile phones, according to agency estimates. The commission will vote on the proposal at its March 31 meeting and will set a budget of \$2.25 billion a year indexed for inflation for the program. The additional budget would allow more than 5 million additional households to take advantage of the program, but the FCC does not expect the entire budget will be used immediately. The FCC estimates that some 95 percent of U.S. households with incomes of \$150,000 have access to high-speed Internet, while less than half of households with incomes lower than \$25,000 have Internet access at home. FCC Commissioner Jessica Rosenworcel said the lack of broadband access leads to a "homework gap" for lower income Americans because most teachers assign homework that requires Internet access. "Five million American families with students at home go without regular broadband access," she said. "We need to bridge this gap and fix this problem because our shared economic future depends on it." The proposal requires phone providers to offer unlimited talk time for all plans for subsidy users after December 2016 and by the end of 2019 providers would have to offer both phone and broadband service to qualify under the program. The proposal aims to crack down on fraud by creating a national eligibility verifier as a neutral third-party entity that removes the opportunity for providers to enroll ineligible subscribers. FCC Commissioner Michael O'Rielly said in a blog post last week that Wheeler's proposal would "massively expand the size and scope" of the program that would "balloon a program plagued by waste, fraud, and abuse." O'Rielly noted that only 40 percent of eligible Lifeline recipients currently take advantage of the program.

(March 8, 2016) [reuters.com](#)

T-Mobile US has spent more than US\$1 billion purchasing 700MHz A block spectrum licenses, Fierce Wireless reports, citing a filing with the Securities and Exchange Commission (SEC). The filing reads: 'In January 2016, T-Mobile acquired spectrum licenses covering nearly 20 million people in seven major metropolitan markets for approximately USD600 million in cash. Additionally, in January and February 2016, T-Mobile entered into agreements with multiple third parties for the exchange of certain spectrum licenses and the acquisition of 700MHz A block spectrum licenses covering approximately 48 million people, for approximately USD700 million in cash'. While the precise details remain unclear, Fierce claims that the concessions cover major areas of Utah, New Mexico and parts of the Southeast. As part of the process, T-Mobile US will relinquish concessions worth around USD200 million. All transactions are expected to close in mid-2016, subject to regulatory approval and other customary closing conditions. T-Mobile currently offers 700MHz 'Extended Range LTE' services in around 170 major metropolitan areas. The cellco bulked up its sub-1GHz spectrum holdings in January 2014, when it bought a substantial package of 700MHz A block spectrum from Verizon Wireless for USD2.37 billion.

(March 2, 2016) [telegeography.com](#)

Zimbabwe



Telecoms operators in Zimbabwe have agreed to an infrastructure sharing policy promoted by the government. Minister of Information, Communication, Technology, Postal and Courier Services Supa Mandiwanzira told that telcos had signed off on the measures and that industry regulator POTRAZ has also submitted the findings from its recent consultation on network sharing. He added that draft legislation to open the way for shared infrastructure has been produced and is due to proceed to the Attorney General's office to ensure that it complies with the requirements of the Telecommunications Act. The government is keen to promote infrastructure sharing as a means of reducing capital expenditure for telcos, with the savings being passed on to end users in the form of cheaper tariffs. Zimbabwe is home to three cellular operators – Econet, NetOne and Telecel – while the fixed line sector is dominated by state-owned TelOne. Mobile market leader – and sole private-sector player – Econet, which controls 80% of equipment already in place across the country, had previously spoken out against enforced network sharing, saying the move would be a 'disguised, unconstitutional form of compulsory acquisition' of its infrastructure, since its closest rival – and the likely main beneficiary of mobile network sharing – is government-owned cellco NetOne (whilst the state also completed a takeover of Telecel earlier this month).

(March 14, 2016) The Herald

The government of Zimbabwe has finalized its US\$40 million acquisition of a 60% stake in mobile operator Telecel from the Netherlands-based VimpelCom group. The government says it has paid the remaining US\$30 million for its stake and the deal has now completed; a US\$10 million deposit had already been handed over by state-owned ISP Zarnet, which is being used as the vehicle for the transaction. It has been reported that the last US\$30 million payment was made by the National Social Security Authority (NSSA) on the government's behalf. VimpelCom had been looking to exit the Zimbabwe market for some time following protracted disagreements over its majority interest in Telecel; under local law, foreign investors are permitted to hold a maximum 49% stake in telecoms operators. There had also been problems concerning Telecel's licence payments. The other 40% of Telecel is owned by a consortium of domestic investors collectively known as Empowerment Corporation. (March 10, 2016) telegeography.com

The government of Zimbabwe is reportedly looking to merge its various telecoms holdings into a single entity in a move designed to avoid duplication, increase efficiency and minimize losses. The Ministry of Information, Communication, Technology, Postal and Courier Services (MICTPCS) is looking to combine some or all of its operations, which include wholly owned units TelOne, NetOne, Zarnet and PowerTel and majority stakes in mobile operator Telecel and ISP Africom. It is not yet known whether Telecel will be included in the deal; last year the government agreed to acquire Vimpelcom's 60% interest in the cellco via Zarnet, but there has been some speculation that the unit will be restructured and a stake sold off to a new overseas investor.

(March 7, 2016) ITWeb Africa



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▼ WHOLESALE NEWS

WHOLESALE UPDATES

Gulf states to slash telecom roaming fees by 40pc

The Gulf Cooperation Council (GCC) will cut telecom roaming charges for making and receiving calls and sending text messages within the six-nation bloc by an average of 40 per cent from April 1, an official said via state media. Last June, GCC members Bahrain, Kuwait, Qatar, Oman, Saudi Arabia and the UAE announced the GCC would steadily reduce charges from April but did not specify by how much. At that time, the bloc said call and text message tariffs would be steadily reduced over three years and data charges over five years. Thursday's statement on the websites of the state news agencies of Saudi Arabia and the UAE quoting Abdullah Bin Juma Al Shibli, GCC assistant secretary general for economic affairs, made no mention of data tariff reductions. The cuts are part of plans for greater economic integration among GCC states, the statement said, predicting they would enable users to save \$1.14 billion. It did not specify over what timeframe. Some Gulf telecom companies have operations in other GCC countries. Saudi Telecom Co controls operators in Kuwait and Bahrain, Kuwait's Zain is also present in Bahrain and Saudi and Qatar's Ooredoo has units in Kuwait and Oman.

Ghana Minister admits new law does not mandate ICH to conduct international traffic

Deputy Communications Minister, Ato Sarpong, has admitted the amended Electronic Communications Act, 2008 (Act 775) which legalizes the establishment of the Interconnect Clearing House (ICH) did not mandate it to terminate international calls. Speaking on the Joy FM's Super Morning Show on March 22, Mr. Sarpong said though the law did not mandate the ICH to handle international calls, it does not prohibit it. He said, "what ICH does everywhere is that it offers a one-stop shop for new operators, existing operators and value added operators to have connection with one operator." On March 17, Parliament passed the Electronic Communications (Amendment) Act, 2008 (Act 775) which gave legal backing to the establishment of the ICH facility for telecom networks to interconnect. It made some major changes in the Act including changing the monopoly status of the ICH making it possible for the NCA to allow multiple ICH facilities to enable competition. The House also removed a provision which granted the ICH operator the license to enter into revenue monitoring services in the operation of its facilities. However,

there was no portion in the law that mandates ICH to route international traffic – a role currently performed by the telecommunication companies. International calls are terminated by telcos themselves who claim they have invested heavily in securing some equipment to enable them do that, however, Mr Ato Sarpong said the ICH operator, which is Afriwave Telecom Ghana would do that as part of its byproduct function. He said: "We have all [government and telcos] agreed and by law that we should establish an ICH for all the operators to be connected to it", adding that this is done in the interest of telcos and Ghanaians as a whole. According to him, by choosing to set up the ICH facility, government is doing what makes "commercial sense in a cost effective ways" for all the stakeholders of the telecommunication industry.

Omantel's fiber-optic cable set to revolutionize telecom in East Africa

Omantel, the Sultanate's leading provider of integrated telecommunication services, has joined in a consortium with several East African telecommunications providers to lay the Gulf to Africa (G2A) undersea fiber-optic cable, which is



set to revolutionize connectivity from Oman to East Africa, including Ethiopia and Somalia. The G2A undersea cable represents the first phase of Omantel's expansion eastwards into the African continent, providing cable connectivity to the Middle East, Asia and Europe and transforming Oman into a communications hub of the Middle East. The G2A undersea cable consortium includes Omantel, Ethio Telecom from Ethiopia and Golis Telecom and the Telesom Company from Somalia. The state-of-the-art cable system, scheduled for completion by the end of 2016, will comprise 1,500km Subsea segment

and a 1,500km terrestrial segment with a capacity 20Tbits with the latest 100G technology. Commenting on the regional and global importance of the G2A project, the vice-president of Omantel Wholesale Sohail Qadir said, "This is the first step in our journey of expansion into Africa. We will connect Oman directly to Somalia via the Salalah cable landing point, and then extend the cable further into Africa to Ethiopia." "Somalia and Ethiopia, currently two highly underserved countries, will soon be connected to our international low-latency network, and in doing so will gain access to all the content hosted in Oman through Omantel and deliver services from Europe and Southeast Asia," he added. The G2A undersea cable is central to the Omantel 3.0 transformation strategy, which aims to transform Oman into a regional communications hub. Currently under implementation, and augmenting the 3.0 growth strategy is the BBG cable which is set to be the first undersea cable that will directly connect the Middle East with Singapore. Similarly, the existing EPEG cable, a terrestrial cable connecting Oman to Germany via Iran, Azerbaijan, Russia and Ukraine will offer services to the region at the lowest latency and the highest quality. "Oman, powered by Omantel, is well on the way to becoming a major communications hub for the Gulf Cooperation Council (GCC) region. Already over half of the 24 international submarine cables that connect to the Arabian Gulf are connected through Omantel. In the coming years, further extending our reach internationally is a key focus for Omantel, and a central goal of our 3.0 transformation strategy. We are planning to expand our network reach by placing POPs (Point of Presence) in over 20 countries across the globe and locally host major international content through multiple data centers in the near future. Throughout history Oman has always been a gateway to the region, facilitating trade and commerce from East to West and West to East. At Omantel, we aim to continue Oman's proud tradition, this time facilitating the transfer of information, in this new digital age," Sohail Qadir added. In the international wholesale arena, Omantel is considered one of the most prominent and competitive wholesale telecommunication providers in the Middle East region. In addition, it is one of the leading companies in the field of submarine cable networks and

a key participant in several submarine cables, complemented by direct terrestrial links, which link Asia, Europe and America passing through Oman to meet the international capacity requirements of customers locally and internationally, thereby sustaining the company's leading position among its competitors. Omantel's wholesale strategy is to be a carrier of carriers and to be the link between the East and the West for the region and beyond.

EC to propose further roaming legislation by June

The European Commission said it plans to introduce further regulation on roaming in June, to prepare for the planned end to roaming surcharges in mid-2017. It has just completed a public consultation on wholesale roaming rates that was designed to help it decide on whether further market regulation is needed and how to set the fair-use policy for operators. The roaming regulation passed by Parliament last October will see roaming surcharges capped from 30 April 2016 and an end to all roaming charges from 17 June 2015. From that point, all roaming in the EU will cost the same as customers pay for domestic services. The EC has been charged with setting the details of the fair-use policy included in the regulation. This would allow operators to set a fair use amount of roaming in the EU, in order to avoid any abuse of the system, such as 'permanent roaming', where customers use in their home country Sims from other countries where national rates are cheaper. If a customer exceeds the fair-use amount, operators would be able to add extra charges for roaming. Consumers responding the consultation called for the most generous fair use possible, while operators want it limited to what occasional travelers could be expected to use. The EC consultation also looked at the problem of wholesale roaming rates, which are out of balance across the EU and could distort the market when full 'roam like home' starts. Not surprisingly, the big operators responding to the consultation generally think that the wholesale roaming markets are competitive, while the smaller operators and MVNOs think that the wholesale roaming market is overpriced. The larger operators expect an increase in

competition on the wholesale market as 'roam like home' is implemented from this May, but the smaller operators say the opposite. Based on the outcome of the consultation and further input from parties such as BEREC, the Commission will present its legislative proposals by June and aims to adopt the implementing acts on fair use by December. The recently started consultation reviewing regulation of termination rates will also feed into the decisions on roaming.

Venezuelan regulator forces Movistar to back down over rates

Venezuela's telecoms regulator CONATEL has ordered cellular operator Movistar Venezuela (owned by Spain's Telefonica) to suspend its planned rate increases for long-distance calls and international roaming, at least until the watchdog has completed relevant technical studies, TeleSemana reports. Conatel clarified that a rate increase would not be allowed unless it was the result of a reasoned decision based on 'technical, economic and social' factors. A shortage of foreign



currency in Venezuela has jeopardized telecoms services, as mobile operators have been forced to cut down their international call services due to the inability to pay arrears of royalties to foreign telco partners. In August last year it was reported that these circumstances had forced Movistar to slash its portfolio of international voice destinations down to ten.

Cuba inks direct interconnection deal with Verizon

Cuba's state-owned telecoms monopoly Empresa de Telecomunicaciones de Cuba (ETECSA) has announced the signing of an agreement with Verizon

Partner Solutions, the wholesale unit of US telecoms company Verizon Communications, to enable direct interconnection for the exchange of international voice traffic between the US and Cuba. The agreement, which expands on existing roaming services by allowing telephony services through direct interconnection between the two countries, was concluded after negotiations were successfully completed between the two firms. The deal will come into force once the implementation period expires and after technical tests have been carried out by both operators. TeleGeography's GlobalComms Database notes that the US announced landmark steps towards normalizing relations with Cuba in December 2014, initiating new efforts to increase Cubans' access to telecoms and their ability to communicate freely. In March 2015 New Jersey-based IDT Telecom began handling direct international long-distance (ILD) traffic between the US and Cuba, after signing a deal with ETECSA, while later in the year Verizon and Sprint launched international mobile roaming services on the island. At the start of this year, the International Bureau of the Federal Communications Commission (FCC) removed Cuba from its Exclusion List, opening the door for US telecoms carriers to provide facilities-based telephone and internet services to the island without separate approval from the watchdog.

Low data pricing stunts telecom growth in Pakistan

Pakistan's telecommunication industry has recorded an unprecedented growth in the past two years despite facing strict regulations and unfavorable economic conditions. Since the launch of third generation (3G) and 4G services in July 2014, the number of consumers looking to utilize high-speed mobile internet has crossed 23 million. In the meantime, the cellular subscriber base has reached 125 million. Seeing these figures, people will believe that telecom companies (telcos) are doing a handsome business in the country. However, this is definitely not the case. A major trouble for the industry is pricing, which has been brought down by fierce competition amongst the five telcos and has likely reached the edge of sustainability. Prior to the launch of high-speed mobile broadband, it was

expected that data charges would push a lot of consumers out of the market as the telcos had spent over \$2 billion on the 3G and 4G spectrum licenses and the rollout of next generation network. But surprisingly, they chose to keep data charges at the bare minimum, in a move, which initially sparked a digital revolution supported by affordable smartphones, that caused a 12% growth in broadband penetration in 2015, up from a mere 2.07% in 2014. This number is forecast to reach 44% by 2020, which according to the World Bank estimate will add 4.1% to the country's economic output. Although it is not uncommon for operators around the world to set data prices below sustainability levels for certain services, this is mostly balanced out by charging higher rates for other services. In Pakistan, however, the operators cannot follow that path since other major services – voice and messaging – already have OTT (Over-The-Top) alternatives and the consumer does not have the same buying power as in other nations.

AIS rejects True's 900MHz roaming terms

Thai mobile market leader Advanced Info Service (AIS) has rejected a 2G 900MHz roaming proposal from rival True Corp, saying that the proposed THB450 million (USD12.7 million) per month charge was too steep. The Bangkok Post reports that AIS has proposed to pay a lower monthly fee to use only 5MHz of 900MHz bandwidth to serve its remaining 2G users for a three-month period, instead of the 20MHz block proposed by True under a scheme backed by the National Broadcasting & Telecommunications Commission (NBTC). Furthermore, AIS argued that it could use 5MHz of the 900MHz block recently won by cellular start-up Jas Mobile instead of striking a roaming deal with True. AIS stated its position by explaining that, of its roughly eight million remaining 2G-only users, 7.6 million were already able to access 2G roaming services on the 1800MHz network of its other main rival DTAC, leaving only about 400,000 2G customers dependent on receiving 900MHz services. A roaming deal is urgent because AIS must cease using the 900MHz frequencies once True pays for its recently-won 900MHz license later this month. Up until now AIS has utilized the 900MHz spectrum under permission to extend 2G service

continuity beyond its 2G concession expiry (last September), whilst it failed to win a 900MHz technology-neutral license in December's auction. True is certain to stump up the fees for its 900MHz license this month, but Jas Mobile has so far failed to secure funding guarantees, leading to speculation that its spectrum will be returned for re-auction

Singapore's MyRepublic plans to undercut rivals with low-cost data

Singapore's mobile hopeful



MyRepublic is putting the pressure on the country's three established mobile players, with a PR blitz that is likely to start a price war long before it even bids for the fourth mobile license. MyRepublic announced yesterday it will introduce unlimited data tariffs for SGD80 (about \$58) a month if it wins the fourth license as well as offer 2GB mobile broadband plans for just SGD8 per month — significantly lower than similar plans from rival Singtel (SGD20). The other operators don't offer unlimited data plans, but 12GB plans are priced at more than SGD100 (StarHub and M1 have 3GB plans for SGD21.45 and SGD30 respectively, the Straits Times said). Just hours after MyRepublic's announcement, Singtel launched its "add-on DataX2", which allows postpaid customers to double their mobile data for a flat fee. Starting today customers can double their mobile data when they sign up or re-contract for two years on one of Singtel's combo mobile plans. For example, a customer on the Combo 3 plan, paying SGD62.90 a month for 3GB of data, can pay SGD5.90 a month to double the data allowance to 6GB. M1 today announced similar plans — its "Upsize Data" bundles — which give customers additional data

for SGD5.90 a month. Its available for new and recontracting customers who wish to boost their data bundles by up to 12GB, it said. MyRepublic has long expressed interest in bidding for the country's fourth mobile license later this year. Singapore's Info-Communications Development Authority (IDA) last month released a detailed framework for its previously announced spectrum allocation, which Fitch Ratings says will ease the path for the entry of a fourth mobile operator and intensify competition. MyRepublic said last week that its lower cost base will enable it to start small and still be profitable within three years. The ISP is targeting 250,000 customers in its first year and 700,000 users, or a 9 per cent share, within three years. The mobile newcomer will also offer its broadband subscribers 2GB data plans for just SGD6 if they sign up by 30 September. Additional data charges will be SGD8 per GB.

Govt. requires AIS to offer 2G 900MHz continuity via True roaming service

Thailand's National Broadcasting & Telecommunications Commission (NBTC) is backing a proposed commercial three-month arrangement under which mobile market leader Advanced Info Service (AIS) will serve its remaining 2G 900MHz customers via roaming on the 900MHz spectrum due to be awarded to rival True Corp later this month. Up until now AIS has utilized the 900MHz frequencies under permission to extend 2G service continuity beyond its 2G concession expiry (last September), but True won a technology-neutral spectrum license for the 900MHz band in December, whilst AIS came away from the auction empty handed, meaning that it must finally vacate the band once True has paid for its license — with payment scheduled for this month. According to the Bangkok Post, the NBTC is in favor of a plan under which True will charge AIS a spectrum rental fee of THB450 million (USD12.7 million) per month for the three-month period. 'We don't want to see eight million 2G users on the 900MHz network have to deal with a possible service disruption,' said Takorn Tantasith, secretary-general of the NBTC, who added that the NBTC's telecom committee had reached a resolution to call all related parties to a meeting to discuss the 2G

continuity plan, namely AIS, True and TOT (the state telco which originally issued AIS' build-transfer-operate [BTO] 2G 900MHz concession, and which lays claim to 2G infrastructure deployed under the BTO framework). 'If we fail to reach a conclusion, the NBTC will implement laws to retain customers for three months to ensure the public benefit,' the official stated. TeleGeography notes that AIS has an existing contingency plan to allow remaining 2G users to roam on the 1800MHz network of its other main rival DTAC, whilst it attempts to complete the migration to 3G/4G networks via offers including free and subsidized handsets.

Ex-head of Austria telco watchdog sets record straight on post-merger price rises

By Nick Wood, Total Telecom

The former head of Austria's telecom regulator refuted claims that the cost of mobile services has risen in the wake of 3 Austria's acquisition of Orange. "The public debate has focused on the level of the monthly bill, often misquoted as 'price,'" said Georg Serentschy, who served as CEO of telecoms at the Austrian Regulatory Authority for Broadcasting and Telecommunication (RTR) between 2002 and 2014, and who now runs his own telco, media and technology consultancy, Serentschy Advisory Services. He explained in an open letter that regulators and commentators often reference the RTR mobile price index — which does indeed show an uptick in bills since the completion of the 3/Orange merger in 2013 (see chart) — as proof that mobile services have become more expensive since the market consolidated. Indeed, when Sharon White, CEO of U.K. telco watchdog Ofcom, in late January set out her concerns about 3UK's proposed acquisition of O2, she noted that Austria has seen a 15% increase in prices since the 3/Orange merger. However, Serentschy said that the RTR index, which he devised, only tracks monthly bills and does not take usage into account. "As a matter of fact, unit prices (i.e., euros per minute, text message or MB of data) have fallen continuously in Austria," he claimed. If monthly bills did rise, it was caused by subscribers using more mobile data, not because services are more

expensive, he said. Similar sentiments were expressed by Vodafone CEO Vittorio Colao during this year's Mobile World Congress. Even the RTR index "is now below 2011 levels, with MVNO entry driving four consecutive quarters of tariff reductions in 2015," Serentschy noted. Providing wholesale network access on favorable terms to virtual players was one of the conditions of 3's acquisition of Orange. In addition, Serentschy argued that mobile network coverage and capacity has shown a marked improvement since the 3/Orange deal. He cited the latest annual 'Connect' test carried out by German consultancy P3, which showed that in 2015, Austria's poorest-performing mobile network was on a par with the best-performing network in Germany when it comes to coverage. "Consumers are getting more for less and the everyday frustrations associated with patchy signal, constant buffering and unreliable coverage are largely consigned to history," he said. Serentschy's open letter comes at a critical moment for 3UK parent CK Hutchison, which is in the midst of trying to convince competition authorities to approve its planned purchase of bigger rival O2. According to Reuters, Hutch this week held "fruitful" closed-door talks with the European Commission about the proposed transaction, which will reduce the number of mobile operators in the U.K. to three from four

Vodafone Portugal drops EU roaming charges on Red plan

Vodafone Portugal has eliminated roaming fees in the EU for customers on its Red postpaid plan. The basic Red plan now starts at EUR 27.5 per month, up from EUR 26.90 previously,

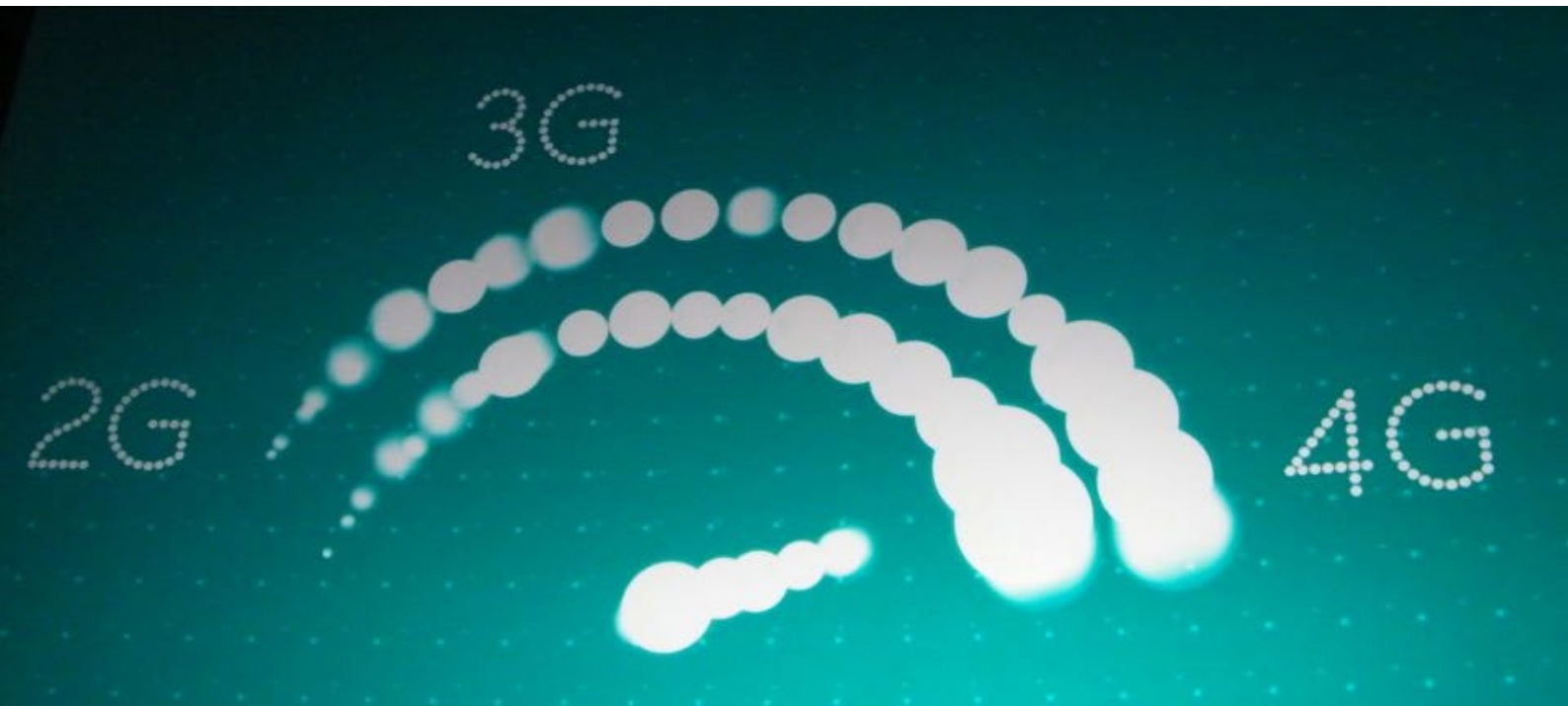
and comes with unlimited calls and texts and 200 MB of data in Portugal (400 MB for first 12 months). In the EU, customers have a 'fair use' of 15 days per year of free roaming from their standard monthly bundle, as well as a monthly cap on roaming of 200 minutes, 200 SMS and 200 MB. That compares to a domestic fair use of 5,000 minutes or SMS to Vodafone networks and 2,000 minutes and SMS to other networks each month. The offer is based on a 24-month contract. The amount of data on the Red plan can be increased to 1 GB for an extra EUR 5 per month, and in a promotional offer until 31 March for new customers, Vodafone offers 2 GB for the same price of EUR 5. Normally 2 GB costs an extra EUR 9.99, 3 GB 12.99 and 5 GB 14.99 per month. Additional lines can also be added to the Red plan to share the bundle with family members, and it can also be combined with Vodafone's fixed-line packages.

Nigeria minister, regulator push for lower call tariff

Nigeria's Minister for Communications Technology, Adebayo Shittu, and General Manager, Lagos State Infrastructure Maintenance and Regulatory Agency (LASIMRA) Babajide Odekunle, have called for lower call tariff. To achieve this, Shittu identified tackling the issue of Right of Way (RoW), stressing that this must be resolved by the three tiers of government. He added that active involvement and participation of all the stakeholders to dialogue on the modalities for harmonizing the tariff charges in the telecommunications industry was imperative at this time. The minister spoke when the LASIMRA chief and his team paid a working visit on the minister in Abuja. According to Shittu, there was need to push for actions on the adoption of a common tariff such that would allow common man to have access to telephony, get the best services and be able to afford the call rate. This, according to him, is because the operators would always shift the levies back to the consumers. He said

the Federal Government was ready to collaborate with all the stakeholders in the industry and do whatever that can be done to ensure a new lease of life for the consumers. According to Shittu, the telecommunications operators are the collective benefactors of all Nigerians, adding that the costs of diesel to power the generators and other financial implication in maintaining the industry are possibly some of the considerations responsible for the high call tariff that could not be compared to what is obtainable in other climes. Responding, Odekunle formally congratulated the minister on his appointment and wished him a successful tenure in office. He said the giant strides made by the minister within his short stay in the information communication technology (ICT) industry reflect the preparedness of the minister for public service. He told the minister that LASIMRA is the government agency responsible for the regulation and maintenance of telecom infrastructure in Lagos, adding that it also grants RoW for underground metropolitan cable laying across the state. He pledged the support of Lagos State government to the National Broadband Plan (NBP) of the Federal Government because the state believes its benefits are overwhelming as it is critical to economic development. The LASIMRA chief said the NBP would increase Internet penetration, thereby boosting the capacities of the Small and Medium Enterprises (SMEs) and creating jobs to grow the gross domestic product (GDP) of the country. Odekunle said more than 60 per cent of the telecom market is based in Lagos State adding that by implication, telecommunications operators should partner and collaborate with the state government in its quest in the areas of compliance with existing statutes and regulations particularly, payment of levies and charges and also adhering strictly to safety and maintenance standards prescribed for infrastructure facilities across the state. He said the agency is planning to have all the database of the infrastructure and set the record straight and be abreast of happenings in the industry. According to him, the issue on co location remains the best option and most appropriate for the telecom industry but stressed that it requires utmost cooperation and great understanding among the operators to wholeheartedly endorse it.





Umniah an Integrated Telecom Provider Offers High-Speed Internet for Individuals, Homes and Businesses

For the First Time in Jordan Umniah Launches High-Speed Internet Service via its LTE 4G Mobile Network "evo 4G" and its LTE Fixed Network

Amman: Umniah announced in March the launch of its High-Speed Internet services through two networks for the first time in Jordan; LTE 4G Mobile network under the brand name "evo 4G", and LTE Fixed network for homes and businesses.

Umniah witnesses a new milestone as an integrated telecom provider offering 4G personal mobile services to individuals (LTE mobile) and high-speed broadband Internet services to households and businesses (LTE fixed network). This latest step is part of the company's vision "Internet for all" to render this technology as an integral contributor to economic development and job creation for youth, as well as support for the SMEs sector, contributing to an increase in the country's Internet penetration rate.

In a press conference, Umniah CEO Ziad Shatara said, "Since its inception, Umniah has focused on transforming the communications market in the Kingdom. As such, today Umniah is launching its exclusive LTE 4G personal mobile services as well as its LTE Fixed for homes and business services at super high speeds.

The company emphasized that it has rolled out a nationwide LTE 4G mobile network, which provides mobile data services to individuals. The company also launched its LTE Fixed network targeting homes and businesses.

In the fourth quarter of last year, Umniah officially obtained a license to launch its 4G wireless network with a frequency of 1800 MHz, at a value of approximately \$100 million. By the end of 2017, Umniah's investment in the expansion and modernization of its wireless network will reach \$500 million. This is part of the company's long-term strategy to promote and expand its mobile 4G services to reach all segments of the Jordanian society.



Umniah Team

"Umniah's vision in launching the LTE 4G Mobile and the LTE Fixed services is focused on adopting an active role in the use of this technology to support all economic fields in the Kingdom, making it the first operator of mobile communications services to provide qualitative additions to High-Speed Internet Services in the local market and make the Internet affordable to everyone." said Shatara.

The company will be offering a dedicated High-Speed Fixed Broadband Wireless Access (LTE Fixed) to home and corporate customers, according to Mahmoud Abu Zannad, Director of Enterprise and High Value Segment at Umniah, which will also ease the pressure on the 4G mobile network and will, in turn, have a positive effect on Internet speeds. Additionally, Umniah is offering a fixed service that includes a plug and play landline beginning with the new code of 06200.

Also speaking at the launch was Zaid Ibrahim, Umniah's Director of Marketing, who stated, "Umniah is looking forward to providing the 4G experience to everyone, both individuals and corporations, with a wide range of prices to suit all the needs of Jordanian society. The "evo 4G" services will target smartphone users with quality, stability, sustainability and super high speeds.

Ibrahim added: "The launch of this new network matches the clear uptake in demand on Internet and technology services by both individuals and corporations alike. It will support Internet service reliability and will undoubtedly contribute to raising levels of productivity and effectiveness, as well as facilitating the provision of the Internet of Things, Smart Cities, Machine-to-Machine services and other similar concepts." He indicated that: "In addition to its investments in infrastructure and systems, the company has also expanded its 3G network to meet the increasing demand for this technology, which will strengthen the company's position in the local Internet market."

Shatara went on to add, "Micro, small and medium enterprises in Jordan make up around 98% of the national economy, and are considered the largest sector contributing to economic growth and job creation. They are also the most efficient in capital investments yet these enterprises face major financing challenges. As such, we are aiming to help advance this sector in specific through our developed networks, and the company will soon announce exclusive offerings for this category." He elaborated by saying, "In parallel, Umniah is also concentrating its plans on the governorates due to the key role they play in pushing the national economy forward. We are looking forward to delivering our services to these areas by providing people and businesses in the governorates similar opportunities as those provided to the residents of Amman which will lead to their social and economic development."

When Umniah entered the local market ten years ago, it made a quantum leap in the telecom sector, as the number of mobile phones and service subscribers doubled, a figure that has jumped from 57% at that time to 157% today. The company is now seeking to bring about the same leap, in

record time, and promote the spread of the Internet in all governorates with the increasing reliance and need for high performance data services.

Last year, Umniah invested \$300 million for 4G licensing fees as well as to build its new network and expand its current services. The total volume of this investment is expected to reach up to \$500 million by the end of 2017, which will include the continued development and enhancement of the company's network.

According to Shatara, "Everyone today is part of the data, technology and information revolution, which is synonymous with speed of communication, reliability and data transfer capacity. This is exactly what Umniah's LTE 4G Mobile and LTE Fixed networks provide: high quality, speedy and reliable Internet services which, in today's world have become necessities." He stressed that Umniah will also focus on offering content that includes educational and health offerings, upgraded entertainment services, videos, online gaming and social communication channels, which have all become vital and indispensable to consumers today.

Figures show that smartphone penetration is more than 75% of mobile phone users in the Kingdom, 22% of which are 4G enabled, with 4G users making up 7.4%; statistics that emphasize the fundamental role that Umniah plays in the penetration of 4G services.



Identity Management for Mobile CSPs: a key to Unlocking Revenue in the Digital Economy



Gorkem Yigit
Analyst
Analysys Mason

Mobile identity management (IdM) – the creation, management, verification, security and exposure of unified, 360-degree user identities across mobile services, devices and third-party partners – is gaining significant importance as mobile devices are rapidly becoming consumers' primary channel for accessing all digital services. Major over-the-top (OTT) and digital ecosystem providers have successfully positioned themselves as identity service providers – for example, Apple's Touch ID and social logins from Facebook, Google and Twitter – and they are dominating the collection, management and monetisation of mobile user identities. By contrast, mobile IdM is not a priority for CSPs today despite their distinct advantages over OTTs and alternative service providers. Most CSPs do not understand IdM's revenue potential, its importance in the digital economy or the business models and technical approaches required for its implementation. This article identifies the key mobile IdM market opportunities for CSPs to create new digital economy revenue streams.

CSPs' mobile IdM monetisation opportunities lie in the digital services that require high security and real-time authentication

Existing user identification and authentication solutions either do not provide sufficient security, or are not user-friendly – particularly on mobile devices. Many digital services need new identity and access platforms that can:

- encrypt and maintain sensitive data in transit – for example: for mobile banking, enterprise mobility access and e-government applications
- support mission-critical and low-latency applications such as m-health, mobile payments and connected cars
- improve the mobile user experience by simplifying service sign-up and login processes.
- Mobile CSPs are uniquely positioned to tap into this opportunity by providing cross-vertical mobile IdM solutions for the digital services that

require high security and real-time authentication, by capitalising on three key strengths:

- in-depth and 'true' mobile ID data on a per-subscriber level, including real-time location, device, usage and payment information that span CSPs' subscriber data management (SDM), B/OSS and other back-end systems and trusted partners' data sources
- experience and investments in secure, scalable, high-performance, real-time service delivery, authentication and processing infrastructure
- their status as trusted IdM service providers, which qualifies them for mission-critical services in several verticals.

The total addressable market for these mobile IdM services will reach USD9.4 billion by 2020, according to our recent IdM market forecast report (see Figure 1), and will strengthen CSPs' ability to capture revenue in the wider digital economy. However, mobile CSPs are expected to address only 15% of this market opportunity (USD1.4 billion) because of inhibitors such as high competition, the geographical limitations of their user bases and operations, and the limitations of legacy systems, business processes and business models.

CSPs need to act fast to become IdM service providers because the opportunity window is shrinking

CSPs' engagement with mobile IdM has been limited to date. They have focused mostly on mobile banking and e-government use cases in Europe, the Middle East and Africa (EMEA), and North America, and there are several ongoing GSMA Mobile Connect trials in emerging Asia-Pacific and EMEA. CSPs should not delay market entry to mobile IdM for e-government, m-banking, IoT/M2M services and enterprise applications because OTT players and other competitors in the IdM space are quickly moving into these verticals by extending their large device, service and partner ecosystems and their well-established federated IdM solutions.

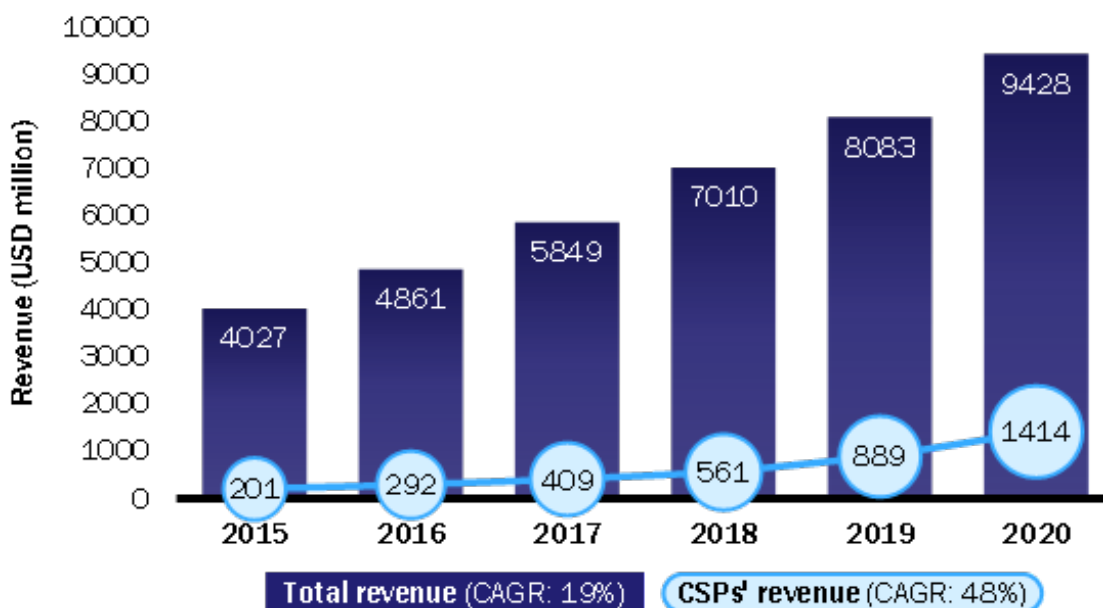


Figure 1: Total mobile IdM service revenue and CSPs' mobile IdM service revenue, worldwide, 2015–2020



Analysys Mason's report – *Identity management in the digital economy: market drivers and opportunities for mobile CSPs* – explores the IdM landscape to identify key market verticals that CSPs should target. It provides a 5-year IdM service revenue forecast for each key vertical and case studies to support this analysis. The report also identifies the main IdM models that CSPs should consider as part of their market entry strategy and suggests a cross-vertical IdM architecture for CSPs.

This report, as well as a case study *Mobile ID adoption is faster in smaller markets, driven by government services and banking*, have been published as part of our *Service Delivery Platforms (SDP)* research programme. For further information on our research on identity management and the SDP programme, please contact Gorkem Yigit (gorkem.yigit@analysismason.com) and Glen Ragoonanan (glen.ragoonanan@analysismason.com).



▼ TECHNOLOGY NEWS

TECHNOLOGY UPDATES

Qualcomm Announces Introduction of Virtual Reality Software Development Kit

Qualcomm has introduced a new virtual reality (VR) software development kit (SDK). The next generation of mobile virtual reality applications is complex, with extreme power consumption constraints and challenging performance requirements that must be met in order for the VR applications to become truly immersive. Processors like the Qualcomm Snapdragon 820 processor are capable of supporting immersive VR experiences, but can also be difficult to fully utilize without the right set of tools for developers. The new Snapdragon VR SDK is designed to abstract the complexity of immersive virtual reality and provide developers with access to optimized, advanced VR features, to simplify development and to help them attain improved VR performance and power efficiency with the Snapdragon 820 for Android smartphones and upcoming VR headsets. The SDK is expected to be available in the second quarter of 2016 through the Qualcomm Developer Network. For the first time, many new technologies that are crucial for an optimal VR user experience will be supported in the Snapdragon VR SDK. These include:

□ DSP sensor fusion: Utilizing the full breadth of technologies built into Snapdragon 820, the SDK enables developers to create more responsive and immersive experiences by easily accessing the right combination of high frequency inertial data from gyroscopes and accelerometers via the Snapdragon Sensor Core and predictive head position processing with the Qualcomm Hexagon DSP

- Fast motion to photon: Supports asynchronous time warp with single buffer rendering for fast transformation of rendered images in 3D space, which helps reduce latency by up to 50% compared with not using the SDK
- Stereoscopic rendering with lens correction: Supports 3D binocular vision with color correction and barrel distortion for improved visual quality of graphics and video, enhancing the overall VR experience
- VR layering: Generation of menus, text, and other overlays so that they render correctly in a virtual world, reducing distortions that would otherwise make them difficult to read
- Power management: Integration with the Qualcomm® Symphony System Manager SDK to provide cohesive CPU, GPU, and DSP power and performance management to

help achieve stable frame rates for VR applications running in low-power, thermally-constrained devices - improving power efficiency compared to not using the SDK

"We're providing advanced tools and technologies to help developers significantly improve the virtual reality experience for applications like games, 360 degree VR videos and a variety of interactive education and entertainment applications," said Dave Durnil, senior director, engineering, Qualcomm Technologies, Inc. "VR represents a new paradigm for how we interact with the world, and we're excited to help mobile VR developers more efficiently deliver compelling and high-quality experiences on upcoming Snapdragon 820 VR-capable Android Smartphones and headsets."

Nokia launches new silicon chipset, optical networking systems for 100G transport services

Nokia has expanded its 1830 Photonic Service Switch (PSS) portfolio, quadrupling optical fiber capacity to more than 70 terabits per second to address surging network data traffic demand. Centered around the Photonic Service Engine version 2 (PSE-2) from Nokia Bell Labs, the enhanced 1830 PSS family doubles wavelength capacities and wavelengths per fiber, giving operators a platform to efficiently deliver the 100G transport services that customers are demanding. Employing the new Nokia-designed Transport Switching Engine (TSE) chipset, the 1830 PSS-24x is the industry's most scalable packet/OTN multilayer switching platform. By combining a TSE-powered switch fabric with PSE-2 coherent interfaces, the 1830 PSS-24x offers 9.6 terabits of switching per half-rack shelf, scalable to 48 terabits per rack. This gives operators a new level of 100G service density, efficiency, and resiliency while using 50% less space and power than current generation packet/OTN switches. Sam Bucci, head of optical networking at Nokia, said: "When we introduced the industry's first single carrier 100G solution in 2010 we became a leader in optical network transformations, a position that was further solidified when we released the first programmable 100G/200G line card. With the launch of the

PSE-2, our 500G Muxponder and the 1830 PSS-24x, we are again at the forefront of innovations, leading the way to 100G client services being the currency of modern optical networks. Thanks to the optical innovations of Nokia Bell Labs we are able to keep operators ahead of today's aggressive bandwidth demand curve." Powered by the PSE-2s and its variable modulation capabilities, the 1830 PSS 500G DWDM Muxponder gives network operators unprecedented capacity, reach, and wavelength flexibility. It also offers operators investment protection for their 1830 PSS platforms with an instant capacity upgrade, carrying as many as five 100G services per line card. The 500G line card is available and being delivered to customers now. Service providers are under tremendous pressure to scale their networks to meet the demands of large enterprises, cloud operators and Internet content providers for high-capacity, on-demand services - all while maintaining profitability by lowering cost per bit. According to a white paper published by industry analyst firm Ovum, the rapid adoption of 100G router ports for the interconnection of data centers and metro and backbone applications is driving the need for operators to migrate from 10G client services to 100G to keep pace with escalating transport requirements. Yet capacity alone is no longer sufficient to respond to ever-changing bandwidth demands. Optical transport is evolving from relatively static applications to highly dynamic services that can be turned up quickly and reconfigured on the fly. Nokia is helping operators address these challenges with an expanded 1830 PSS portfolio featuring unprecedented flexibility through the new PSE-2 chipset and industry-leading scale with the 1830 PSS-24x. These innovations and platforms provide operators with a cost-effective way of delivering business-driven 100G transport services.

Huawei to invest \$212mn in 5G Ontario

Huawei said that its Canada subsidiary is partnering with Canada on a major research and development expansion project called 5G Ontario. Huawei Canada will invest \$212 million to create hundreds of R&D jobs for Ontario's highly skilled workers and further solidify the province

as a global hub of the knowledge economy. 5G Ontario will focus on advanced communications research initiatives including faster internet speeds and related technologies such as cloud computing, data analytics and mobile security. Huawei will create 250 new R&D jobs in the province as it establishes new research laboratories in Markham and Waterloo and expands its existing research facility in Ottawa. "Last month, I was in India on another overseas trade mission. Today, I'm at Huawei Canada to announce that the company is investing an additional \$212 million in an R&D project called 5G Ontario. It all connects to my first priority as Premier, which is creating good jobs in a growing economy. The investments our government is making in the talent and skills of our people, the trade missions I lead, the partnerships we're entering with business and the dynamic, competitive environment we're creating are all driving real investment, creating good jobs and laying the foundations for sustainable growth for years to come," said Kathleen Wynne, Premier of Ontario, Canada. According to the Minister of Economic Development, Employment and Infrastructure, Brad Duguid, "Huawei's investment in Ontario is a huge vote of confidence in our province's talented workforce and world-class innovation ecosystems. We are committed to strategically partnering with innovative companies like Huawei." The Huawei expansion project illustrates how Ontario's Going Global Strategy is strengthening the province's information and communications sector. International trade missions and strategic partnerships with business are both critical ways the government is attracting new investment, facilitating innovation and bolstering global exports.

Engineers Design Next-Generation Non-Reciprocal Antenna

Researchers in the Cockrell School of Engineering at The University of Texas at Austin have designed an antenna that is able to process incoming and outgoing radio wave signals more efficiently and without the need for separate bulky and expensive electrical components commonly used in antenna systems. This new technology could lead to significantly faster, cheaper and

clearer telecommunications in the future. Andrea Alù, associate professor in the Department of Electrical and Computer Engineering, along with postdoctoral fellows Yakir Hadad and Jason Soric, discuss their non-reciprocal antenna's design and capabilities in the Proceedings of the National Academy of Sciences. Their article will be published online this month. The research team's breakthrough design is an antenna that can break reciprocity, or the natural symmetry in radiation that characterizes conventional antennas. In textbooks, the angular patterns for antenna transmission and reception have been assumed to be the same - if the antenna opens a door to let signals out, signals can come back through that same door and leak toward the source. By breaking reciprocity, the UT Austin researchers' new antenna can independently control incoming and outgoing signals with large efficiency. The main advantage of this technological advancement is the possibility of sending out a signal while keeping out noise and echoes that come back toward the antenna, enabling faster data rates and improved connections while requiring less bulky antenna systems. Beyond telecommunications, the new antenna technology may be applied to sensors used in applications as diverse as health care and weather tracking, allowing the sensors to pick up stronger signals for more accurate data collection. The researchers' new antenna demonstrated a drastic difference between transmission and reception capabilities, with reception efficiency from a certain direction that is hundreds of times smaller than their transmission efficiency toward the same direction. Conventional antennas are subject to reciprocity, implying that they unavoidably transmit and receive signals with the same efficiency. This means that if a conventional antenna is a very good emitter of radio-wave signals toward a certain direction, it is also a very good receiver from the same direction. As it happens, this property is not always a beneficial feature because transmitting antennas are prone to absorb surrounding reflections or echoes that bounce back from nearby obstacles. This noise deteriorates the quality of the transmission signals. "Our achievement is that we break the symmetry between transmission and reception signals, so we are able to prevent the antenna from having

to listen to reflections and echoes that affect the source," Alù said. "We show that it is possible to efficiently overcome these constraints using temporally modulated traveling-wave antennas." In the team's experiments, the researchers fed the antenna with two signals simultaneously: the radio-frequency signal that they want to transmit or receive, and a weak low-frequency modulation signal that slowly changes the properties of the antenna as the radio-frequency signal travels along it. This modulation breaks the inherent symmetry of the antenna in transmission and reception, overcoming the reciprocity constraints. Presently in the telecommunications field, magnet-based isolators are commonly used as part of antenna systems to prevent received signals from traveling into the transmission amplifier. The researchers believe their new antenna may be an efficient solution to significantly reduce the need of isolators and reduce the size and cost of telecommunication systems. The researchers are now looking into how this concept may be extended to other applications such as optics. They envision that by pushing these concepts to higher frequencies, it will be possible to break a similar constraint affecting energy-harvesting devices such as thermophotovoltaic cells. The researchers believe that their antenna experiment, extended to the infrared part of the spectrum, may provide a route toward more efficient energy-harvesting platforms. This work received support from the Office of Naval Research, the National Academy of Engineering's Frontiers of Engineering program and The Grainger Foundation.

Alfa signs '4.5G' contracts, 5G MoUs with Ericsson, Nokia

Alfa, one of Lebanon's two state-owned mobile network operators, has signed contracts with Ericsson and Nokia to jointly upgrade and expand its existing 4G LTE services nationwide this year, whilst also signing memorandums of understanding (MoUs) with the same two vendors on the development of 5G technology platforms on its network in the next few years. The signings were carried out under the patronage of Lebanon's telecoms minister Boutros Harb as part of the country's '2020 Telecom Vision' development program launched by

the Ministry of Telecommunications (MoT). Alfa, which is managed by Egypt's Orascom Telecom Media & Technology Holding (OTMT), said in a press release on its website that the latest contracts with the Nordic vendors will achieve comprehensive coverage of LTE-Advanced (LTE-A) services with mobile data speeds of up to 300Mbps in phases across the country. Although Alfa refers to the rollout as '4.5G', the 300Mbps carrier aggregation (CA) evolution it describes is more commonly labeled by operators as LTE-A or '4G+'. The press release adds that the commencement of rollout contracts with Ericsson and Nokia represent the first step in the USD600 million mobile broadband and fibre project announced by the MoT in July 2015, and reiterates a goal to see LTE-A networks deployed and ready-for-service nationwide by the end of September 2016 (compared to the '16% of territory' LTE coverage quoted by the ministry last July). At the signing ceremony Alf and the MoT asserted that the project will 'not exclude any village' and will extend LTE to '99.7% of the Lebanese territory'. Alfa previously tested LTE-A CA technology in August 2015, and disclosed that it will be using 2x35MHz in the 1800MHz and 800MHz bands to achieve its 300Mbps (theoretical) top LTE-A speeds. Regarding the '4.5G to 5G' MoUs signed with Nokia and Ericsson, Alfa announced that it will work with the two technology giants on the exchange of information and expertise to ensure the readiness of its network to begin incorporating 5G technology 'by mid-2018'. 'The network will be ready in mid-2018 to receive the first 5G [base] station in Lebanon,' the press release claimed. With the upgrades to LTE-A and beyond, Alfa said it expected data consumption to rise by between five-and-six times, whilst all users would be able to access advanced applications including HD video streaming and HD voice. New areas of focus made possible by 4.5G/5G were identified as including the m-health/education sectors and the expanding Internet of Things (IoT) field.

First cloud-based VoLTE and Wi-Fi calling in the Netherlands

Ericsson and Vodafone Netherlands have deployed the country's first cloud-based and fully virtualized

Voice over LTE (VoLTE) and Wi-Fi calling solution. Wi-Fi calling enables operator voice services to be provided in more locations, such as indoor environments like basements, by complementing macro network coverage. VoLTE offers fast call set-up times and high-definition (HD) voice quality while facilitating a broader range of IP-based communication capabilities, such as video calling over LTE and multi-device support. As a result of the deployment, Vodafone Netherlands can now provide a superior experience for users of mobile video communication services compared with similar services delivered over internet access. The solution is based on a commercial Network Functions Virtualization (NFV) deployment of Ericsson IP Multimedia Subsystem (IMS) and Ericsson Evolved Packet Core (EPC). The complete cloud-based solution also includes Virtual Network Functions (VNF) for Wi-Fi calling, policy control and application server domain. Matthias Sauder, Head of Networks, Vodafone Netherlands, says: "Network virtualization brings huge opportunities for efficiency and agility. It will allow us to introduce new services more rapidly to our subscribers. We are very pleased with Ericsson's support in deploying NFV in our network in the Netherlands, which will now enable swift launches of new IP-based communication services for our customers." Valter D'Avino, Head of Western and Central Europe, Ericsson, says: "Ericsson has deployed a VoLTE and Wi-Fi calling system that can automatically scale within a telecom cloud and fulfill telecom-grade service availability. It provides Vodafone with a complete solution to evolve their voice and SMS business toward an all-IP communications network based in the cloud". "This is a great example of how operators everywhere can leverage cloud and virtualization technologies to explore new business opportunities." The unique end-to-end VoLTE and Wi-Fi calling overlay network includes VNFs for the Ericsson IP Multimedia Subsystem with Ericsson Multimedia Telephony Application Server, Ericsson Call Session Control Function, Ericsson Evolved Packet Core with Ericsson Evolved Packet Gateway, Ericsson Wi-Fi Mobility Gateway and other Ericsson control and authentication functions.

Ericsson and China Mobile extend 5G cooperation

Ericsson joins China Mobile's 5G Joint Innovation Center program to accelerate development of next-generation wireless networks, which will be faster, more powerful and offer even greater opportunities. The agreement to broaden 5G cooperation was first announced at Mobile World Congress 2016 in Barcelona. China Mobile's 5G Innovation Center initiative aims to accelerate the development of 5G by establishing a cross-industry ecosystem and setting up an open lab to provide a platform for new products and applications, and to foster new business and market opportunities. In January 2016, Ericsson and the China Mobile Research Institute signed a Memorandum of Understanding (MoU) to collaborate on the development of its Open NFV Lab and the NovoNet. In December 2015 the parties also signed another MoU, covering an extensive range of 5G research and development cooperation. As part of this agreement, Ericsson jointly demonstrated connected sheep/livestock tracking utilizing NB-IoT technology at China Mobile's booth during MWC 2016. During MWC 2016, Shang Bing, chairman of China Mobile, paid a visit to Ericsson headquarters in Stockholm, Sweden, where he met Hans Vestberg, president and CEO of Ericsson. While visiting Ericsson, Shang Bing said: "China Mobile pays a lot of attention to the developing trends of this industry. We saw at MWC 2016 that the ICT industry will embrace transformation in the following 5 years. It is crucial for China Mobile and Ericsson, as the two ships of this industry, to stride forward in the right direction in the coming 5 years. Ericsson has been an important partner to China Mobile for a long time. China Mobile values the partnership with Ericsson and hope to have more cooperation with this important partner during the coming 5 year transformative period." Hans Vestberg, president and CEO of Ericsson, said: "5G will enable people, industries and things to connect on an unprecedented scale, and this ability to connect will bring with it a whole new galaxy of devices and services. I am convinced Ericsson will lead the 5G evolution, and I also believe that working with partners like China Mobile is significant to realize the Networked Society."

IMT-2020 Makes Progress in Developing 5G Standard

The ITU group engaged with developing International Mobile Telecommunication (IMT) systems ITU R Working Party 5D is meeting in Beijing, People's Republic of China, to further develop IMT 2020, the standard for 5G mobile systems. This is the first meeting of ITU-R Working Party 5D following the decision of the World Radiocommunication Conference 2015 (WRC-15) to identify and harmonize spectrum for operation of IMT systems in frequency bands below 6 GHz. WRC-15 also requested ITU-R to study potential use of additional spectrum above 6 GHz for IMT, and the results of those studies will be considered at the next WRC in 2019. ITU is continuing to work with administrations, network operators, equipment manufacturers and national and regional standardization organizations to include today's 5G research and development activities in the IMT-2020 global standard for mobile broadband communications. "Following additional spectrum allocations for mobile during the World Radiocommunication Conference in late 2015, ITU is continuing to work in close collaboration with governments and the global mobile industry to make rapid progress in bringing the vision of IMT-2020 to fruition," said ITU Secretary-General Houlin Zhao. "Future steps in 5G mobile technology are aimed at a new paradigm of connectivity among people and things in a smart, networked environment encompassing big data, applications, transport systems and urban centers." This successful collaboration of the ITU membership brought together a large number of participants and experts to take forward the work on IMT-2020 and the coordination of the international standardization for 5G systems. "5G has already become the research and development focus of global industry," said Mr. Liu Lihua, Vice Minister, Ministry of Industry and Information Technology (MIIT) of the People's Republic of China. "The development of IMT-2020 is speeding up and the ITU-R WP5D is playing a key role in international standardization and global spectrum issues related to 5G." Mr Liu added that MIIT has launched R&D trials, which will support key 5G technologies, improve technical solutions, and develop international standards.

What is IMT-2020 and what does it mean for 5G?

Advanced '5G' use cases will require global interoperability and scalability; International Telecommunication Union is working away on ultimate standard The tactile Internet, autonomous vehicles and smart cities; all these things are expected to hit new levels of penetration and utility once "5G" mobile networks move from the lab to commercialization. In the meantime, the telecom industry as a whole – service providers, vendors, academia and standards-setting bodies – are working to define exactly what 5G will be. There's broad agreement 5G will require tremendous network density, access to high-band spectrum, massive multiple-input/multiple-output antenna technology and more technological features, but that has to be locked down in a standard. And that's where IMT-2020 comes into the picture. The term was coined in 2012 by the International Telecommunication Union Radiocommunication Sector and means International Mobile Telecommunication system with a target date set for 2020. Here's some commentary from the ITU: "In early 2012, ITU-R embarked on a program to develop 'IMT for 2020 and beyond,' setting the stage for 5G research activities that are emerging around the world. Through the leading role of Working Party 5D, ITU's Radiocommunication Sector has finalized its view of a timeline towards IMT-2020. The detailed investigation of the key elements of 5G are already well underway, once again utilizing the highly successful partnership ITU-R has with the mobile broadband industry and the wide range of stakeholders in the 5G community. In September 2015, ITU-R has finalized its vision of the 5G mobile broadband connected society. This view of the horizon for the future of mobile technology will be instrumental in setting the agenda for the World Radiocommunication Conference 2019, where deliberations on additional spectrum are taking place in support of the future growth of IMT." Based on the aforementioned timeline, various working groups of industry stakeholders are currently going through technical performance requirements; evaluation criteria and method; and submission templates, then moving into a workshop phase

in 2017. In 2018 and 2019, the timeline calls for taking proposals on IMT-2020, evaluation of those proposals and consensus building ahead of standardization in 2020. The ITU-R Working Party 5D, charged with developing future standards for 5G, met last month in Beijing. One major aspect of the group's task is to identify and harmonize 5G spectrum in frequency bands below 6 GHz. "Following additional spectrum allocations for mobile during the World Radiocommunication Conference in late 2015, ITU is continuing to work in close collaboration with governments and the global mobile industry to make rapid progress in bringing the vision of IMT-2020 to fruition," explained ITU secretary general Houlin Zhao. "Future steps in 5G mobile technology are aimed at a new paradigm of connectivity among people and things in a smart, networked environment encompassing big data, applications, transport systems and urban centers." Liu Lihua, vice minister of China's Ministry of Industry and Information Technology, said IMT-2020 "is speeding up and the ITU-R WP5D is playing a key role in international standardization and global spectrum issues related to 5G." 5G Americas, previously referred to as 4G Americas, delineates the "more obvious requirements" of 5G as support for a large number of devices and flexible air interfaces; always on capabilities; energy efficiency; software-defined networking and network functions virtualization support; enhanced 911 and other law enforcement features; and machine-to-machine communications. "As of today, there is no clear definition of or detailed requirements of 5G. The European Union is investing a significant amount of money for research and EU leadership in 5G. China, Korea and Japan also have a number of initiatives under way with funding by the respective governments," 5G Americas noted. "The best way to understand the requirements for 5G is to understand what, more generally, will be required of mobile communication, from end-user and service provider points-of-view, in the 2020 and beyond era. The identification and elaboration on these requirements and corresponding technology components to address are the key activities for the 5G-related activities currently going on around the world."

Ericsson Teams with Google for Open Cloud Service

Ericsson has announced the launch of OTT Cloud Connect (OCC), an open cloud service that allows mobile operators across the globe to 'connect' to multiple OTT players to deliver new and creative services to users. The Ericsson OCC service strives to bridge the gap between operator networks and OTT services by exposing the OSS and BSS capabilities of operators to OTT players and vice versa. This brings simplicity to collaboration between OTTs and operators, making it possible to offer unique application-specific features to end users for better experiences. The OCC platform is an open platform that would allow any OTT player to deliver innovative features to users based on integration with specific operator network capabilities. It acts as a gateway platform that abstracts the complexities of each operator's network and provides simple integration for OTT players and applications. Ericsson is collaborating with Google as one of the first partners to get on-boarded on the OCC platform. This integration enables Google to bring innovative features and services to products such as YouTube and reach large numbers of users by leveraging the scale that OCC provides. Going forward, Ericsson will continue to bring additional OTT players onto the OCC platform for the benefit of one common interface or platform for participating operators and OTT players. "Collaboration, between operators and OTT providers, would be key as we start seeing new innovative services being introduced towards the end users. Ericsson is strongly supportive of this approach and we believe we are in a sweet spot to play the role of an enabler to make this collaboration happen. We are very bullish about the OCC platform and very happy to have integrated with YouTube as the first video platform. We look forward to onboarding many more OTT providers" said Diomedes Kastanis, Head of Technology, Business Unit Support Solutions, Ericsson.

Japanese tech firms unite on mmWave 40GHz and 60GHz wireless access network

A number of Japanese tech companies have announced the successful test and implementation of a jointly developed 'wave-based, high-throughput wireless access network for large-scale data content distribution' in the 40GHz and 60GHz band. Tokyo Institute of Technology (Tokyo Tech), Sony Corporation, Japan Radio Co (JRC) and KDDI R&D Laboratories (KDDI Labs) say the initiative is based on a next generation network using millimeter wave (mmWave)-based wireless systems, allowing a more 'efficient use of the mmWave communication band, which is much less crowded than the wavebands below 6GHz'. Development of mmWave represents a key technology for the development of the heterogeneous networks (HetNets) that will be used for fifth-generation (5G) wireless cellular networks. In an attempt to resolve some of the obstacles relating to using higher frequency transmissions, Tokyo Tech, Sony, JRC and KDDI Labs 'jointly developed a new wireless access network that combined 40GHz operation for outdoor networks with 60GHz operation for mobiles to enable large data size content delivery on the gigabyte scale'.

China Mobile Draws Up a New Blueprint for the Migration from 4G to 5G

China Mobile launched its 5G Joint Innovation Center project at the GTI Summit 2016, which was held during the World Mobile Congress (WMC). The world's largest telecom company also announced its business targets of reaching 1.40 million TD LTE base stations, selling 330 million 4G devices and expanding the 4G subscriber base to over 500 million by the end of 2016. According to Mr. Shang Bing, Chairman of China Mobile, the company has deployed 1.10 million TD-LTE base stations as of the end of 2015, covering over 1.2 billion population and has achieved 4G roaming with 114 countries and regions; China Mobile sold 300 million TD-LTE devices in 2015, indicating the addition of more than 400 TD-LTE users every minute; China Mobile's 4G subscriber base reached 340 million, accounting for about 30% of global

number. Moreover, China Mobile has completed the deployment of carrier aggregation (CA) in over 300 cities and has commercialized VoLTE services in 100 cities. Speaking of the goal for next year, Shang Bing said that China Mobile will speed up 4G deployment by increasing the number of TD-LTE base stations to 1.40 million and deploy CA technologies in central and hot-spot areas of all cities by the end of 2016; to commercialize VoLTE services in over 260 cities in the first half of 2016; to commercialize the Rich Communication Service (RCS) in the second half of the year; to accelerate the uptake of VoLTE/CA-enabled devices, sell 330 million 4G devices and expand the 4G user base to over 500 million in 2016. China Mobile supports GTI in driving the global deployment of TD-LTE and the converged development of FDD/TDD and will actively promote roaming of 4G and VoLTE. It will develop dedicated networks for the Internet of Things and aims to develop 100 million IoT connections in 2016. Moreover, Shang Bing pointed out that the company expects to increase the maturity of narrow-band IoT (NB-IOT) and strives to commercialize it in 2017. Mr. Li Zhengmao, Vice President of China Mobile, together with the representatives of the first 11 partners, jointly launched the China Mobile 5G Joint Innovation Center at the summit. The Center aims to conduct joint innovation on applications and products with industry partners in such areas as basic communications, IoT, telematics, industrial Internet, cloud robotics and virtual/augmented reality, through open labs, and thus build an integrated cross-industry ecosystem and achieve win-win cooperation in the process of migrating from 4G to 5G. Early partners include Huawei, ZTE, Ericsson, Nokia, Qualcomm, Datang, Intel, Keysight, Beijing Shougang Automation Information Technology Co., Ltd., Haier, and Hisense. China Mobile also introduced cost-effective VoLTE/CA devices and chip solutions during the summit, including its self-branded VoLTE/CA devices such as A1s, A2 and N2. Together with Samsung, China Mobile introduced 5 new customized VoLTE devices; in partnership with Qualcomm and MTK, China Mobile launched VoLTE+ downlink and up-link CA chip solutions at the price point of \$100; jointly with Spreadtrum and Leadcore, China Mobile released VoLTE chip solutions at the price point of \$50.

DoCoMo Achieves 20Gbps with Two Simultaneously Connected Mobile Devices in 5G Outdoor Trial

NTT DoCoMo and Ericsson announced that in a joint 5G technologies trial, the companies achieved a cumulative 20Gbps of data throughput in an outdoor environment using the 15GHz frequency band with two simultaneously connected mobile devices of a downlink bit rate of over 10Gbps each, on February 21. The data speed satisfies one of the key requirements for future 5G commercial services. The companies also succeeded in a separate trial on February 21, data throughput exceeding 10Gbps at a distance of approximately 70 meters from the base station, or about 7 times farther than the distance achieved in a past trial. Moreover, the data transmission exceeding 9Gbps at a distance of about 120 meters from the base station was also succeeded. 5G will use high-frequency bands, which are inclined to experience attenuation in speed and capacity as they travel over long distances. The trial, which took place at the DoCoMo R&D Center in the city of Yokosuka, Japan, utilized a specification defined jointly by DoCoMo and Ericsson, and an Ericsson 5G Radio Prototype and user devices, in place of mobile phones, from Ericsson. The data speeds were achieved thanks to multi-beam multiple-input multiple-output (MIMO) technology, which increases data speeds by multiplexing radio waves simultaneously. Also, by utilizing a beam-forming technique that incorporates beams, each one consisting of 64 antenna elements to converge highly directional long-distance signals on a single target, the cumulative 20Gbps throughput was successfully transmitted.



Putting Mobile Privacy in Focus in MENA

After much talk about it over the last few years, the use of big data to improve users' lives seems to finally be coming to fruition, and this holds great promise for the mobile market in the Middle East and North Africa.

The amount of data we have the capability to collect now is eye-opening, along with the number of ways we can use it. From connected cars, to smart homes, to body-monitoring apps, we have a number of technologies that are producing avalanches of data every day. According to Gartner, by 2020 there will be an astounding 26 billion connected devices that aren't PCs or phones in the world, up from less than 1 billion in 2009.

If we can harness this data, it can be game-changing. The idea of using different kinds of big data – like demographic information, location and interaction history – to personalize services is increasingly becoming a priority for both enterprises and mobile service providers.

In particular, when we consider just how quickly mobile data is growing in MENA, the opportunities for mobile data use here seem unlimited. According to the GSMA, from 2014 to 2020, the number of mobile broadband connections here

is forecast to grow from 34 percent to 69 percent, and, likewise, during this same time, the number of smartphones is forecast to increase from 117 million to 327 million. What's more, the rollout of advanced mobile networks to support this data is also predicted to grow rapidly, with the GSMA forecasting the number of 4G connections to grow at a compound annual growth rate of 37 percent from 2015 and 2020.

But despite all the new possibilities for big data, one question that those of us in the mobile business and in the consumer sector have been grappling with is, to what extent are consumers willing to share personal data in return for more personalized services along their mobile journey?

It's actually difficult to tell since little research has been done on the subject. For this reason, Syniverse decided to conduct its own study, and in January we joined forces with a research firm to complete a survey of 8,000 consumers in eight countries to uncover their attitudes toward mobile privacy. The results, which we announced at Mobile World Congress, are eye-opening and make for difficult reading for enterprises as well as operators.



Nour Al Atassi
Regional Vice President &
Managing Director
Middle East and Africa,
Syniverse

Here are some of the most surprising findings:

- 75 percent of consumers say they don't trust brands to take care of their data.
- 71 percent say they don't trust operators to take care of their data.
- 89 to 94 percent admit to having at least some concern when sharing data with brands in the retail, financial services, travel and hospitality vertical markets, as well as with mobile operators.

The findings make it clear that consumers don't feel that their mobile experiences have been significantly improved by the sharing of personal data. At the same time, consumers say the responsibility to keep data safe lies with enterprises (55 percent) and mobile operators (30 percent), with regulators coming in a distant third (15 percent).

The expectation that enterprises and mobile operators are responsible for the security, transparency and control of consumer data defines the "mobile privacy pact" between them and their customers. This is good news, because it empowers enterprises and mobile operators to address this privacy predicament head on.

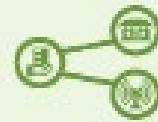
The study results are a wake-up call that it's time to take consumer privacy concerns seriously in MENA. While the opportunities for the use of mobile data in MENA will surge in the next few years, enterprises and operators must strive to achieve the right balance in the value exchange between users allowing their personal information to be shared and users gaining an enriched experience by their favorite brands in return.

Ultimately, a more transparent approach to personalization is required that puts the user in the driver's seat and makes data security and personal privacy paramount. This approach will form the new "mobile privacy pact" of the future, and it will not only pave the way for future successful engagement strategies in MENA, but, crucially, happy customers.

The Mobile Privacy Predicament

Trust in brands and mobile operators to safeguard privacy has fallen among half of consumers in the last three years yet consumers must share data in order to receive the personalized services they expect.

Privacy is Critical for Consumers



At least **89%** have some concern when sharing data with brands and mobile operators.



40% will reluctantly share basic personal data in order to improve the mobile experience.



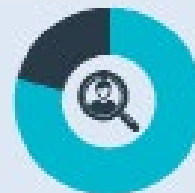
Less than **20%** are willing to share more rich contextual data, such as location, browsing history and shopping habits.

Key Objections to Sharing Personal Data

Security: 25% of consumers surveyed don't believe their personal data will be kept private or secure.



Transparency: 21% of consumers surveyed worry about how their data may be used in the future.



Control: 19% of consumers surveyed are concerned their data will be sold to third parties.



Brands and Mobile Operators Must Drive Value and Trust Along the Mobile Journey

55% of consumers hold brands directly responsible for safeguarding their data.



30% of consumers hold mobile operators responsible for safeguarding their data.



38% of consumers assume brands should be able to improve personalized services and offers as a result of collecting personal data.

"All players in the mobile value chain must rethink their approaches to harvesting, managing and using personal data. They must take a more transparent approach to personalization that empowers control and guarantees data security and privacy."

- Mary Clark, Chief Marketing Officer, Synovus



IoT Demands a Connection Re-think

Cisco estimates that within three years, IoT devices will generate a staggering 400 zettabytes (ZB) of data a year. This deluge of new data traffic is forcing mobile operators to look beyond their cellular and wireless networks.

Orange, for example, is investing in a new Low Power Wide Area (LPWA) network in France. Construction will start in 2016 and is planned to cover the majority of metropolitan France.

“Orange has an ambition to become the number one operator for the Internet of Things. To answer all the needs, we decided, as a supplement to the cellular networks, to deploy a national network dedicated to objects that need narrow-band connectivity, and also to low energy consumption,” said CEO Stephane Richard.

Orange selected the ultra-narrowband technology called LoRa (Long Range) because it offers very low power consumption in connected devices and very long range. The trade-off is slower data rates (less than 50kbps), which is acceptable for many IoT applications

like meters and sensors. A smart meter, for instance, only needs to send a few packets a data.

LoRa is backed by Cisco, IBM, Actility, Semtech as well as operators SK Telecom, Swisscom, Bouygues and Orange. It is one of the leading LPWA candidates, which also includes Weightless SIG, and proprietary network technology from companies like Telensa, Sigfox, Huawei.

Worldwide, LPWA networks are expected to become the workhorse of M2M connectivity. Machina Research forecasts over 3 billion LPWA M2M connections by 2023. “[This] will be a remarkable feat for a set of technologies that did not even have a collective name until 2013. Traditional cellular technologies have been bumped to number two spot, although the overall effect of the emergence of LPWA technologies is expected to add wide area connections, rather than to substitute for cellular connections,” said Machina’s chief research officer Jim Morrish.

The importance of LPWA in IoT has been recognised by the GSMA. It recently launched the ‘Mobile IoT Initiative’,



Orange Business Services – Middle East, North Africa & Turkey

backed by 26 mobile operators, OEMs, chipset, module and infrastructure companies to look at LPWA technology in licensed spectrum. It is expected that "initial specifications for LPWA solutions will be completed by the end of 2015 and included in 3GPP Release 13, with first implementations in early 2016 and full commercial solutions following later in the year."



According to the GSMA, LPWA networks possess several characteristics that make them particularly attractive for devices and applications that require low mobility and low levels of data transfer:

- Low power consumption that enable devices to last up to 10 years on a single charge
- Optimised data transfer that supports small, intermittent blocks of data
- Low device unit cost that can be sub-\$5 per module
- Few base stations required to provide coverage
- Easy installation of the network
- Dedicated network authentication
- Optimised for low throughput, long or short distance
- Sufficient indoor penetration and coverage

Evolving cellular and wireless

However, LPWA will not be the answer to all IoT uses, which is why there is significant research into LTE evolution. For instance, Intel, Nokia and Ericsson are working on Narrowband-LTE (NB-LTE) which they believe is the route to power efficiency for IoT devices which needed higher mobility. Meanwhile, Qualcomm is pushing 4G MTC (machine type communications) which would run at a higher bit rate.

And the Wi-Fi Alliance is seeking a wireless standard fit for IoT. The 802.11ah standard would offer long range (up to 1km), low power Wi-Fi and 100kbps data rates, and support nearly 8000 devices connected to one access point. Unlike LPWA technologies, the Wi-Fi standard would operate in 900MHz unlicensed spectrum.

Licensed or unlicensed

Whichever technology operators select, they will be faced with the question of using licensed or unlicensed radio spectrum. The Wireless IoT Forum believes that national telecom regulators such as Ofcom and the FCC need to dedicate bandwidth to IoT to ensure the monetization and long-term sustainability of networks and services. "It is clear the Internet of Things is a key technology to boost productivity, alleviate key societal challenges, improve our working lives and to deliver growth and employment," explained William Webb, WIoT CEO.

"For these reasons it merits a higher level of regulatory attention than many other wireless applications. We would like to see regulators dedicate bands in the range 800MHz-1000MHz to IoT applications, thus overcoming interference issues. Where IoT is deployed in general purpose unlicensed bands we would like to see "light licensing" approaches for base stations removing duty cycle restrictions and enabling higher power levels."



▼ SATELLITE NEWS

SATELLITE UPDATES

SAARC satellite project: Pakistan decides to opt out

Pakistan has "decided to opt out" of the ambitious SAARC satellite project which was proposed in November 2014 by Prime Minister Narendra Modi for all member countries of the regional grouping. At the SAARC summit in Kathmandu, Modi had announced India's decision to develop the satellite to benefit all member countries in different fields including telecommunication and tele-medicine. MEA spokesperson Vikas Swarup said: "Pakistan has decided to opt out of the satellite project. So it cannot be called a SAARC satellite. It will be a South Asia satellite." Pakistan is learnt to have expressed reservations over the safety of its space program data. This was conveyed to India during the SAARC meeting in Pokhara this month.

Phasor and Harris CapRock Partner on Phased Array Antenna for Cruise Market

Phased array antenna developer Phasor has entered a partnership with satellite and remote communications services provider Harris CapRock Communications to develop an Electronically Steered Antenna (ESA) terminal for the cruise

sector. The companies will co-develop a maritime terminal based on Phasor's ESA technology that will support high throughput Ku-band satellite communications to be included as part of Harris CapRock's managed services offering. This terminal will be designed for high mobility and higher bandwidth applications, such as those found in the cruise market. Cruise-sector communications combine multiple services such as passenger broadband-access, retail, banking and hospitality, which places large demands on communications infrastructure. Harris CapRock holds special distribution rights for the terminal in the cruise market. Phasor's ESAs are based on patented dynamic beam-forming technologies and system architecture. The company's low profile antenna is solid-state, with no moving parts, so satellite signals are tracked electronically. The terminal can match the performance of a 2.4m antenna dish, and features a modular antenna architecture that allows the system to be scaled to nearly any environment.

X2nSat, Axesat Join up to Provide Coverage of All Americas

X2nSat and Axesat have entered a formal partnership agreement to provide satellite connectivity across North and South

America. X2nSat has a high capacity satellite gateway and 24/7 Network Operations Center (NOC) located in California, with redundant sites and data centers spread throughout the United States. Axesat, serving corporate clients in Colombia, Peru, Venezuela, Chile, Ecuador, Mexico, and Central America, is based in Colombia, with operations centers in Bogota and Mexico City. Together, the companies' pooled resources include five satellite gateways, eight business offices, and permanent in-house resources in 10 countries, 291 employees, and operations on a total of 10 satellites. In addition to typical broadband applications, Axesat will have access to new Machine-to-Machine (M2M) and business continuity products already available in the United States. "We chose to partner with Axesat because it's one of the fastest growing service providers in the world, and by leveraging one another's people, resources and infrastructure, we can provide coverage to all of our clients from the Arctic to the Antarctic," said Garrett Hill, CEO of X2nSat.

Orbital Tracking Corp Develops Cellular-Satellite Tracking Device

Mobile Satellite Services (MSS) provider Orbital Tracking has developed its first global tracking product, a dual-mode asset tracker, which will be available later this year following final testing and receipt of necessary regulatory and compatibility certifications. The dual-mode tracker leverages cellular and satellite technology, automatically switching between the



cellular and satellite links to provide global tracking. For commercial users in transportation, shipping, logistics, fleet management and construction, the device features reporting alerts, status and GPS location data, allowing cargo and vehicles to be tracked nearly anywhere in the world. The tracker lowers operating costs by using cellular when available and satellite in remote areas to minimize roaming charges. Orbital Tracking has been developing the tracker for more than a year and intends to apply for all required operating licenses and certifications. The dual mode tracker works in conjunction with Orbital Tracking's brand mapping portal "orbitaltrack" in the U.S., and "gtctrack" for U.K. and EU customers through its U.K. subsidiary, Global Telesat Communications. When launched later this year, the product will operate on the world's largest commercial satellite networks.

Iran to launch homegrown satellite carrier this spring

Head of Iran's National Space Center Manouchehr Manteqi announced on Tuesday that the country will launch the indigenous "Simorgh" satellite carrier for test in early spring. Manteqi said the missile will be launched in three phases: Two test launches, one of which will take place in the coming weeks and the other in late summer, and a third launch, which will most probably take place in early 2017, Tasnim News Agency reported. Simorgh satellite carrier is one of the most important projects whose contract was signed by Iran's Vice-President for Science and Technology Sorena Sattari and Defense Minister Brigadier General Hossein Dehqan back in 2015. Less than 10 countries in the world are capable of designing and building such a rocket. According to Iran's Space Agency officials, the first generation of the satellite carrier is capable of carrying communications and sensing satellites as heavy as 100kg to orbits some 500km above the earth. Meanwhile, Iran is building its first sensing satellite named "Toloo (Dawn) 1", which can take images of the earth with an accuracy of 25 square meters from a distance of 500km above the earth. Iran successfully launched into orbit its first indigenous data-processing satellite, Omid (Hope), back on February 2, 2009. As part of a comprehensive plan to develop its

space program, Iran also successfully launched its second satellite, dubbed Rassad (Observation), into the Earth's orbit in June 2011.

Private Satellite Operators Grapple with Role of National Satellite Programs

While assessing the many changes that have taken hold of the satellite industry over the past few years, operators at the "Satellite Executive of the Year (SEOTY) Winner's Circle" panel debated a topic that remains unchanged for decades: the role of government-driven national satellite programs. Private satellite operators face the challenge of competing with government-backed programs around the world, as some governments deem owning one or more satellites a national priority. How commercial satellite companies compete with these players remains a quandary. "The problem begins with a lack of access," said Kalpak Gude, VP of legal and regulatory at OneWeb, who won a SEOTY award in 2007 when he was working as deputy general counsel at Intelsat. "Governments are investing to a significant degree to solve the problem of the last mile. The problem is reaching rural areas, ... governments are flailing around trying to find solutions. One solution that some governments have reached is these national systems, and we have seen this. It is not a new trend, per se; it has been going on for quite some time. How do we solve that problem?" This year's SEOTY, Eutelsat Chairman Michel de Rosen, who recently stepped down from the role of CEO of the company, said the struggle between "nationalistic and irrational approaches" to the use of space, and "international, rational approaches" has been a persistent theme for decades, and remains very important in 2016.

Panasonic Expands HTS Network to Maritime

Panasonic Avionics' broadband communications and digital entertainment services are now available to passenger vessels across the maritime market. The company is expanding its capabilities used for In-Flight Connectivity (IFC) to connectivity at sea, serving passengers

and crew, as well as communications for ship operations and corporate networking. Panasonic's Ku-band satellite network covers more than 98 percent of maritime traffic routes. The company also has a partnership with Kymeta for flat panel antennas for the maritime market. "Panasonic, in close cooperation with ITC Global, is dedicated to delivering the best in digital entertainment and enterprise quality broadband communications to the maritime industry," said David Bruner, VP of global communications services at Panasonic Avionics. "We believe our network strategy sets a new standard in connectivity across a wide range of markets including yachts, river cruises and other passenger vessels." In February, Panasonic announced multi-year contracts with satellite fleet operators SES and Telesat for High Throughput Satellite (HTS) spot and wide beam Ku-band capacity to supplement its existing HTS capabilities. The agreement helps ensure a broadband experience for Panasonic customers across the U.S., Canada, Mexico and the Caribbean, as well as the Mediterranean, Europe and the Middle East. Over the next several years, Panasonic plans to roll out "Extreme High-Throughput" (XTS) capacity in the densest of traffic areas — across North America, Europe and Asia — where these regions will be seeing multiple gigabits of capacity.

Liquid Telecom Establishes Second Satellite Hub at Teraco Data Center in South Africa

Liquid Telecom has invested \$3.5 million in a new satellite hub at the Teraco Data Center in South Africa to respond to increasing demand for broadband connectivity from across Africa. The new hub will enable the company to offer customers a satellite service with speeds of up to 50 Mbps. By placing the hub at Teraco's vendor-neutral Earth station, Liquid Telecom can route African data locally, which reduces latency and increases Internet reliability. The company keeps 97 percent of its satellite traffic within Africa, with traffic outside the continent routed via its hub in London. Liquid Telecom's satellite network complements its pan-African fiber network. Liquid Telecom will

also be one of the first to use the Newtec Dialog multiservice platform in Africa. The new platform includes technologies that will enable Liquid Telecom to provide enterprises across Africa with a dedicated bandwidth service.

Thuraya Partners with ViaSat for North American M2M Service, Creates New Terminal

UAE-based Thuraya has partnered with ViaSat in the United States to launch a dedicated Machine-to-Machine (M2M) service across North America with a new satellite terminal. The partnership expands Thuraya's coverage into North America for the first time. Concurrent with the partnership, Thuraya released its new Thuraya FT2225 fixed terminal, which operates on the company's network and on ViaSat's Mobile Satellite Services (MSS) network, leveraging ViaSat's L-band high capacity satellite system. The FT2225 terminal offers efficient bandwidth usage, low-latency IP networking, and high levels of security, along with a 99.9 percent Service Level Agreement (SLA). Thuraya's M2M strategy is founded on providing solutions to address Low Data Rate (LDR), Medium Data Rate (MDR) and High Data Rate (HDR) requirements for a range of market segments. The

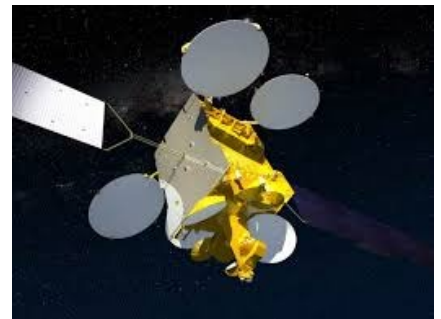


launch of this new service addresses the market requirements for the MDR tier of applications. "The International Data Corporation predicts the IoT market will grow to \$7.1 trillion by 2020 worldwide, from \$1.9 trillion in 2013. Whichever projection you choose for the number of connected devices — Gartner's 26 billion by 2020, Cisco's 50 billion, or even Intel's 200 billion — the time is right for Thuraya to grow our M2M presence across each of the three data rate tiers, and

extend our geographical reach," said Randy Roberts, chief innovation officer at Thuraya.

Eutelsat Nabs Singtel Contract for Network Connectivity Across Southeast Asia

Singtel, one of Asia's leading communications groups, has selected capacity on the Eutelsat 70B satellite to support network connectivity in Southeast Asia. The company is establishing a new relationship with Eutelsat through a flexible contract that enables it to progressively ramp up capacity over the coming 12



months as demand grows. Eutelsat 70B launched in 2012 carrying Ku-band capacity for Europe, the Middle East, Africa and Asia. The satellite's Asian footprint stretches from Myanmar to Australia, enabling users to operate secure, scalable networks and extend access to outlets in rural and isolated regions areas.

Neda Telecommunications Partners with SpeedCast to Build Network for Government of Afghanistan

Neda Communications, the first licensed Internet Service Provider (ISP) in Afghanistan, has selected SpeedCast International to build a satellite connected secured private network for one of the ministry offices of the government of Afghanistan. Under this multi-year service agreement, SpeedCast will build a new private network with more than 50 sites to deliver required connectivity and service levels to the end user. The new network aims to provide reliable and secure connectivity that will extend coverage for the government customer.

Norsat Unveils Atom 250 Watt Ku-band BUC and SSPA

Norsat has released new Atom 250 Watt Ku-band Block UpConverters (BUC) and Solid State Power Amplifiers (SSPAs), the latest edition to the company's Atom series of products. The company has shipped the first Atom 250W BUC to its initial customer for integration into a radar transceiver application, and is accepting new orders now. According to Norsat, the Atom 250 Watt Ku-dual band BUC provides 250W of saturated power (200W at P1dB) in one of the most compact sizes in the market. Covering transmit frequencies from 12.25 to 18 GHz, including Common Data Link (CDL) and Low Ku band, the Atom 250W SSPAs and BUCs can be configured to suit operation on any Ku Band satellite. Norsat claims the Atom series is up to 85 percent smaller, 90 percent lighter, and 60 percent more energy efficient than alternatives, enabling a wide range of applications including Travelling Wave Tube Amplifier (TWTA) replacement, Satellite News Gathering (SNG), transportable Very Small Aperture Terminals (VSATs), Satcom on the Move, and radar. The Atom 250W also includes AtomControl, the same management and control software that powers the full Atom Ku and Ka family of products.

SES Prepping Ka-band Maritime Service for Europe

SES has announced plans for the operator's first maritime Ka-band services under the SES Maritime+ service offering. This new service for the maritime and inland shipping mobility sector will use Astra 2E's and Astra 2G's Ka-band beams to provide services aimed at boosting efficiency and operational savings. The new Ka-band service, to be launched in Q2 2016, combines SES Ka-band spot-beams, Epak's DSi9 maritime antenna and Gilat Satellite Networks' broadband technology. The offering is based on SES Techcom Services' Astra Connect solution, and will provide coverage over Europe, including the North Sea, the Irish Sea and inland waterways. SES is targeting customers such as offshore wind farms, inland shipping companies, and supply ships for oil platforms with this service.

SES Launches SatMed e-health Platform on Floating Bangladesh Hospital

SES and Friendship, a non-governmental organization, along with the technical assistance of Square Informatix (Bangladesh), launched the first state-of-the-art Maritime VSATs on three of Friendship's floating hospital ships — Lifebuoy Friendship Hospital, Emirates Friendship Hospital and Rongdhonu Friendship (formerly the Rainbow Warrior II) Hospital. SatMed, the newly deployed satellite-based e-health platform, will enable Friendship to establish communications with national and international doctors from remote areas to provide medical counseling to marginalized communities through telemedicine and to exchange medical knowledge with local doctors. SatMed

Central Command (CENTCOM). The one-year contract calls for 288 MHz of Ku-band service to support U.S. military operations in the CENTCOM Area of Responsibility (AOR), which extends from North Africa through the Middle East and into the Central Asian countries of Afghanistan and Pakistan. "This capacity will provide the U.S. military's deployed command and control nodes with robust reliable communications in remote locations," said Skot Butler, vice president of satellite networks and space services at Intelsat General. "This will support vital C4ISR networks throughout the CENTCOM AOR." The service, which began in February 2016, has four, one-year renewal option periods and one six-month renewal option period. The new contract follows a similar award made last September to support the U.S. Air Forces Central Command (AFCENT) operations with 144 MHz of Ku-band services.



is an IT-enabled cloud infrastructure accessible around the globe, which facilitates data exchanges between professionals and medical frameworks such as electronic medical records and teleradiology systems. The project is funded by the Luxembourg Government and implemented in cooperation with SES Techcom Services and e-Medical Communication (eMC).

US CENTCOM Awards Intelsat Second Year Contract

Intelsat General Corporation has been awarded a second contract to provide satellite services to the U.S.

Eutelsat Awards OSN First HD- Home of HBO Award for 6,000th Channel on Fleet

Eutelsat's satellites have now broadcast more 6,000 channels with the launch of "OSN First HD – Home of HBO," a new channel broadcast by OSN, a Pay-TV network in the Middle East and North Africa. "OSN First HD – Home of HBO" takes OSN's long-term partnership with HBO offers first and exclusive access for OSN subscribers to HBO's portfolio of TV movies, comedy specials, documentaries and talk-shows.

Stargroup Selects Eutelsat 65 West A Satellite for StarGo Broadband in Latin America

Stargroup, the parent company of StarTV, Mexico's new Direct-to-Home (DTH) platform, announced a multi-year agreement with Eutelsat Americas, a subsidiary of Eutelsat Communications, for Ka-band capacity on the Eutelsat 65 West A satellite. Stargroup will use the capacity to power its new StarGo broadband platform. Launched by an Arianespace rocket at 05.20 UTC, Eutelsat 65 West A is now on course for the 65 degree west location in Geostationary Earth Orbit (GEO). The new satellite's capabilities include a broadband payload with 24 Ka-band spotbeams of which eight, booked by Stargroup, cover large swathes of Latin America. The new StarGo broadband service will complement Stargroup's DTH offer launched in Mexico in December using capacity on the Eutelsat 117 West A satellite. Stargroup plans to provide Ka-band broadband services in Mexico, Colombia and Peru to complement its Mexican DTH offer and support broadband access for end-users, as well as a broad range of corporate sectors including agriculture, manufacturing, farming, fishing, security and health.

Eutelsat 9B Goes Live, Replaces Eutelsat 9A

Eutelsat's latest satellite, Eutelsat 9B, is fully powered up and now providing TV services to homes across Europe. The satellite, launched Jan. 29 aboard a Proton rocket, replaces Eutelsat 9A to broadcast a diverse line-up of more than 350 channels, of which 100 are in High Definition, to cable, Direct-to-Home (DTH) and Digital-Terrestrial-Television (DTT) homes. Having completed its mission at 9 degrees east, Eutelsat 9A will continue in full commercial service at an alternative orbital position. Eutelsat 9B is a high-capacity Ku-band satellite addressing broadcast markets through a pan-European footprint with wide coverage and four regional footprints serving Germany, Greece, Italy, and the Nordics with the Baltics and Ukraine. With its entry into service, overall Eutelsat capacity at 9 degrees east has increased to 50 physical transponders

(47 equivalent 36Mz transponders). The satellite is also hosting the inaugural data relay payload for the European Data Relay System (EDRS) being implemented through a Public Private Partnership (PPP) between ESA and Airbus Defence and Space

Entel deploys 'fiber-like' satellite backhaul to Easter Island

Entel Chile has deployed satellite provider O3b's 'fiber-like' backhaul solution, O3bTrunk, to Easter Island, enabling the cellco to roll out 3G and 4G services on the remote island. The new link will also allow Entel to provide fixed broadband access on the island, previously a challenging prospect due to the island's location, some 3,700km away from the Chilean mainland. Home to around 6,000 people, the island also plays host to more than 80,000 visitors a year. In its press release, O3b explained that its O3bTrunk solution 'delivers latency equivalent to long haul fiber, with round-trip times of less than 150 milliseconds. This allows access to improved quality voice, streaming high definition (HD) video, social media, online gaming, enterprise software applications and overall performance for the end user on par with connections in Santiago or other mainland cities.'



Inmarsat to Launch Fourth Global Xpress Satellite

Inmarsat has decided to launch the fourth Global Xpress satellite, originally procured from Boeing as a spare but with the potential to support an incremental business case, in the latter part of 2016. The operator announced intentions to orbit the satellite with its full year financial results March 3, stating that

the company is exploring a number of different orbital locations, business opportunities and related revenues for this satellite. Following the decision to launch, Inmarsat has adjusted its 2018 revenue outlook. Inmarsat expects that group revenues, excluding those from LightSquared, will increase to between \$1.2 billion and \$1.3 billion in 2016, and will reach between \$1.45 billion and \$1.6 billion in 2018, mainly as a result of Global Xpress. The \$500 million targeted annual revenue run-rate for Global Xpress revenues by the end of 2020, the fifth anniversary of the global launch of commercial services, remains unchanged pending a decision on the orbital slot and business plan for I-5 F4 later this year. Inmarsat's total revenue was flat for 2015 at \$1.274 billion compared to \$1.275 billion in 2014. Government revenues saw a 10.4 percent drop, but aeronautical connectivity largely offset this decline with 25.4 percent growth

Hispasat Teams with Quantis Subsidiary for Satellite Broadband in North Africa

Hispasat has entered a partnership with Quantis and its Moroccan subsidiary Nortis, a leading operator in data, voice and satellite Internet services in Spain and Morocco, to provide satellite broadband services in North Africa. Per the agreement, Quantis signed for Ka-band capacity on the upcoming Hispasat 30W-6 satellite, formerly known as Hispasat 1F, until the end of its useful life, estimated at 15 years, at a cost of approximately \$137 million (125 million euros). Under construction by SSL, the satellite will provide coverage over North Africa, especially Morocco, after launching in 2017. Hispasat currently has Ku-band capacity at this orbital position from the satellites Hispasat 30W-4 and Hispasat 30W-5. Both companies have signed another agreement to offer maritime connectivity for cruise ships, fishing fleets, ocean carriers and other ship companies from these spacecraft. The service, which Quantis will offer through its own platform, uses Hispasat satellite capacity, which covers the waters of the Maghreb, from the southernmost latitudes of the region to the most central areas of the Mediterranean.

10 Media Trends Disrupting the Satellite Market

Evolving media habits such as streaming, Over-the-Top (OTT) and bandwidth demand are driving change in the way satellite bandwidth is used and consumed. While a recent study conducted by Ericsson found that 60 percent of millennials are still consuming linear TV, the popularity of live content such as sports and events sustain much of that demand. Alternative avenues of consumption, such as Subscription Video-on-demand (S-VOD) and the growing popularity of mobile viewing, are ready to take center stage. Here, we take a look at the 10 trends impacting satellite bandwidth today, laid out by Jimmy Schaeffler, chairman and CSO of The Carmel Group, during Monday's "Satellite's Response to Evolving Media Habits: Streaming, OTT and Bandwidth Demand" at the SATELLITE 2016 Conference & Exhibition.

1. Migration to Mobile

As smartphones, tablets and wearable technologies rise in popularity, the demands for mobile applications are growing and will continue to evolve. "Smartphones are still in their earliest stage," said Schaeffler. "The demand for iPhones, iPads, smart watches, etc., is really going to begin increasing the need for better distribution of bandwidth."

2. Migration to Streaming Broadband OTT

According to a study conducted by Ericsson and Consumer Labs regarding viewer TV and media habits, in 2014 as many consumers say they watch streamed on-demand video and TV at least once a week, as those who watch scheduled linear TV. These changing habits are linked to the proliferation of connected TV screens, where consumers can easily and conveniently access on-demand content, according to the report. And that proliferation isn't likely to slow. "The pay TV and broadcasting of 10 years ago is no longer," said Schaeffler. "Like so many traditional companies, the cable and satellite operators — maybe with the exception of Dish Network — looked at OTT and decided they weren't worried about it, their businesses were strong no matter what. I don't think companies are saying it quite with that confidence anymore." bOTT

and satellite have the likelihood of working together, however. "There is definitely a move toward streaming video and OTT. But what we need to keep in mind here is ... we do believe linear and OTT are going to go hand in hand. We think that by 2020 linear television is going to be 50 percent of viewing and offline video will be the other 50 percent," says Lisa Hobbs, vice president of commercial portfolio strategy of compression at Ericsson. "Yes [OTT] is growing, but in many places in the world the best way to get linear content out to consumers is still going to be satellite."

3. Data Analytics

The collection and analysis of data surrounding consumer and audience habits and desires is already coming through in how content is produced and provided to viewers. Schaeffler points to Netflix's "House of Cards" series, in which the company turned away from traditional aspects of fielding and releasing the show and instead made use of data it had collected regarding what the consumer wanted to see and how Netflix's audience of OTT viewers would prefer to watch it. With that data, the company built and released the highly successful series. "Netflix didn't spend millions of dollars on a pilot, testing the series on audiences. Instead they collected data on their audience and introduced it to them. That was the early beginnings of data-driven content. Now, more and more series are going to be created and watched based on data from the consumers as well as, importantly, advertising and cultivating targeted ads," says Schaeffler.

4. The Internet of Things

The Internet of Things (IoT) is set to connect everything and everyone to the Internet through sensors and devices such as smart watches. As the network of objects grows and seeks to collect and exchange data, satellite will most certainly have a role in enabling that conversation.

5. Connectivity

As cars, airplanes, and inanimate objects everywhere begin to link up to the Internet, the need for satellite capacity will grow alongside it. "Everything is connected all the time — even your refrigerator, even your oven, your car. Interconnection will grow and grow, and it will drive that need for more bandwidth," says Schaeffler.

6. New Content Stakeholders

Companies such as Netflix and Amazon are entering the picture and are changing the ways that media content is produced and distributed — and this is likely to accelerate in years to come. "People are realizing that vertical distribution is not just owning the distribution pipe but also owning some of the key content that goes into the pipe is critically important," Schaeffler notes.

7. Enhanced Bandwidth Consumption

With devices rapidly proliferating across the globe, the demand for bandwidth will rise as everybody's device throughout their lifetimes, is going to take whatever bandwidth they require now and increase it, incrementally, as new platforms and higher definition content begins to, naturally, take hold.

8. More and Smarter Devices

As each consumer stocks up with more than one device, the devices themselves will become more powerful. We will see "more and more computer, power and storage in one small unit," according to Schaeffler, growing the need for bandwidth capacity in coming years.

9. Advanced Digital Media

Virtual reality and augmented reality will also grow demand for device proliferation and bandwidth. Schaeffler sees video games as the perfect landscape for these two new advanced digital media platforms to evolve and take off with consumers. "When you start having to interconnect those bits and you add a whole new layer to 4K or Ultra High Definition in the form of virtual reality or augmented reality, you see more and more bits; more and more need for cellular, landline and satellite," he says.

10. Distribution Migrations

New technologies are coming into the market to challenge the status quo when it comes to how consumers can access content. "It's all morphing, it's all changing. Just in the U.S. the market for cable is being challenged by alternative broadband access providers," says Schaeffler.

Anatel Awards Yahsat Rights to Operate in Brazil

Brazil's national telecommunications agency Anatel has awarded UAE-based satellite operator Yahsat a license to operate its upcoming satellite, Al Yah 3, in Brazil. The award of the license follows Yahsat's success in an Anatel-hosted auction in May 2015, offering satellite operators the option to bid for rights to operate a satellite, as a Brazilian operator, over Brazil. Upon winning the auction, Yahsat elected to use the license for Al Yah 3, a Ka-band satellite under construction by Orbital Sciences, for the 20 degrees west orbital slot. Al Yah 3 is scheduled to launch in 2017 aboard an Arianespace rocket. In preparation for the satellite, Yahsat has established an office in Rio de Janeiro, which is staffed by a growing team of industry experts from Brazil. In addition, the country will be supported by major infrastructure, services and contracts. Yahsat is now in possession of landing rights to operate



as a local satellite provider in Brazil. Al Yah 3 will cover more than 95 percent of Brazil's population across more than 5,000 municipalities, offering satellite Internet services as well as economic, high data rate backhaul links for Internet Service Providers (ISPs) and telecommunications operators.

Yahsat Signs New Service Partnership with Nexlinx in Pakistan

Yahsat, the Abu Dhabi-based satellite operator, announced that it has signed an agreement with new service partner Nexlinx Networks to distribute its satellite broadband service, YahClick, to users across Pakistan. Nexlinx customers will

soon be able to instantly connect to YahClick's satellite broadband internet service anywhere in the country using a compact satellite dish and modem, without the frustration of congested networks, including areas where terrestrial infrastructure is currently not available. Commenting on the new partnership, David Murphy, Chief Commercial Officer, Yahsat said: YahClick already enjoys great success in Pakistan and with the ever growing demand for widespread access to reliable broadband internet, we wanted partner with a leading telco to further the reach of our service offering. We are delighted to partner with Nexlinx to extend our reach and believe they bring critical knowledge of the market and business customer

connectivity will play an important role in expanding our broadband portfolio by allowing us to provide high class broadband services in areas which are underserved and overlooked. Our partnership is directly in line with our mandate to develop market-leading high quality broadband services for businesses all across the country. He continued: Satellite continues to play a huge role in driving economic success for SMEs and larger enterprises, especially in rural environments. Previously hindered by unreachable or unreliable internet connectivity, YahClick addresses these issues by offering a cost effective and versatile product suited to business with fast internet access across the whole of Pakistan.



requirements. Their expertise coupled with the flexibility, reliability and ease of YahClick's installation is a powerful combination to roll out this new service. As one of Pakistan's leading telecom and technology providers, Nexlinx specializes in high quality telecommunication services and solutions to a business client base. YahClick's satellite broadband service will be delivered by Nexlinx, who will offer in-country technical, operational and customer care. Nexlinx delivers a 100% managed network with an expansive portfolio of business-specific products and services. YahClick's popular Ka-band satellite broadband offering has already been deployed across the enterprise sector in verticals such as banking and directly to consumers, NGOs and businesses of all sizes. Naeem Haq, CEO, Nexlinx Networks, commented: We are delighted to be partnering with Yahsat and believe YahClick's satellite

16th Global Symposium for Regulators (GSR) Sharm el-Sheikh, Egypt 11-14 May 2016

Today, technology is increasingly recognized as a pillar of social and economic development. And the value and impact of information and communication technology (ICT) is set to grow as new technologies – including the Internet of Things (IoT), 5G-enabled technology, and artificial intelligence – are the building blocks of tomorrow's 'smart societies'. Positive development can only continue and flourish with effective regulation and attention to policy in this ever-changing ICT landscape.

Now more than ever, regulators need to come together and develop innovative solutions to leverage new opportunities. Together, regulators and all technology players have the power to drive change and deliver transformative technologies and regulatory responses that bring real change to people's lives.

ITU's flagship event – the Global Symposium for Regulators (GSR) – is the forum where regulators come together every year to discuss policy and regulatory challenges, opportunities and best practices. GSR is the world's largest neutral platform for regulators to engage with other regulators, policy makers, and business leaders. GSR 2016 will be held in Sharm el-Sheikh, Egypt, from 11 to 14 May 2016 under the theme 'be empowered, be included, building blocks for smart societies in a connected world.'



GSR 16 BE EMPOWERED, BE INCLUDED: BUILDING BLOCKS FOR SMART SOCIETIES IN A CONNECTED WORLD

Sharm el-Sheikh, Egypt,
11-14 May 2016

Aim of GSR16 and beyond: Our promise is to recognize and integrate emerging trends in regulation to maintain GSR as the unique, neutral platform for regulators to come so that they can keep a head start on regulation and create a feeding ground for collaborative regulation. We want to give our Members the tools to share their experiences and expertise, and get ahead of the curve in terms of regulation, not only in the ICT/telecommunications sector, but also in terms of how ICT/telecommunications interacts with other regulation so that we can leverage our head start on regulation in a collaborative, 4th, and even 5th generation ICT regulatory environment.

Entering Behavior: The evolution in the sector has brought about changes – there are new players on the market and discussions as to new and existing business models, new technologies, and new opportunities.

Regulators around the world have become more conscious of the changing ecosystem and are aware that they need to adapt to the changing environment. From a time when they were mainly focused on their creation as independent entities opening monopolistic markets, to one where they became active in promoting investment in infrastructure and services development and overseeing budding competitive markets, they now have many more issues at stake – they have become 4th Generation Regulators fostering the development of ICTs for economic and social development and increasingly interacting with other sectors.

What is the Challenge: Today we are seeing a new opportunity arise because of the changing landscape, where we are dealing with the Internet of Everything and yet see billions still unconnected, which also affects their ability to participate in the digital economy – socially, financially, and economically. As ICTs are recognized as the foundation

upon which the pillars of economic and social development can grow, recognition has grown that we need ecosystems that include ICT/telecommunication operators and service providers, but also health providers, educators, banks and others as partners to connect the world and create value for business. We need to work together to create an enabling regulatory environment between regulators and other stakeholders across the sectors and remove the barriers that hinder progress. We also need greater focus on standardization and interoperability between borders and also between technologies. The ability to offer secure and real time transactions on strong, resilient ICT networks is essential to build consumer trust, and this also requires a focus on protecting privacy.

Description of Sessions: We have designed GSR16 around the theme: BE EMPOWERED, BE INCLUDED: BUILDING BLOCKS FOR SMART SOCIETIES IN A CONNECTED WORLD, and have identified various tracks to allow participants to exchange on the challenges of collaborative regulation in a digital, connected, smart society. In addition, information sessions will be held during coffee and lunch breaks, including a cyber drill, and information sessions on key BDT projects, programs and initiatives.

Program

Wednesday 11 May 2016 PRE-EVENT DAY

09h00-12h30 Global Dialogue on Digital Financial Inclusion
 12h30-14h00 Lunch
 14h00-16h00 Global Dialogue on Digital Financial Inclusion
 16h00-16h30 Coffee

16h30-18h00	Chief Regulatory Officers Meeting (CRO)	Regulatory Associations Meeting
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Thursday 12 May 2016

09h00-10h00 Opening Ceremony
 10h00-10h15 COFFEE BREAK/ PHOTO OPPORTUNITY
 10h15-12h00 Leadership debate: Beyond 2020 - Challenges, Opportunities, Scenarios
 This high-Level debate will examine

- Artificial Intelligence, smart Sensors, smart networks – where do we go from here?
- How to maintain trust in ICTs in an era of big data, Internet of everything, machine learning and smart digital environments?
- As things get smarter, will smart machines take over?
- How can consumers get smarter?
- What are the kind of policy and regulatory frameworks needed to ensure disruptive technologies bring new opportunities for all in a sustainable manner?
- Will it be business as usual?

12h00-14h00 LUNCH / PRESS CONFERENCE

TRACK 1 BE SMART: BUILDING BLOCKS FOR A SMART SOCIETY IN A CONNECTED WORLD

14h00-15h30 Session 1: A changing regulatory landscape: Collaborative regulation – how to pave the road towards adoption of IoT, M2M?

Presentation of GSR Discussion Paper on Building Blocks for Smart Societies in a Connected World

This session will explore ...

- Setting the context - impact (efficiency, QoS, resilience of infrastructure, and sustainability)
- Redefining collaboration along the value chain from infrastructure to services to institutions: smart infrastructure, smart transport, smart grid, smart delivery of services, smart health, smart financial services, smart education, smart businesses
- How does ICT link with and contribute to other sectors and what is needed in terms of regulation – case study on smart energy/grids
- Challenges – the case of energy efficiency for ICT development

15h30- 15h45 COFFEE BREAK

Information Session on International Mobile Roaming Dialogue

15h45-17h00 Session 2: Digital Financial Inclusion – how to include the unbanked and unconnected in today's smart society?

This session will be an interactive panel session on:

- How to include the unbanked and unconnected in today's smart society?
- Collaborative Regulation to foster an enabling environment for digital financial services

Friday 13 May 2016

TRACK TWO: TOWARDS A SMART DIGITAL SOCIETY

9h00-10h30 Session 3: Future Technology Developments: Opportunities, challenges and business strategies

Presentation of GSR discussion paper on Future Technology Developments and Regulatory Impacts

This session will examine

Future Technologies: Drones, nano-satellites, Wifi, M2M/5G (HetNet), Future cables, NFV, WebRTC

- What are the requirements for future technologies? Reliability, latency, integrity and safety, openness, quality?
- Preparing the regulatory landscape: what kind of regulation is needed and who's in charge?
- Spectrum as a tool for innovation – where do we stand post WRC 2015? What are the new frontiers?
- 5G: what to expect? A revolution or evolution?

10h30-10h45 COFFEE BREAK

10h45-12h00 Session 4: Be empowered! What ICTs can do for you!

Presentation of GSR discussion paper on Digital Platforms in a Collaborative Economy

This session will examine ...

- What does the Ecosystem Look Like Today
- Do Free Basic Services Empower Communities and Individuals?
- Business and Investment Incentives and Sustainability in a Collaborative Economy – how the mass adoption of connected digital technologies and applications by consumers, enterprises, and governments is driving strategic and operational decisions and creating opportunities to empower citizens and business
- How extending access must be accompanied by the development of relevant content and new services so that innovation and entrepreneurship can be fostered and local digital platforms and content can help develop local digital economies

12h00-14h00 LUNCH

Information session on Universal Service Reform Programme

14h00-15h30 Session 5: Be included!

Presentation of GSR discussion paper on Enablers for Smart Networks, Societies, and Individuals

This panel discussion will examine ...

- Improving digital skills for new business opportunities/SMEs
- Smart policies and regulatory measures: entrepreneurship in a smart, collaborative economy - monetizing apps and smart services, cloud services, networks, crowdsourcing – crowdfunding
- What can regulators do to facilitate entrepreneurship in a digital economy?

15h30-15h45 COFFEE BREAK

Information Session on Let's Roam the World

15h45-17h00 Session 2: Real Life impact of Smart Societies – How to maintain trust?

This interactive debate will see panelists share their views on Privacy, Trust and Cybersecurity – the foundation for the development of our smart society (e.g., securing e-commerce/ financial transactions, digital identity)

Demo: Cyberdrill – illustration of what needs to be done when there is a cyberattack

Saturday 14 May 2016

08:00-09:30 Director's Breakfast (upon invitation only)

09h45-12h15	<p>REGULATOR TRACK</p> <p>GSR16 Best Practices Guidelines: Discussion and Adoption</p> <p>This session will address the GSR Best Practice Guidelines with a view to their adoption by regulators.</p> <p>Meet the Regulators – Exchange Platform between regulators – e.g. Content, Telecoms, Financial Services, and Energy?</p> <p>Regulators will share their experiences and expertise, not only in the ICT/telecommunications sector, but also in terms of how ICT/telecommunications interacts with other regulation so that they can define tools and guidelines to leverage their head start on regulation in a collaborative, 4th, and even 5th generation ICT regulatory environment. This session will examine case studies on e-health, electricity, content, and include regulators from financial sector, energy sector, health sector and broadcasting.</p>	<p>INDUSTRY TRACK</p> <p>Industry Leaders Debate – Impact of open innovation and new business models on Collaborative regulation</p> <p>Open innovation, shared resources, and networked business models are key components of innovations and new developments in most industries, including ICTs. Companies cannot develop and control everything alone, but will use services from other companies and open their own services to third parties. Success may depend more on how companies can be a hub in the ICT ecosystem than just on building and owning infrastructure. This session will allow participants to exchange on business models, partnership models and regulation.</p> <p>Industry Leaders Debate – Regulatory KPIs</p> <p>This session will examine Regulatory KPIs in a 1st to 4th Generation Regulation Context – ICT Regulatory Tracker as Basis for Discussion.</p>
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12h15-13h30 Way forward and closing ceremony:

- Presentation of GSR16 Best Practices
- Summary of Pre-event Workshops
- Presentation of CRO and RA reports
- Guru impressions

Moderator: Brahima Sanou, BDT Director

Panelists: GSR past, present and future chairs

Highlights Video

13h30-14h30 LUNCH



TELECOM LEADERS' SUMMIT 2016

19th May 2016

Challenges of the Digital Economy and the Stakeholders' Need for Alignment of Priorities in a Better Connected World

Over the last three decades, the world has consistently witnessed the advent and growth of telecommunications and computing linked phenomena, causing major shifts and changes in economic activities across the world. For the last ten years, specifically, such phenomena have been much more apparent to the eyes. Still over the past few years, many more tangible effects of such phenomena have been observed, giving rise to the development of what is now referred to as the digital economy. Digital economic activity is based on the digital transformation of previously existing goods and on the emergence of purely new digital goods.

The notable fact that information and communications technologies have not only aided the creation of goods and services, which have now become essential to the human living style, but have also catalyzed new paradigm shifts in how new goods, whether purely digital or not, are created, manufactured, distributed, traded, and consumed in our increasingly digital societies.



Taking the G20 economies as an example, it can be speculated that the impact of digital economy may already have reached or exceeded US\$4 trillion. In the SAMENA region alone, in 2013, the potential of economic impact due to the adoption of digital services and applications was approximated by SAMENA Council to exceed US\$1.3 trillion. Such approximations, needless to say, are founded on existence and availability of high-speed fixed and mobile networks, affordable user terminals, innovative applications and content, and reliable and secure cloud based services.

As the digital economy is dependent on digital infrastructure, there are pressing issues that need to be overcome for the digital economy to thrive, as many nations step into the world of smart

Nonetheless, the business of digital development, given its central role in the development of digital economies and the realization of smart digital societies, and with its myriad of private-sector and public-sector stakeholders and complexities across all dimensions, now demands an unprecedented level of co-operation and and sector-wide understanding of stakeholder priorities. Without collectively aided understanding of such priorities and issues, which could only be addressed through cross-stakeholder dialogue, it is no longer feasible to achieve true progress, save time, realize operational efficiencies, meet national as well as international obligations, and ensure a viable and sustainable future for both business and socio-economic well-being, purely based on individualized priorities and values.



societies. Some of the issues revolve around insufficient investments, lack of spectrum resources, archaic regulations, lack of measurable ICT policies, or sluggishness in digital development, which may simply be specific to certain markets and regions, given their socio-economic and geopolitical dimensions.

It is imperative to realize that individually-set priorities have a much better chance of reaching fulfillment if they are well-corroborated, subordinated to our collective will to meet our digital agenda, and if they are cross communicated for the purpose of seeking common grounds

and mutual contributions that lead to fruition of those priorities.

Moreover, it is imperative also to realize that in the absence of required reforms - the need for which has been firmly established by all the stakeholders from both private and public sectors, we must collectively bear responsibility for undermining economic growth and the potential for elevated standard of living of our people. Thus a much greater understanding of all facades and realities of the evolving world of telecommunications among all stakeholders is critically needed. And that is possible only if all stakeholders are aware of each other's priorities and areas of both immediate and long-term focus.

Collective and all-inclusive participation across the decision-making spectrum has become inevitable.

Leaders' Summit: Objectives for 2016

In this great period of excitement, progress, investment planning, and a sense of urgency within the policy-making circles to advance digital development, SAMENA Council feels that, with its new, dynamic leadership announced this month, and given its global leadership role in bringing private-sector in closer alignment with regulatory preferences, it is a matter of utmost importance that future decision-making among stakeholders be aided in the best manner possible. To this effect, Telecom Leaders' Summit, an annual top-tier stakeholders' meeting being organized since 2010 by SAMENA Council, an operator industry association.

Leaders' Summit, in the past, have recorded tremendous success and top-tier participation from across the SAMENA region.



Leaders' Summit Over the Years



It is the primary objective of SAMENA Council's Telecom Leaders' Summit to facilitate and drive such cross-stakeholder participation and open communication by bringing together business decision-makers, investors, policy and regulatory authorities, and global institution-level leadership, in order to open new avenues of progressive thinking and future planning for the benefit of both the telecoms and ICT industry and the ultimate stakeholders – the citizens, the consumers.

Creating linkages between stakeholder priorities and improving stakeholder relationships are daunting tasks. However, SAMENA Council is well-equipped to execute such tasks and the Leaders' Summit is a means to achieving progress toward this effect. This year's Leaders' Summit will delve into the following areas of discussion and efforts will be exerted to advance significant post-gathering cooperative undertakings, bearing long-term positive impact for the telecom industry of the SAMENA region and beyond.

- Re-defining Priorities in Policy, Regulation, and Infrastructure Development
- Necessities of the evolving market and relevant legislation & regulation
- Viable areas of investment and stakeholder partnership to help reduce financial burdens

Our industry, the enabler of everything digital, has experienced many evolutionary waves and continues to do so, with new telecommunications technologies emerging from all corners of the digital ecosystem. More than 4 billion users of the Internet will be online in a matter of months from now. Out of these, a wide majority, in one form or another, will be using over-the-top platforms - a major disruption in the industry - to stay connected and access user-generated data, among other content.

What we have created by now, is a world of ubiquitous connectivity, which is quickly transcending the bounds of human-to-human interaction and taking us into the human-to-machine realm. Perhaps, such evolution is integral to the realization of smarter societies and more efficient approaches that would offer improved insurance of socio-political and socio-economic participation.

There thus exists a sore need for defining and pin-pointing what the real requirements in this region are, and what region-specific approaches can be adopted through stakeholder co-operation and willingness to achieve much larger, far-reaching digital development goals.

Given the the efforts of many a government and participation of the private-sector entities, including telecom operators, various telecoms markets of the region have assumed the right direction toward achieving digital progress for the betterment of their citizens. In such a scenario, it is likely that as national development goals begin to achieve fulfillment relative to developed nations of Europe and North America, or other markets regarded as having been developed, the possibility of introducing legislations and regulations inspired from other markets may also increase. Such a trend could undermine innate market dynamics specific to this region, and even more specific to each individual regional market, and may also prove to be detrimental to the sustainability of the business in markets of this region. We are already seeing a rising trend of over-taxation in many countries within and beyond the SAMENA region; among other sources of impedance that directly affect the will and the possibility of investment. There thus exists a sore need for defining and pin-pointing what the real requirements in this region are, and what region-specific approaches can be adopted through stakeholder co-operation and willingness to achieve much larger, far-reaching digital development goals.

At another layer, it is only through close communication that all stakeholders would be able to align themselves toward achieving both individual and collective success. In the digital world, such success will be measured by the level of convenience, reach, inclusiveness, access to opportunities, and physical routes leading to riches of life provided to the common man. No smart society will function properly without guaranteeing advanced-level services to its citizens; no investment will find its return without being of service to the people, its intended recipients.

But where do we start from, and how can cross-stakeholder willingness to cooperate be transmuted into tangible steps that would generate more revenue opportunities, without having to rely too heavily on archaic approaches that measure revenue success and failure only in terms of taxes and duties?

Telecom Leaders' Summit 2016 will be held in Dubai, UAE, on May 19, 2016. It will coincide with SAMENA Council's ten-year anniversary, marking the beginning of a new era in SAMENA Council's history as a regional telecom industry association.

It is hoped that the the SAMENA Council-aided understanding of stakeholder priorities would help promptly unearth development potential in this region and would help:

- Promote entrepreneurship in the ICT sector through smart capital injection and incubation programs
- Build knowledge capital through advanced ICT program
- Improve digital literacy through ICT integration in education, awareness and training programs
- Encourage ICT usage among businesses through awareness
- Institutionalize measurement and monitoring mechanisms in the ICT sector
- Improve healthcare quality and delivery through tele-health solutions
- Enhance efficiency of energy sector through smart grids and digital oilfields
- Use ICT as a tool to enhance education
- Improve digitization of financial services
- Invest in state-of-the-art transportation, among other "smart city" services
- Institutionalize cross-sector collaboration to drive digitization across sectors
- Promote ICT investments through the easing of regulations and financial requirements
- Create investment friendly and futuristic business environments



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