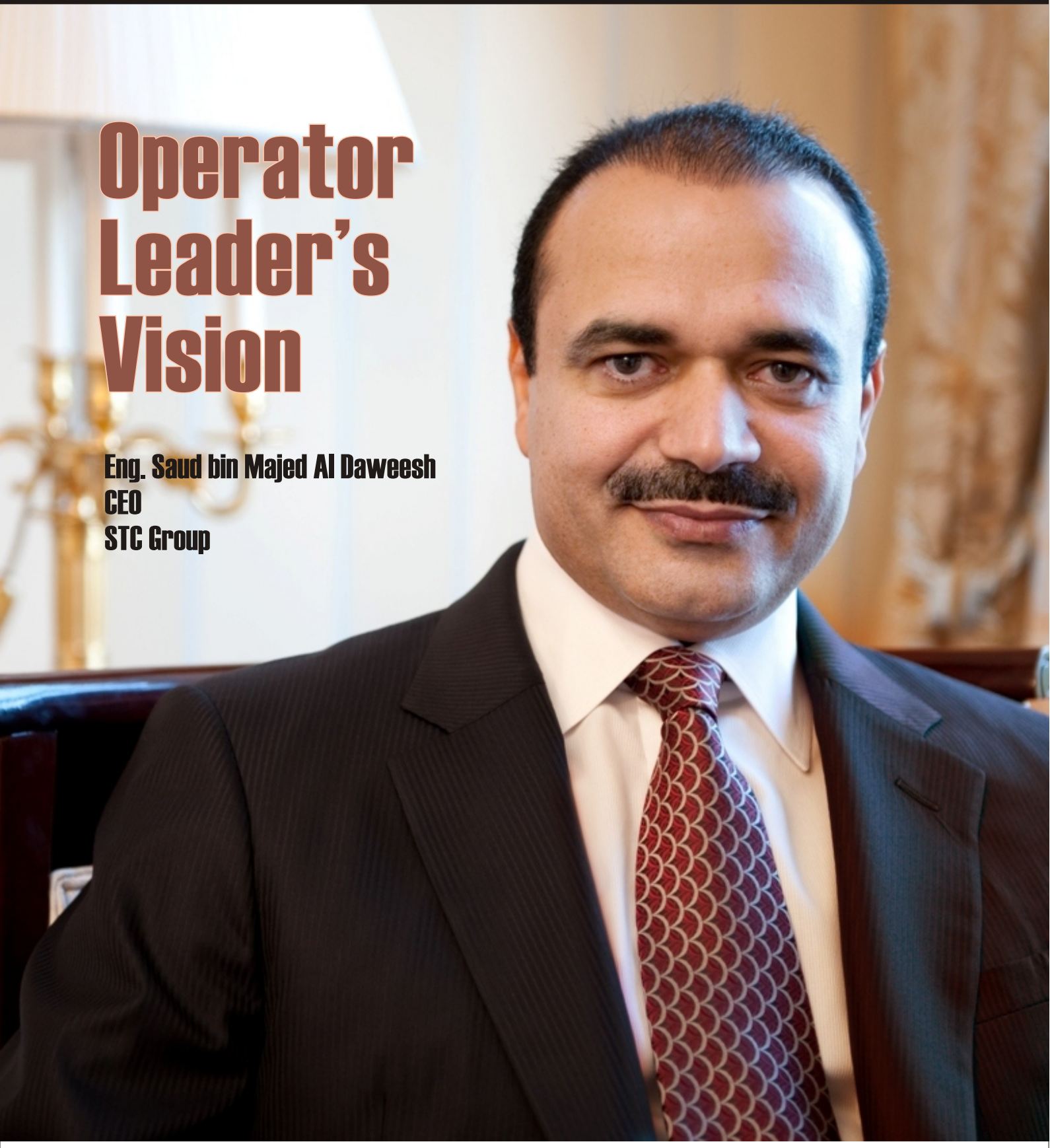
SAMENA TRENDS

Volume 01
Issue 01
August 2010

A SAMENA Telecommunications Council Publication



Operator Leader's Vision

Eng. Saud bin Majed Al Daweesh
CEO
STC Group

Convergence to Casablanca 2010

"Transforming Challenges into Growth"

27th - 28th October, 2010
Casablanca, Morocco

Topics of Discussion

Broadband

1. Government subsidies for speeding up broadband (and general telephony) for Rural and underserved areas. (Regulatory issue as well)
2. What does it entail to develop a sound migration path to 4G?
3. Challenges in connecting users to fiber-based networks and providing coverage to rural areas.

Optical Networks & Applications

1. IPTV: Accelerating growth via FTTx.
2. Why may IPTV be among the key services capable of stimu lating investments in FTTx networks?
3. Can IPTV help generate a return on fiber rollout costs by helping to increase ARPU?
4. How is FTTx developing and what regulation is there on fiber access?

Mobile TV

1. Mobility and Mobile TV.
2. "Free" Mobile TV: A way to encourage take-up in the SAMENA region?
3. Mobile TV Ecosystem: Integration with the Broadcast, Cable TV and Movie Industries

Content

1. Content industry: How is it a new "revenue" supermarket for operators?
2. Localized Mobile Content: An emerging trend in SAMENA.
3. Mobile Content: How to get the right content to the right consumer.
4. Ownership, Copyright & Content Security

Roaming

1. International Roaming Rates: Re-evaluation
2. WiMAX and International Roaming: the next big thing for operators.
3. Arrangements for Unified Roaming Rate in SAMENA: Developing effective strategies.

Regulatory

1. IPTV regulations: A progress check.
2. Broadband proliferation and the regional Universal Services obligation.

SAMENA
TELECOMMUNICATIONS COUNCIL
#304, Alfa Building; Knowledge Village, P.O. Box: 502544
Dubai, United Arab Emirates
Tel: +971-4-364-2700 I Fax: +971-4-364-7513
Web: www.samenacouncil.org

EDITORIAL

Change is in the Mailbox

It can be substantially noted by those in leadership in our industry, that change is normal and that without change, the industry would stagnate and dissipate into the hot noontime air. Change is opportunity and the telecom industry is always changing. What was the hot item only a year ago, such as 3G implementation (technologies, applications, etc.) can now be considered nearly passé, given the new rush for implementation of LTE and other so called 4G technologies and add on issues. Once labeled as a something not so high on the priority list of many operators, value add services has reached new heights on the do now activities for many operators, as they rush to horizontally build product mix for their customers.

The big news of late has been the potential suspension of services for Blackberry in two key markets in the SAMENA region, being the UAE and the KSA. Other countries in the gulf have so far for the moment, said they had no plans to suspend Blackberry services, for which seems the inability for governments to have access to the traffic flow for security purposes. We can be fairly sure, that in the UAE and the KSA, the decision to suspend these services was given with a great amount of reluctance. However, it may be potentially signaling a harbinger of things to come in the region as a whole, where security concerns are paramount to many countries in the region. The Blackberry suspension in the UAE, upcoming in October still stands but it appears, in the case of Saudi Arabia, that relief has been reached, with an agreement having apparently been reached between RIM and the CITC in Saudi Arabia. It remains to seen how the TRA - UAE decides to firmly go with its ban that it has set for execution in October. Time will tell. Maybe by the time this article is published, more will be told about this situation. If Blackberry is indeed banned, it will be a telling situation about security and networks in the region. It is potentially a boon for other smart phone manufacturers, such as Apple, HTC and Nokia where they may have messaging systems, enabled to push mail, but also be able to be monitored for security's sake.

SAMENA is making its own changes to its monthly newsletter. SAMENA TRENDS is as of this issue, will be producing an electronic version in a magazine format, which will present the industry view to its readers, with special outlets of information and key discussion in our industry. There are regular sectional items such as the SIRG and Regulatory report, which addresses what is happening in the SAMENA region on both fronts, the regulatory environment as well as the international roaming issues of interest to the operator's in the region.

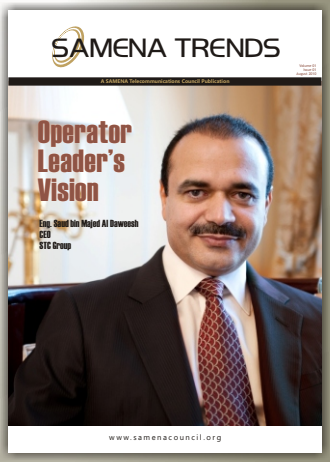
We are extremely pleased to have in the inaugural August issue, an interview of the Chairman of the Board of SAMENA and Group CEO of STC., Eng. Saud bin Majed Al Daweesh. He has provided his organization, to SAMENA and the industry as a whole, a gift of prescience and exemplary leadership. His interview, inside this issue, shares his view points on the industry today in the SAMENA region. A must read.

Additionally, taking a look at how LTE can complement HSPA network architecture and produce an effective CAPEX strategy is addressed, as well as the implementation of long term Broadband deployment strategies is highly effective are both discussed at length. An interesting article on the new generation of service development platforms, with regard to IMS and its implementation in the operator networks today and in the future allocation in the region's networks.

We look forward to your comments and suggestions and are working hard in our endeavor to provide a quality outlet of information and updates on the ICT activities in the region and within SAMENA itself.

Yours Very Truly,

Thomas Wilson
CEO

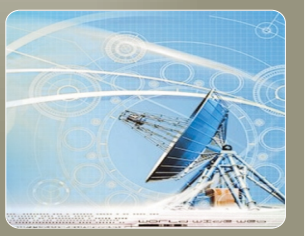


For any legal issues or concerns,
e-mail: legal@samenacouncil.org
or contact SAMENA at:
SAMENA TRENDS
P.O. Box 502544
Knowledge Village
Dubai, UAE
Tel: +971.4.364.2700

Editor in Chief
Thomas Wilson
Managing Editor
Bocar BA
Contributing Editors
Jeff Seal
Christine Beylouni
Javaid Akhtar Malik
Members Contributors
Qualcomm
Devoteam Group
Thuraya
Publisher
SAMENA Telecommunications Council
Subscriptions
subscriptions@samenacouncil.org
Advertizing
ads@samenacouncil.org

CONTENTS

EDITORIAL



NETWORK TIMING....
THE CRITICAL COMPONENT OF ANY NETWORK

In the case of using time to determine a specific location, such as with the Global Positioning System (GPS), a slight discrepancy of just one second equates to an error in position of 23 nautical miles at the equator - imagine your cruise ship being a few hundred yards inland, instead of safely moored in the harbor!
In the case of a timing source for a data or voice network the consequences of bad timing may be equally devastating.

Accurate Time

Mechanical clocks are notoriously unreliable, but most electronic clocks also keep inaccurate time. One reason for this is that designing a computer or electronic device to keep accurate time is not often a core competency of the device or computer manufacturer, nor is it primary function of that device.

However, even reasonably accurate computer clocks vary due to manufacturing defects, changes in temperature, electric and magnetic interference, the age of the oscillator, or even computer or electrical load. In addition, even the smallest errors can add up over a long period to a significant difference in time. For example, two clocks, synchronized at the beginning of the year, but one running only small amount slower - say an extra microsecond to increment a second; by the end of a year, the two clocks will differ in time by more than 30 seconds. If a clock is off by just 10 parts per million, it will gain or lose almost a second a day. These measures are actually fairly optimistic examples of the accuracy of some of the clocks in modern workstations and PCs and certainly better than the alarm clock on your nightstand. Luckily, we've come a long way and are no longer reliant on 17th century time keeping devices; in fact, time, and it's adjunct, frequency are the most accurate measurements we can make. The measurement of the duration of a second is so precise it has become the standard by which other units, such the volt, ampere, ohm, and meter are defined. The ultimate in modern time references are capable of maintaining timing as accurate as ± 1 second in 10 million years

Interesting Facts about GPS Satellites

- The first GPS satellite was launched in 1978.
- A full constellation of 24 satellites was achieved in 1994.
- Each satellite is built to last about 10 years. Replacements are constantly being built and launched into orbit.
- A GPS satellite weighs approximately 2,000 pounds and Is about 17 feet across with the solar panels extended.
- Transmitter power is only 50 watts or less.

Unless you have the luxury of your own atomic clocks throughout your network, having any sort of meaningful time synchronization is almost impossible if clocks are allowed to be free running. In some environments, like your

nightstand, this lack of synchronization isn't a big issue. However, in most modern networked computing environments, time synchronization is critical. To reduce confusion in shared networks, it is crucial for the modification times to be consistent, regardless of what machine the file-systems are on. Billing services and similar applications must know the time accurately. Sorting email and other network communications can also be difficult if time stamps are incorrect. In addition, tracking security breaches, network usage, or problems affecting a large number of components can be nearly impossible if time stamps in logs are inaccurate. Time is often the critical factor in separating cause from effect; knowing which is which is essential in trouble-shooting and forensic investigations, such as did the lamp break as a result of the baby pushing it off the table, or did the baby push it off the table because it broke?

Applications such as cryptographic key management and secure document transmission require using accurate, as well as video transmission encoded time stamps which match un-encoded time stamps to help assure document authenticity. For instance, secure Remote Procedure Calls (RPC) needs clocks to be synced to within 15 seconds for proper operation. In addition, interactions with dynamic events such as TV programming require careful synchronization of time. Accurate timing devices, like your own personal atomic clock, can be purchased, but for the vast majority of organizations, there is a simpler and more cost effective method. The most commonly used method of ensuring accurate time; at least where there is a computer network, is the Network Time Protocol, or NTP.

"From the late 15th century merchants were sailing on the open seas in large numbers. Their voyages were hazardous as they had no means of accurately knowing their position. While their latitude, the distance north or south of the Equator was relatively easy to find by observing the position of the Sun by day or the Pole Star at night, longitude, the distance clockwise or anticlockwise round the earth had always been a problem. Failure to be able to determine position once out of sight of land resulted in huge losses of life and merchandise at sea by shipwreck. In October 1707 the fleet under Admiral Sir Cloudesly Shovell with almost 2000 men was lost by shipwreck off the Scillies because they incorrectly estimated their longitude. This, together with pressure from influential merchants spurred the British Government into action and in 1714 an Act of Parliament established the Longitude Prize of £20,000, over £1,000,000 today, for a solution to the problem. Needless to say stringent conditions were attached which the successful solution had to satisfy to qualify for the prize. Such a large sum attracted a lot of proposals and to examine them the Board of Longitude was set up. Many were crank suggestions but there were two possible methods, one using the position of the Moon and the other a clock able to maintain time accurate to 2.8 seconds per day whilst at sea. At that time the only clocks able to achieve this accuracy were large precision regulators, quite unsuitable for use on a rolling heaving ship. Isaac Newton had expressed the view that to make such a clock was impossible..."

CAPELLA - CAMBRIDGE ASTRONOMICAL ASSOCIATION
Newsletter 99. November/December 2002

Network Time Protocol - RFC 1305

Network time Protocol (NTP) is not based on the principles of synchronizing machines with each other. Instead, it is based on the principles of having all machines get as close as possible to the agreed upon reference time. At the top of any NTP hierarchy are one or more reference clocks. These are electronic clocks synchronized to a common time reference and each other using some methods outside the scope of NTP, such as the atomic clocks mentioned above. These reference clocks are assumed to be accurate and the methodology they use to maintain synchronization with each other is beyond the scope of this document; for additional information and very dry reading, please refer directly to the RFC, which may be found at http://rfc.net/rfc1305.html.

The accuracy of all other clocks is judged according to how "close" a clock is to a reference clock (the stratum of the clock, as described below), the network latency to the clock, and the claimed accuracy of the clock. NTP works on certain hierarchical model where a small number of servers give time to a large number of clients. The clients on each level, or stratum, are in turn, potential servers to an even larger number of clients of a higher numbered stratum. Stratum numbers increase from the reference clocks (stratum 0) to the low numbered strata at the leaves of the tree. Clients can use time information from multiple servers to automatically determine the best source of time and prevent bad time sources from corrupting their own time. Figure 1 illustrates the hierarchical strata model of servers used in NTP.

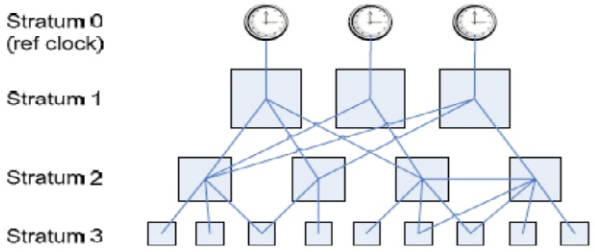


Figure 1. Hierarchical strata model of servers used in NTP.

Servers that are directly connected to a reference clock are called stratum 1 servers. A reference clock connected to a stratum 1 server is referred to as a stratum 0 server. Clients never communicate directly with a stratum 0 server; they always go through a stratum 1 server synchronized to a stratum 0 server. Regardless of the source of time for a server, it is important to remember that the accuracy of these time signals can vary widely. Just because a server is a stratum 1 server does not necessarily mean it has accurate time. In fact, a stratum 1 server could even be configured to use its own poorly running internal clock as a reference clock. This is why it is very important to use multiple time sources and verify time sources before using them. They take their time seriously! All of the clocks listed above are stratum 0 references, yet they still coordinate their time between and compare the drift and skew amongst each other.

For the rest of us, there are several public NTP servers available on the Internet. They use Coordinated Universal Time as their ultimate source of time. UTC evolved from Greenwich Mean Time (GMT), and still uses the Greenwich time zone as the zero offset. GMT, which is based on the earth's rotation, is not constant enough to be used for detailed time measurements (the earth is currently spinning about 1 second slow it's not known when it will catch up). UTC is based on a standard second length determined by

The time lab of the Royal Observatory of Belgium is presently equipped with five clocks: three HP5071A Cesium clock and two H-Maser clocks (1 active CH1-75 and one passive CH1-76). The UTC realization UTC (ORB) is obtained from the 5 MHz frequency provided by the active H-Maser clock (CH1-75) in which the cavity auto-tuning is realized using the 5 MHz frequency of the passive H-Maser (CH1-76)...

Excerpt from "SETTING UP AN NTP SERVER AT THE ROYAL OBSERVATORY OF BELGIUM - Fabian Roosbeek, Pascale Defraigne, and André Somerhausen, Royal Observatory of Belgium", presented to the 36th Annual Precise Time and Time Interval (PTTI) Meeting, December 7-9, 2004 in Washington DC.

quantum phenomena (e.g. the radio-active decay of Cesium atoms, ala the Royal Observatory). In situations that need more accurate time than an Internet link will allow (due to latency, service provider restrictions, or other concerns), or environments that cannot rely on Internet time sources due to security implications, something else is clearly required. Synchronizing a few machines to an arbitrary time source, such as the internal clock on a given server, may be acceptable in a few rare cases, but in any sort of large installation it is critical to keep the clocks synchronized with some maintained time standard. Regardless of the configuration, an NTP server needs to be set up in order for clients to use it for synchronization.

NTP Clients and Servers

The relationship between NTP servers and clients may be configured to operate in several different ways. Computers using NTP can operate in different modes with respect to different servers. For example, a single machine may be a client of a machine with a lower stratum number, while being a peer to a machine on the same stratum, and a broadcast server to a number of clients at a higher stratum number.

- ***Server*** - An NTP server provides time to clients. Clients send a request to the server and the server sends back a time stamped response, along with information such as its accuracy and stratum.
- ***Client*** - An NTP client receives time responses from an NTP server or servers, and uses the information to calibrate its clock. This consists of the client determining how far its clock is off and adjusting its time to match that of the server. The maximum error is determined based on the round-trip time for the packet to be received.
- ***Peer*** - An NTP peer is a member of a group of NTP

servers that are tightly coupled. In a group of two peers, at any given time, the most accurate peer is acting as a server and the other peers are acting as clients. The result is that peer groups will have closely synchronized times without requiring a single server to be specified.

- ***Broadcast/multicast server*** - An NTP server can also operate in a broadcast or multicast mode. Both work similarly; broadcast servers send periodic time updates to a broadcast address, while multicast servers send periodic updates to a multicast address. Using broadcast packets can greatly reduce the NTP traffic on a network, especially for a network with many NTP clients.
- ***Broadcast/multicast client*** - An NTP broadcast or multicast client listens for NTP packets on a broadcast or multicast address. When the first packet is received, it attempts to quantify the delay t o the server in order to better quantify the correct time from later broadcasts. This is accomplished b y a series of brief interchanges where the client and server act as a regular (non-broadcast) NTP client and server. Once these interchanges occur, the client has an idea of the network delay and thereafter can estimate the time based only on broadcast packets.

Threats to Accurate Time

The concept of accurate time is essential to determining the order in which events have occurred. This is a fundamental aspect of transactional integrity. Having an accurate time source plays a critical role in tracing and debugging problems that occur on different platforms across a network. Events must be correlated with each other regardless of where they were generated. Furthermore, the notion of time (or time ranges) is used in many forms of access control, authentication, and encryption. In some cases, these controls can be bypassed or rendered inoperative if the time source could be manipulated. For example, a payroll function could be tricked into providing access over a weekend when normally it would be restricted to normal business hours.

Quite a few organizations have become reliant on NTP just as they are with other services such as the domain name service (DNS). This reliance can be a weakness if the service is not properly safeguarded. Therefore, it is important that these time sources are adequately protected against a wide array of threats, internal and external, local and remote. Time is not just an extraneous service. It is fundamental to the successful operation of today's environments.

The most significant risks to NTP services are tampering, jamming and Denial of Service (DOS) attacks. Tampering occurs when the NTP server is affected by either accidental or malicious data modification. Jamming occurs when a time server is either destroyed or prevented from providing NTP service. DOS attacks occur when an NTP server is flooded with traffic, either NTP requests or other (e.g. management) traffic, and is unable to valid NTP requests. As with any other application, administrators must remember that NTP is not guaranteed to be secure; poor coding and other flaws in the program could allow unintended access to NTP internals or the underlying operating system. NTP servers may be capable of protecting themselves against some of these threats using architectural choices such as redundancy, and configuration options such as access control and authentication.

Service Providers and NTP

Nearly all network devices, PCs, printers, hubs, routers, etc., generate NTP requests. Most request time from a handful of public domain NTP servers, or in the case of Windows ™ PCs, at time.microsoft.com. As you might imagine, with billions of network devices all requesting time, this adds up to a significant amount of traffic. In extreme cases, some consumer devices are known to request time updates every 2 seconds. Many service providers view these NTP packets (UDP port 123) as unnecessary noise traversing their network and either block them entirely or establish proxies at the edge. An NTP proxy would be a process running on running on the router that your home or enterprise network connects to; any NTP requests generated by your network would be intercepted and responded to at that point. All is well and good, assuming you trust your ISP to have configured everything properly throughout their network and to have provided traceability back to the ultimate reference clocks. Unfortunately, that is not commonly the case. A NTP request is responded to locally, typically by a router whose own clock was set once, the last time it was rebooted, and is now free-running. Or, just as bad, pointed at another router that is in turn pointed back. What this means is that even though you have NTP running, you are in actuality, no better off than having a good clock in a free-running state. What is needed is a local, secure, and traceable timing source. In other words, a GPS based NTP server that is controlled by the local enterprise. Fortunately this solution is available to the network operators today so please do not be fooled by close imitations!

Jeff T. Seal, COO - Teralight

Convergence: The Formation and Adoption of New Value-Chains

Modern value-added services have made the convergence between telecoms and media companies a reality. With the emergence of multimedia services such as IPTV and Mobile TV the new value-chain can bring about a new range of innovative services to the public and increase telcos' revenues. With the emergence of convergence, network operators have now started to think in terms of "content", thus creating a converged ecosystem. Portio Research predicted in June 2008 that worldwide mobile data revenue would increase at an annual rate of 16 percent to reach US$252 billion by the end of 2012. In both, business and in personal life, multimedia & broadband are quickly becoming essential. The good news is that data usage is on the rise with broadband proliferation increasing in the region. However, to translate usage into revenues, one still has to be innovative, offer converged solutions, and put strong emphasis on consumer experience, education, and marketing the services, and providing good customer care.

Although there are several markets in the region with good broadband proliferation rates, the overall broadband penetration in the region has been quite low. This has had a hindering impact on the pace of convergence. Apparently, broadband has become the essential element behind convergence. The region's broadband industry remained underdeveloped mainly due to poor infrastructure, slow pace of deregulation, and less attention towards modern technologies. Necessary measures by various stakeholders such as governments, regulatory authorities, operators and others are important to promoting the uptake of broadband and multimedia industry. Most countries in the region have opened the fixed-line sector to competition, in addition to the cellular sector, penetration in which in some regional markets has already saturated.

IPTV, an outcome of the convergence between broadband and media industry is a bandwidth and data rate intensive service. Continual improvement in terms of television service provisions warrants the need to find methods to evolve IPTV as the fundamental method of delivery of television content. To ensure that user demand towards progression is addressed, investments in FTTX are eminent as it is the most capable method for providing IPTV.

Telecommunications, media, entertainment, and Internet have all come together to become one. The convergence of these industries, which has driven much of content aggregation, has created countless options for the consumer. Due to convergence it has become easier to visualize the industry gaps that have customarily existed. It is also now clear how some innovative "intermediaries" between different industries might be able to receive handsome rewards for their initiatives.

Although convergence now appears to be a natural consequence, it is the result of technological advancements and maturation of user demands. The fundamental differences between telecommunications and other industries will gradually be overcome.

Carriers, equipped by expert vendor solutions, have been the main force behind the convergence that we see today. It's the carriers that have built and are maintaining networks at high operational costs, acting as the deliverer of the converged services through their copper and fiber networks, Digital Subscriber Line Access Multiplexers, routers and switching systems. Interestingly operators are now providing a wide range of content to their subscribers, including games, video, news, sports, weather, and music. Media content providers are also becoming connectivity services providers. Other players, like ISPs and distributors, have also seen a rise in opportunities. With increasing opportunities and challenges, the best way to capture the benefits of convergence is through differentiation and consolidation.

Traditional telephony services are no longer sufficient for the networks to survive, whereas content providers cannot move towards convergence single-handedly. Partnerships between these two businesses are destined. Especially in our regional telecoms industry, the help of media and entertainment providers is essential for conversion from telecom operators to content-based service providers.

Telecom companies would have to develop strong capabilities in creating joint partnership with traditional content providers. This is particularly interesting because the region's telecom industry is moving towards consolidations on all fronts. Although, content providers and network operators are playing a decisive role in establishing a system that will give a boost to convergence, but network operators, being the owners of the infrastructure which essentially drives convergence, have more significance. The importance of content providers in this regard can never be underestimated, keeping in view that without “content” a network would be nothing more than a dump pipe.

The region's telecommunications market is approaching saturation. Retention should be a top priority, and can be ensured by providing value to the current customer base. Service differentiation becomes more significant as earnings per user further decline.

Bocar A. BA, President - SAMENA

MIGRATING TO LTE THE LAYERED APPROACH

The Information Society

The cornerstone of 21st Century global commerce is access to information. Ask any businessman and he will tell you that the faster and more intuitively he can access information, the better he can compete. If we have learned anything from the titans of global business, it's that telecommunications is a critical enabler for them, and telecoms services will continue to be an important pillar of the Gulf's economic development as well.

Broadband service is virtually a prerequisite for attracting and supporting international enterprises across the region, while connectivity for residents is essential for building human capital capability, knowledge development and, ultimately, growth in GDP.

According to a recent research published by IDC looking at 'Top Trends for the 2010 Middle East Telecommunications Market', the benefit of building a class-leading telecoms network is well recognised by Middle East operators. IDC forecasts 3-4 per cent year on year growth in the region's telecommunications spending for 2010, against the backdrop of a predicted decline elsewhere in the world.

The Gulf region today has the opportunity to not only catch up with the communications capabilities of Western markets, but to actually leapfrog them. In Saudi Arabia, for example, the number of mobile broadband subscribers is on the verge of overtaking fixed line broadband subscribers, and we can expect to see this trend growing elsewhere in the region. Rather than developing fixed line network foundations and then turning to consider mobile capabilities, many operators in the Middle East are directing money into developing high capability mobile broadband infrastructure that co-exists with and complements DSL and fibre optic fixed line access.

As part of this strategy, many mobile operators are selecting HSPA technology for their networks. The Middle East and North Africa already sits among the most penetrated HSPA regions in the world, providing high-bandwidth mobile (3G)

The Gulf region has not been immune to the changing global economic climate and, as a result, regional governments and corporations have understandably become more cautious in their investments.

Even with this caution, the region continues to take great strides towards establishing itself as a global hub for finance, trade, logistics and tourism. To support this development, an ongoing commitment towards investment in a world class telecommunications infrastructure across the region is critical. Jay Srage, Vice President MENA for Qualcomm, discusses operator strategies for embracing future innovation without sacrificing the wealth of asset investment to date.

connectivity across many areas. Having invested in 3G infrastructure whether via HSPA, its successor HSPA+, or alternative CDMA technology the next step is the commercial launch of new business and consumer services. In MENA, these are widely anticipated to start coming to market around the middle of 2010. Even for operators that have not yet started to implement 3G, HSPA+ is an effective and cost-efficient starting point that enables operators to bring the network immediately up to state-of-the-art performance.

From the operator's perspective, the time to invest is now. But with technology progressing at such speed, how can they be confident that the decisions being made today are the right ones to provide a cost-effective, high-bandwidth service infrastructure that fulfils the demands of subscribers today, tomorrow and into the future?

From HSPA To LTE In Simple Steps

To be successful in the competitive environment that is increasingly emerging in deregulated markets across the Middle East, operators are committed to innovate and evolve. But if each move by the operator requires a 'fork-lift exchange' to replace the network infrastructure, then not only will the pace of development be severely held back, but the operators' timeframe for recouping an investment will be extended over longer periods.

The dilemma operators face is that they have made substantial investments in their existing 3G HSPA networks and want to get the best possible return on that. However, providing these faster data speeds opens the door for many types of new, revenue-driving mobile services such as video conferencing and real-time gaming. Investing in Long Term pment at the cell tower; not a small financial commitment.

The good news is that operators don't have to make an 'either/or' decision when selecting their 3G and LTE strategies. HSPA has an aggressive evolutionary path it allows operators to progressively increase their 3G network's voice and data capacity as they look toward introducing LTE services in parallel.

HSPA+ currently provides peak download data rates of around 21 Mbps. We will start to see deployment of the next evolutionary step HSPA+ Rel. 8 later this year, which will double HSPA+'s download data rates to 42 Mbps. Rel. 9 is not far behind to further boost download data rates to about 84 Mbps and, already in development, Rel. 10 goes on to offer impressive peak download speeds of 168 Mbps. We can see how, at these high speeds, HSPA+ is ramping up to levels similar to those provided by LTE.

In the consumer segment, users are rapidly becoming more engaged and demanding more and richer content. With ever increasing demand for content pushed through mobile services in the Middle East region, one of the key priorities this year will be the need to develop capacity ahead of the curve to alleviate or avoid network strains.

Creating A Patchwork Of Connectivity

In reality, LTE is unlikely to be deployed uniformly across all areas of a network, at least initially, but rather will be deployed to cover high-demand areas where increased data capacity and excellent connectivity are required. LTE will allow operators to boost their data capacity in dense urban areas, while 3G HSPA continues to provide more wide-area coverage and underpin operators' voice and primary data services.

With this architecture, it's easy to see the complementary nature of HSPA+ and LTE technologies, and their combined importance to the region's network operators as parallel paths for innovation. Developing co-existing networks might initially suggest that the mobile operators are burdened with twice the investment, but in fact combining LTE and HSPA+ actually provides a more cost-effective strategy and upgrade path. Advantages exist for both the operator and their mobile subscribers.

Devices For The Global Market

The ever-growing population of worldwide business and leisure travellers through the Gulf illustrates the importance of network and device compatibility to enable easier roaming. The fact is that mobile users simply don't want to carry a range of different devices just to accommodate the world's range of different networks. Devices need to function globally, not just locally; enabling people to connect and access mobile broadband services anywhere in the world and have access to a wealth of rich data services at their fingertips.

Qualcomm is the first semiconductor company to offer an integrated LTE chipset for mobile devices that brings together all platforms HSPA, CDMA and LTE in a smart device, providing a faster mobile broadband experience across the major networking technologies used around the world.

Multi-mode devices enabled by Qualcomm allow users to move in and out of LTE coverage areas without losing their data connection. When LTE service is not available, the devices allow operators to seamlessly hand the user back to the HSPA connection. Simple!

Changing Gear Without Reinventing The Wheel

Unhindered by concerns over network and device incompatibility, a phased migration to LTE will enable the Gulf's leading operators to roll out new revenue-driving features and in time to to mirror service innovation, meet user demand and secure a time-to-market advantage over industry competition. This strategy gives network operators additional capacity to incrementally build out a future-proofed infrastructure to support an extensive and growing range of revenue-driving applications and services.

Having witnessed such a rapid expansion in establishing network connectivity across the Middle East, operators are now enhancing, upgrading and expanding capabilities for their business and customers' benefit. Pragmatic investment in a 'layered' combination of HSPA+ and LTE makes sure that money put into the network delivers high quality user experience and access to rich high bandwidth applications, whilst securing the returns to support ongoing innovation. Treading a fine line between caution and innovation, operators will be well positioned for long-term success in the increasingly competitive Middle Eastern economic hub.

QUALCOMM

www.qualcomm.com

Incorporated is a leader in the development of CDMA2000® 1x, 1xEV-DO, UMTS and HSDPA/ HSUPA chipsets and solutions. In 1989 Qualcomm introduced Code Division Multiple Access (CDMA), a superior technology for wireless and data products that changed the global face of wireless communications forever. Today, Qualcomm plays a central role in the rapid adoption and growth of 3G and next-generation wireless around the world. Qualcomm has accumulated more than $9.8 billion in R&D expenditures since 1985 and its current intellectual property portfolio includes more than 7,200 United States patents for wireless technologies, with more than 145 telecommunications equipment manufacturers licensing them worldwide. Headquartered in San Diego, California Qualcomm employs over 12,000 people in 53 worldwide locations. QUALCOMM is included in the S&P 500 Index and is a 2008 FORTUNE 500® company traded on the Nasdaq Stock Market®. Since 1985, Qualcomm's visionary technology leadership has been carrying the world forward, changing it by improving the way people communicate, work and live. And with that same pioneering spirit, Qualcomm is still innovating, still chipping away at the boundaries of what's possible, still changing the world, one idea at a time.

CONTENT AND FAIR EQUITY

The advent of high-speed broadband is bringing about new mediums for users on both fixed and mobile line network services. These new products and services are creating an unprecedented demand for bandwidth; a requirement that has been a driving force behind innovation. This demand has put unprecedented pressures on networks to expand their capacity to handle growth nonlinearly, at times, exponentially, both in terms of size and scale. Such demand pressures have resulted in network and customer requirements, which even the standard-size operators have had difficult time in maintaining or exceeding. This only leaves those operators at the forefront that have accrued momentum to allow for large-scale investments to be made in capacity enhancements and infrastructural expansions.

The image illustrates how a large operator, namely AT&T, has made exclusive arrangements with one of the world's renowned consumer electronics manufacturers, Apple, to cater to its growing customer base's need for greater bandwidth, driven by the need to access content-rich applications, for example.

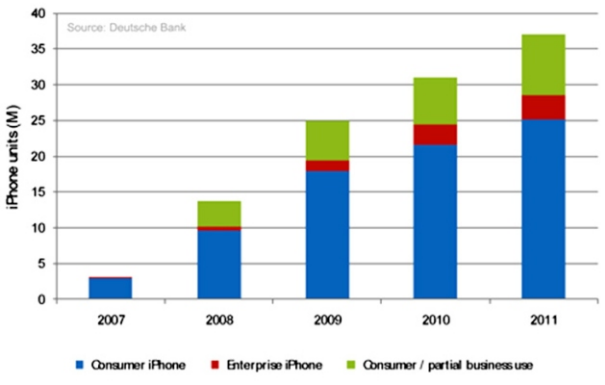


Exhibit 1: *Rising Demand for Content-Rich Apps and Bandwidth*

The demand and the resulting pressures required from the consumption of high-speed broadband requirements have basically brought at certain times and in certain locations, AT&T's high-speed 3G data network to its knees. From the consumer perspective and from the operator's strategic positioning point of view, this obviously is not a good thing. AT&T only recently acknowledged such problems with the growth of its iPhone smart phone demand placed on its network assets, specifically, in markets such as New York and San Francisco, USA, and some other markets where its network demand has far exceeded its network capacity.

Similar situations are now arriving in the SAMENA region, following the path created by the advent of 3G networks and the increasing adoption of smartphones, which seemingly have an insatiable demand for bandwidth. One can assume that if a major operator in this region is asked - *How has the proliferation of demand for high-speed smartphones sold onto its networks been and how has the 3G network upheld against the onslaught of applications' requirements solicited by the use of such smart handhelds?* - a likely answer would be *"It's been a real challenges."*

Hopes that the new high-speed broadband networks being deployed for the future should be able to better handle bandwidth pressures from consumers are vague at best. The costs to maintain and build high-bandwidth, high-speed networks are exceptionally and predictably high. The capacity for the operators to recover these costs at a fair and

equitable rate is equally questionable at best. Furthermore, the unfair equation plays on when you consider the distribution of income generated by content generators and contents providers as they continue to use telecom operators' networks for "free" while obtaining easy access to operators' customersa resource which the latter once struggled to gain and are now contending to keep.

What do high-speed broadband, capacity, 3G networks, consumer pressure, bandwidth demands and other interesting terms have in common, especially when seen in the context of content? The answer, everything! All the bleeding edge and leading-edge technologies that are put into the operators' networks in today's environment, if not followed by proper application use, would be rendered worthless, thereby placing another form of pressure on operators regarding the provision of their networks as well as their survivability. The continual evolution of the technology has been necessitated in part by the importance to survive. The figure below shows the continual chronological shift in technology to ensure a network's ability to survive:

As an analogy, recall what happened in the early part of the year 2000, where the stock market was greatly weakened by investor revolts due to the fact that the Internet age had been driven largely by technologists and not by applications and the end-users. In today's world, applications drive the technology but applications themselves are driven by content.

If you look at the investment case, which operators must use for the principal foundation of accounting for the investments made in these ultra-high bandwidth networks, you'll find a common theme amongst all the operators: The cost to support both the fixed and the mobile wireless customers' unyielding demand for bandwidth is extremely high. Yet the continuous demand for growth and an increase in the number of Internet users in the world is

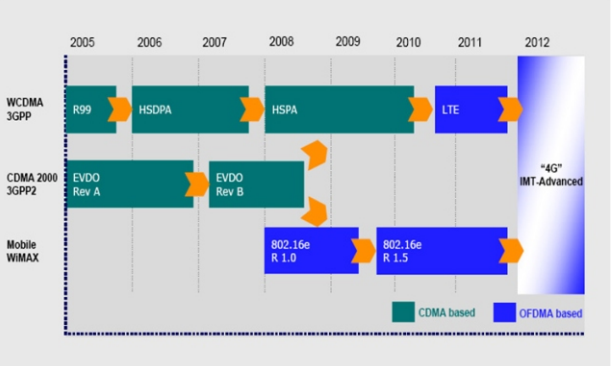


Exhibit 2: *Technological Evolution for a Network's Survival*

continuing to rise. The figure below shows the comparison of the number of users in different regions of the world:

Penetrating further amidst a growing demand is a challenge, an analysis of the world internet penetration rates based on the geographic regions is shown below:

Thus the barriers to entry are quite high for operators to be able to provide a network that provides high-quality and congestion-less service. The business model requires that the operator find the means and the methods to achieve return on its investments. In other words, the investment required to build these large high-speed, high-capacity broadband networks is very high and, as such, warrants a revenue base that is justifiably profitable from those that use this network to earn their own profit centers.

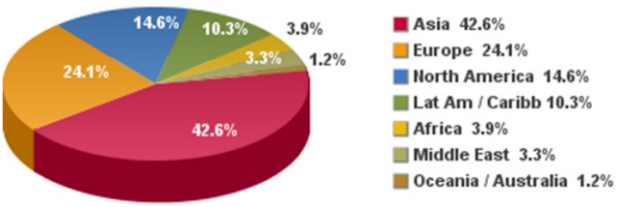
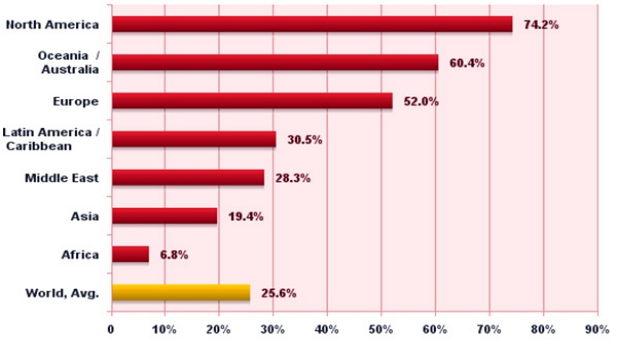


Exhibit 3: *Rise in Internet Penetration: Growing Demand for Bandwidth*
Source: *Internaet World State www.internetworldstate.com/state.htm*

The issue herein lies alongside several questions that can be asked of the participants on all sides of the equation. That is, how should the investment of the network be paid for and what is justified with regard to who pays and how much? In today's world, content providers and operators as well as



Source: *Internet World Stats www.internetworldststs.com/stats.htm*
Exhibit 4: *Internet Penetration Worldwide*

Content generators, such as search engines and software and websites portals, generate the lion's share of the requirements on the use of the operators' networks. As a percentage of sales with the overall revenue from all of the instruments on the use of the network, the operators' shares of such turnovers are very modest with regard to the investment made into the network that allows the activity to

happen. On one side of the equation are the content providers or generators such as Google, Yahoo and other search engines that generate large revenue from the sale of advertising on their sites, which the operators networks provides access to. On the other side, these entities don't pay one dime to the access side of the equation where the customer is concerned. Thus, the customer gains access through a medium that the customer pays for. It is minimal in size and scale compared to the revenue that is generated by the content owner or provider on the other end of the network.

An analogy, which is relevant to this business model, could be the use of public pay phones on the operator services provided via the public pay phones in the mid-1990s in North America. For years, the public payphone owners received no compensation for the use of their devices or for the line rents that they paid on a monthly basis for those calls made by customers to operator service provider platforms. The associations supporting such activity eventually were able to plead their case with the FCC and over the long term, were awarded a certain compensation for such activities. Thus the operator service providers have to pay a fee for the use of such network services and public facilities in order to earn the relatively high income versus cost generated by the use of the payphones for the making of operator service calls.

There are many other similar analogies. At the end of the day, operators, in today's world, are paying the freight for content owners and providers to utilize their networks to access their customers, which are, then leveraged so that the content owners and providers are able to earn substantial sums via means of advertising and other elements. The question is not if but how much should the operators be compensated for "serving" the content providers. This is a very viable question that needs to be answered.

Another question that the operators must face is whether or not they wish to be simple transport mediums for content owners and providers to access or interface customer demand or if they are to actually contract, manage or generate content, which would create a foundation of equity with regard to ownership of the customers on a reality basis in the future.

One example of success generated in this context is that of John Malone, founder and CEO of Liberty Media in Denver, Colorado. Mr. Malone basically was the CEO for TCI (Telecommunications Inc.) many years ago, a leading cable transport operator that was the number one provider of video cable services in the United States in the 90s. Mr. Malone made a conscious decision to begin acquiring rights and ownership of media and related content. At a certain point during the growth stage of the company, the company not only provided transport services between customers viewing the media and also the actual media output but also owned the media that the customers had a demand for. This was a brilliant move for the company, for Mr. Malone sold TCI to AT&T broadband and kept the ownership of the content and media. Essentially over the long run, the content and media ownership was of greater value than the transport entity that was sold to AT&T and Liberty Media, today, is a very profitable multibillion-dollar company.

The Liberty Media story does not just end there. Liberty Media was one of the few pioneers, having international as well as a very large domestic US customer base, which saw the need to begin working closely with localized content in international markets. This same demand portion exists today. If operators are to get into the content business, they probably would be highly advised to begin to make forays into local content serving specific ethnic or cultural markets they serve.

This is a very broad stroke yet extremely focused and targeted. As the region begins to seriously privatize and offer consumers with choices for the selection of operators to use for their communications requirements. In each of the local markets in our region, operators, which would own content and to manage content and which do own the rights to content, would be first in seeing the importance of generating or contracting for local content. As a matter of fact, customers want to view or listen to specific content. If that content is local in nature and is only carried by a specific operator, the operator has gained a customer, which most likely would pay for access to that service.

Europe and the United States and Canada are experiencing today an environment that is unfriendly to controlling access to content through the accident of net-neutrality. Net-neutrality can create issues with regard to how carriers and operators are able to manage the use of their extensive networks and with regard to the free use of such expensive networks to access content.

The argument has only begun.

Thomas Wilson, CEO & Managing Director - SAMENA

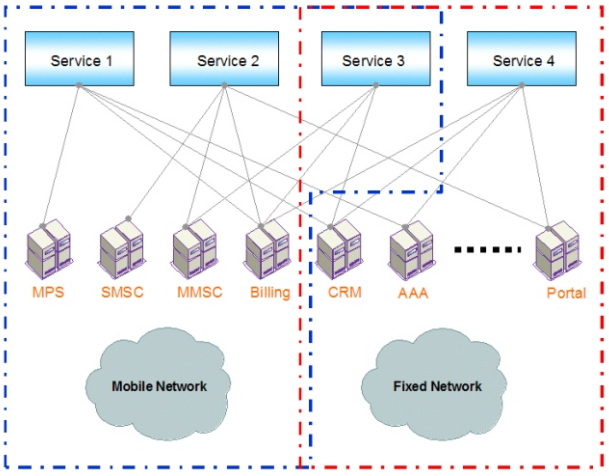
SDP CONCEPTS AND TELCO'S NEW BUSINESS MODELS

In a telecommunications landscape driven by the ever-growing penetration of broadband Internet and its associated paradigms (low cost access, bandwidth growth, rapid service deployment, openness, new content) and the massive decline of circuit switching, telecom operators face new challenges like never before in their industry. Devoteam explores here some of the telecom industry trends and provides an insight on how Service Delivery Platforms concepts for New Generation Networks can help facing them and leveraging the telcos infrastructure and service platforms to deliver high value to the end-users .

From Traditional Service Delivery Models To Service Delivery Platforms

In traditional service delivery models, services can be represented by functional bricks, hosted by one or several platforms. If the platform has multiple network interfaces and is modular enough, the same service can be accessed by different equipments (e.g. SMSC and MMSC), and over different network types (fixed and mobile).

The following picture illustrates a basic view of classic service delivery models in the telecom fixed and mobile networks.



In the best case, a service could share some components of the telecom and IT infrastructures. Likewise, a service can be based on information available from both the network and IT domains. In this example, Service 1, which could be for example an instant messaging service that locates friends nearby, makes use of both the MPS (Mobile Positioning System), and CRM (Customer Relation Management) platforms. MPS provides the customer's geographical location and CRM provides marketing details specific to the customer.

Service Deployment Issues

For most operators, when it comes to rapid service deployment, following the model depicted above faces several challenges:

- Traditional service creation follows a "vertical solution" for each vendor that limits interoperability.
- Most of the time the network infrastructure has been engineered while the business was growing, resulting in islands of heterogeneous architectures
- Each solution is customized to include network specifications specific to the operator. As a result, there is no standard toolset, architecture or hardware platform for the different systems. This situation makes it more complex to combine maintenance of existing services and development of new services.
- The solutions deployed are strongly linked (or "tightly coupled") with the network and the infrastructure, making it difficult to change one without the other.
- Operators must deal with a wide variety of systems, each with its own unique access methods and behaviors. This makes it difficult to develop and deploy a new service in a standardized way, and can often make the potential introduction of a new service prohibitive from a cost and risk perspective.
- Even if the standards of Intelligent Network for fixed and mobile network standards are close to each other, they are not truly compatible: deploying a new service for both fixed and mobile networks usually required duplicated architectures
- Where mergers and acquisitions have occurred between operators, the result is often a multi-vendor network, with no standard method available to create new services in the new entity.

SDP Concepts And Benefits

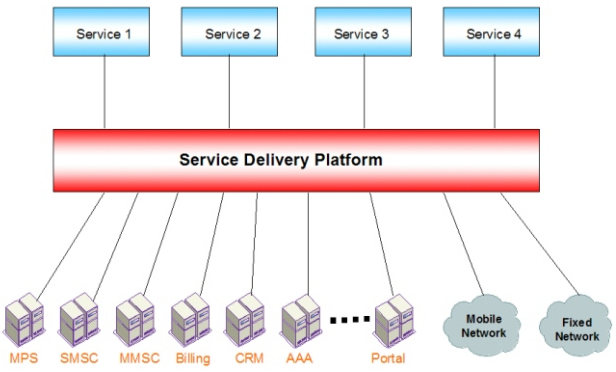
Operators being in need to address the issues highlighted above are looking for a solution through the introduction of a complete framework that can meet all these needs. The concept of Service Delivery Platforms (SDP) comes to enable operators meet the below key requirements:

- Quick delivery of value-added services (reduced time to market)
- Reduced development costs (using off the shelf Integrated Development Environments)
- Simple service development method by using open standard interfaces that provide an abstraction for service creation (simplified APIs usable by a Web service developer unaware of the complex underlying protocols)
- Service portability over different vendors, networks, platforms ("write once, run anywhere" concept)
- Simplified network abstraction
- Integrated in network operator's IT infrastructure or service provider, rather than being an element of core network infrastructure
- Interwork with other elements of the operator IT infrastructure such as service enablers (portals, SMSC, MMSC, IVRs, MPS, WAP servers), CRM, BSS/OSS elements and AAA systems, but also with core network elements such as switches, MSC, GGSN, etc.
- Provide a complete framework for deployment, provisioning, execution, management and billing of value added services.
- Support of multi-media types (voice, data, video, messages)
- Aggregates different network capabilities, services and content sources allowing application developers to access them in a uniform and standardized way.
- Service exposure: open and secure access to service capabilities for use by external service providers and enterprises.

The benefit of using an SDP is illustrated on the following figure: the "middleware" introduced by the SDP framework makes it more robust to architecture or network element changes

As well, it is worth to note that the SDP concept federates two worlds with different backgrounds.

- Traditional telecom services, characterized by highly specialized ITU-T Intelligent Network protocols and their equivalents in the IP world (typically IMS), career-grade reliability, and high performance concerns. They are usually delivered in embedded real-time environments, and closed proprietary frameworks.
- Operators' information systems and more globally IT frameworks, driven by business services in open environments dominated by Java, Corba, and Windows.



However as the need is growing along with the interpenetration of the Telecom and Internet worlds, various type of players are involved: decision makers

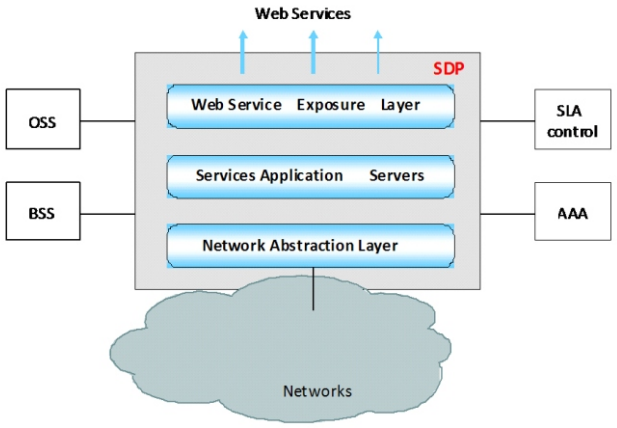
needing to make sound strategic choices (business executives, product developers, planners), as well as those more deeply involved on the technical level (infrastructure architects, product line managers), and, of course, service developers, especially those accustomed to Web service designs, and do not have a traditional service creation background.

SDP Components And Standards

Because SDP is not a standardized concept, there is no fully agreed consensus over which elements compose an SDP. Some vendors use the term SDP for their application servers, whereas others include a whole portfolio of products and components. The following figure shows the typical SDP architecture:

In general, an SDP is seen as a commercial bundle of different products that can be offered by different vendors. It should be composed of the following elements:

- **Services Application** servers that provide deployment and execution environment for a broad range of voice



and data applications. The Services Application servers are built on a standard J2EE or .NET. They can be also based on a standardized service execution environment such as JAIN SLEE or on a proprietary vendor-specific solution using J2SE or XML scripting.

- **Network Abstraction** Layer that provides standardized interfaces to network service capabilities such as call management, multimedia and multiparty services, messaging, user location, presence and others. The Network Abstraction Layer provides standardized interfaces to core network services and ensures that this access is, as far as possible, network, technology and vendor independent. The Network Abstraction Layer usually utilizes emerging standards such as OSA/Parlay, JAIN, Parlay X, Web Services, OMA, IMS (SIP and SIP SIMPLE), as well as other standard protocols Internet such as LDAP, IMAP, SMTP, VoiceXML, etc..
- **Web Service Exposure Layer** exposes service capabilities to third party service providers and enterprises. This layer allows the operator to "open" its network through a set of standardized and secure interfaces. Web Services technology can now be seen as the candidate for opening up the networks and exposing capabilities to external service providers and enterprises.

With regards to SDP standards, three main bodies are involved and working in a cooperative manner: OSA/Parlay, OMA and JAIN.

SDP To Foster Fixed-mobile Convergence

Today, end-users want a seamless, anywhere, anytime experience with a single high-tech device usable over several networks, without even being aware of which network they are using: call it the "ubiquity" experience.

What seamless means here is a homogeneous user experience, and, possibly, complex handover issues (within the mobile networks), possibly between fixed and mobile networks. This evolution drives the operator's strategies towards integration of their different networks, especially from the end-user perspective (which means for example single branding, billing, identification, and authentication).

Triple play (Voice, Internet, TV) and, as fixed-mobile convergence emerges, quadruple play offerings are driving the market, adding more complexity and interoperability issues. Tomorrow, Digital Video Broadcast offers could complete this type of offers. What this could mean for operators is that services focused on access (high bandwidth ADSL, FTTH, WiMAx, HSPA, LTE DVB) could be the next market killer and the investment focus. In the fixed area, revenues of circuit-switched voice calls that used to be "cash cows" are dropping, driven by increased pressure from both regulators and technology (VoIP). More significantly, mobile revenues, traditionally protected by strong entry barriers (licenses, investments) could also be at threat. Internet providers start packaging offers where the owner of a dual WiFi + GSM handset could use any network-connected set top box nearby to make almost free "mobile" calls. Doing this is no less than creating a virtual mobile network at no cost, in the same fashion as the UMA model (Unlicensed Mobile Access) , but with no infrastructure.

Even if this type of approach is far from delivering the features of a real mobile network, it can good enough to make calls from the "home zone" (operators have observed that a significant portion of mobile calls are made from home). Environments like business centers, train stations or airports are the next target. In other words, Internet access

providers are starting deploying a cheap "hot spot" offer, without any infrastructure of their own. Significantly, these actors consider the Internet access box they are selling to be part of their network and not as a customer premises equipment. The box can be potentially shared as a network access point by other customers passing nearby with a dual handset, just as a roaming user would use a foreign switch in the mobile network. In the fixed-mobile convergence area, the key is integrated access. The technology is already there to provide it, but networks are not ready yet to perceive the customer as the single user whether he is behind a fixed line, an ADSL access, a traditional radio interface, or a wireless access through a dual handset. Achieving this requires the merger of two major service enablers:

- Billing mediation between networks, and, within the mobile network, between pre-paid and post-paid customers. This mediation platform should be real-time oriented and provide transparent billing for end user, including communities. such as the family.
- Service profile databases, including all technical data (IMSI, IMEI, IP @, fixed line, email, portability), all service subscriptions and authorization modes.

On both topics, in a pre-IMS environment, it is more realistic to build mediation platforms between the various networks rather than imagining a single unified platform. At such, the migration to IMS can be a window of opportunity for SDP environments to become the reference mediation platforms.

Opening Networks Through SDP & IMS For New Innovative Services

The transition from GSM to IMS, the emergence of new business opportunities made possible by the introduction of multimedia and convergence, the new business models that IMS facilitates with service providers are all strong drivers for opening networks. Their combination makes the network architecture evolution a real challenge, as different scenarios emerge, that require opening the networks in different ways:

- Migration from GSM to IMS a pure network evolution. In the services area, it requires to support seamlessly Intelligent Network services, which are critical to service continuity (pre-paid service, number translation). The obvious answer is the migration of the service infrastructure towards an OSA/Parlay gateway able to interface both networks. The business case is even justified in a pure GSM network when the core network is shared between two vendors that support slightly different INAP protocols and need a mapping gateway to access a standardized service.
- Introduction of innovative IMS services as prototypes (typically Web services) over a fixed access is a tempting approach (the mobile operator becomes a virtual ISP), but if the service is adopted, subscribers will want it on their mobiles. Designing these new services with Parlay X APIs in the first place would allow migrating them smoothly and with a short time-to-market in a true mobile environment.
- Operators need to differentiate themselves from the competition, today from the MVNO they host in their network, tomorrow from ISP and service providers in the IMS world, while still opening the network on a service basis to partners. Service providers also need access to enablers provided by the operator, and one could imagine differentiated pricing on an enabler basis. For example, the presence or the location enablers are strategic for specific services that provide high added value, and could be priced accordingly. This requires a framework able to manage efficiently secured authentication and subscription to services and enablers.

HUAWEI, SAFARICOM LAUNCH ANDROID MOBILE PHONE IN KENYA

Huawei, a leader in providing next-generation telecommunications network solutions for operators around the world, in partnership with Safaricom, the largest mobile operator in Kenya, has launched a U8220 mobile phone, which is powered by the Google Android operation system that will be able to support high speed Internet access. The phone, first of its kind in the market entails a 3.5 inch HVGA touch screen, the largest among all Android phones. It also features innovative canvas profile which enables users to switch freely between six default extended screens.

The other features in the phone include, sleek chrome cover and HSDPA, Wi-Fi, and GPS capabilities. Speaking at the launch, Chief Operations Officer Huawei Technologies Kenya, Radoslaw Kedzia said, "We are launching Huawei U8220 Android phone in the Kenyan Market making it the first to enjoy this high-tech phone in the whole of Africa. Customers will use various applications freely powered by the Google Android software at affordable price. The launch also reflects our long term investment to develop high-tech devices which will enable users explore various unique applications that satisfies their needs.' Safaricom's Chief Executive Officer, Michael Joseph said, "We take this opportunity to laud Huawei Technologies for taking the leadership to formally launch the first Android phone in Kenya. Safaricom and Huawei have been collaborating for several years now and this joint initiative is an example of cooperation between the most innovative companies in the fields; Safaricom is the Kenyan telecommunication arena. Safaricom is in the middle of revolutionizing its use of the internet to change people's lives and Huawei is an important partner to the end."

MOBILE PHONE PAYMENT MAKES DEBUT IN TUNISIA

According to a statement released recently by Tunisia's Central Bank (BCT), the mobile phone payment mechanism was launched early July. This service was developed by "Tunisie-Telecom" and "Monétique Tunisie" under the aegis of the BCT, and in collaboration with other banks. The service is destined for the benefit of traders on a two week trial basis. They will target members operating in the departments of transportation and commerce. The new service benefits from world guarantee safety regulations. Until the end of 2010 the service is free for customers and merchants. This service will be open to all mobile operators by the end of the year.

ZTE TO BUILD COMMERCIAL LTE NETWORK IN HONG KONG

ZTE Corporation signed a contract with CSL, a subsidiary of Australian mobile operator Telstra, to build a commercial LTE network for CSL in Hong Kong. The contracted LTE network is the first 2.6G/1.8G dual-band network in the world. CSL is the first and largest mobile network operator in Hong Kong. It owns the Next Generation cellular network, a GSM/WCDMA network utilizing the UMTS 900 spectrum. As of early July, ZTE has won contracts from global operators to build seven commercial LTE networks and about 50 pilot networks in Europe, America, Asia-Pacific and the Middle East.

you have Network
we have Solutions

GIS

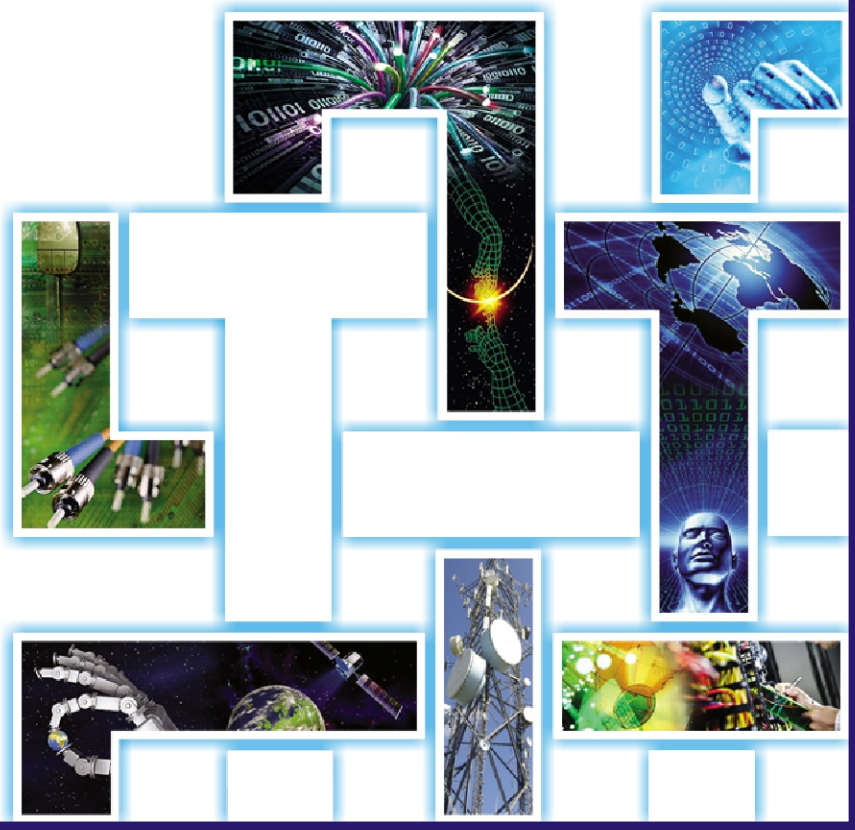
Security

Monitoring

OSP/Civil Works

IP

DWDM



TERALIGHT

DUBAI	ISLAMABAD	BEIRUT
00971.4.364.2700	0092.51.2654602-04	00961.1.970.742

www.teralight.com

GROWING ATTENTION TOWARDS SATELLITE BROADBAND IN THE REGION

Although, satellite broadband market is still emerging in SAMENA region but some significant advances are expected with the launch of a satellite with Ka-band capacity by a regional operator. Most of the countries in the SAMENA region still have very low broadband penetration. Industry's analysts predict that there will be strong business case for satellite broadband services across the region and the sector is expected to flourish over the next few years with multimedia application such as video-on-demand and Internet TV.

SAMENA region is seen as a key market for satellite broadband. The growth in the satellite broadband market has been concentrated in Middle East and North Africa, though countries in South Asia have been showing considerable growth. The satellite broadband industry is expected to experience radical changes in the next few years, with the completion of new satellite broadband projects worldwide and in the region as well. Reportedly, Middle East and North Africa among other regions will have high capacity satellite systems operational by 2011; this will further boost the satellite industry in the SAMENA region.
Satellite operators Arabsat and Yahsat have unveiled their plans to offer satellite-based broadband services in the SAMENA region. The overall broadband penetration has been quite low in majority of the SAMENA region's markets but the situation of broadband availability is even worse in remote areas. This is mainly because the cost of building infrastructure for broadband access in such areas is much higher and the ROI is considered to be low, thus operators generally avoid going into such areas. Satellite broadband service can be received through a relatively small 0.6m dish in any part of the operator's footprint. Arabsat's coverage area is made up of 10 spot beams, five over KSA, two in Iraq and one each in Yemen, Jordan and Afghanistan. UAE-based satellite operator recently unveiled that its satellite broadband service will be based on the its second satellite Yahsat 1B, scheduled for launch in the second half of 2011.

Addressing key challenges will guarantee success. Some of the key areas that will drive the satellite broadband industry includes the technical capabilities of satellite broadband, , strategic alliances and partnerships, satellite broadband regulations, the ability to have an effective business model in fragmented markets, and above all the key aspect: how to have a strong sales and distribution channel region's emerging markets. Euroconsult predicts that the global market value of capacity used for the traditional FSS market is predicted to reach some USD 16.8 in 2018, including wholesale revenues from BBS systems dedicated to providing broadband access. The analysts foresee continuing consolidation in the satellite industry and the emergence of new satellite systems. Satellite broadband appears to explode over the next few years with services such as video-on-demand, Internet TV, data, VoIP and cellular backhaul. How the operator community will manage to tackle this situation and to get maximum return on investment is an important area that needs attention.

Market Research - SAMENA

SATELLITE SYSTEMS IN DISASTER RELIEF

Thuraya's Roles & Capabilities in Disaster Relief

Several governments around the world are in the process of creating frameworks for disaster response and recovery and to provide dependable means of providing emergency care. In this context, the significance of establishing alternative reliable communications infrastructure and systems has begun to be highlighted throughout the developed world, particularly in the United States. Even

some countries of the South Asia - Middle East - North Africa (SAMENA) region have gradually begun to focus on the need to implement backup telecommunications systems for disaster response and recovery purposes.

Overview

Thuraya, one of the leading satellite services providers in the world that provides blanket telecom coverage in more than 140 countries spanning Europe, Africa, the Middle East, Asia and parts of Pacific, has been one of the earliest providers of handheld services, dating back to 2001. The satellite operator has, precociously, been providing telecoms services in line with the requirements specified in the recently initiated Ancillary Terrestrial Component (ATC) program, under development in the United States, to cover North America, and the European Complementary Ground Component (CGC) program.

Both in the ATC and the CGC programs, a handheld mobile satellite system operating in the L-Band, the S-Band and the Big Leo-Band, is to be implemented and such a system would communicate directly with the mobile services satellite or the terrestrial- GSM, UMTS, CDMA, WiMAX, etc - networks, over the MSS (Mobile Satellite Services) spectrum.

Thuraya is of the view that its services are more advanced than those specified in the ATC or the CGC program and that the operator has a proven capability to establish an "emergency telecoms backup system" in the SAMENA region. Furthermore, Thuraya is GSM - operator friendly, in that its dual-mode handsets work with both satellite and GSM networks.

The Context: Emergency Telecoms Backup System in the US

In the United States, the need for an emergency telecommunications backup system has been highlighted in the wake of 9/11 and Hurricane Katrina, deemed to be among the costliest and the deadliest natural disasters in the history of United States. Subsequently, the Federal Communication Commission planned for the formation of an emergency communication backbone, which would serve various government agencies at times of similar natural disasters, or man-made disasters, in the event terrestrial networks failed. To this effect, the US government

authorized the use of L-Band and S-band spectrum free-of-cost for terrestrial use to encourage the establishment of hybrid satellite systems. As a result, investors would be allowed to use the same spectrum for cellular businesses also.

Thuraya's Activities & Capabilities

Thuraya serves a broad range of business and private sectors, including NGOs, rural communities, oil and gas, government, military and media. The operator offers

mobile voice and data telecommunications in addition to GPS, GmPRS and fleet management services. It also provides other specialized solutions for emergency and disaster management situations.

When a natural disaster strikes, communication links are usually

disrupted. To disaster relief workers, these links are essential in accurately assessing the scale of the disaster, and to ascertain where and how relief operations can be initialized. First response can mean the difference between life and death.

From rapid response teams first on the scenes of a natural catastrophe, to clean-up crews sifting through rubble after the event, Thuraya provides reliable, robust and portable satellite communication solutions. The satellite operator is playing a key role in providing swift and simultaneous communication back-up, especially when terrestrial networks are affected or such a disaster has occurred in areas that are beyond reach.

Thuraya's cutting-edge solutions in voice, data and integrated satellite communication provide an ongoing critical connectivity for both relief teams and disaster victims. During such calamitous events, signal congestion is a common problem as aid organizations converge on the scene. Thuraya's sophisticated, intuitive satellite network minimizes this, automatically allocating additional power and bandwidth to disaster hot spots as demand dictates.

Thuraya's Relief Comms Solution

Thuraya provides critical voice communications for relief teams, crucial in early-warning communication for disaster preparedness and risk mitigation. Each handset includes GPS, voice and GmPRS features ideal in communicating the location and extent of disasters and coordinating medical attention and relief efforts.

Thuraya's industry-leading data solutions give relief teams access to reliable, high-speed mobile satellite broadband to access information, such as weather and mapping services, which are critical in relief efforts. Thuraya's rapidly deployable satellite communications solutions provide an essential integrated, framework to coordinate relief organizations, emergency services and government/military outfits operating on different communications platforms.

framework to coordinate relief organizations, emergency services and government/military outfits operating on different communications platforms.
For ongoing relief missions in remote and rural areas of the globe, Thuraya provides cost-effective, feature-rich satellite communication solutions for aid workers. Thuraya's solar-powered products offering Data, Voice, Fax and SMS services enable communities that would otherwise be isolated to interact with the rest of the world.

To this effect, Thuraya has partnered up with different international organizations, NGOs as well as funding bodies to make strategic contributions, including in the area of disaster recovery and emergence management. The company is already in the process of launching the Thuraya Disaster Emergency Portal and its strategic-alliance partners include ITU, UNOPS, UNICEF and more than 150 non-government organizations worldwide.

Thuraya's Strategic Partnerships for Disaster Relief Activities

Terrestrial infrastructure is typically the first casualty when disaster occurs. Thuraya has been active in developing strategic partnerships to increase reliability. Thuraya serves a number of organizations in worldwide relief operations. Thuraya complements the terrestrial networks in a perfect way either as a backup system and/or an extension element of the infrastructure.

Thuraya and the United Nations partnership mobilizes portable satellite phones for disaster relief

Stepping up its efforts for disaster mitigation and relief, Thuraya and the United Nations signed an agreement in 2006 to provide portable satellite terminals, a major factor in rescue operations.

The tsunami that wreaked havoc in south East Asia, the Kashmir earthquake, the Suriname floods, and the Indonesia earthquake have demonstrated the power of emergency telecommunications in saving lives and coordinating efforts during rescue operations such as the setting up of telemedicine links.

In this respect, Thuraya is contributing handheld satellite terminals along with solar chargers at discounted airtime rates and covering transportation costs of telecommunications equipment to and from disaster-hit areas.

Thuraya and ITU partnership for disaster relief satellite terminals (2006)

In July 2006, Thuraya and ITU concluded an agreement, under which Thuraya will contribute free of cost handheld satellite terminals and solar chargers to power them at discounted airtime rates. The Thuraya terminals will help provide vital links via satellite to rescue teams, government authorities and humanitarian agencies for relief and rehabilitation efforts. These terminals support voice and data applications, as well as navigation services via the global positioning system (GPS). They will also help victims locate their relatives and seek assistance. Thuraya has provided free of cost a quantity of mobile handhelds and broadband terminals for both mobile and data communications, which is instrumental to any disaster management effort.

Thuraya dispatched an initial batch of 30 mobile handheld terminals and 10 DSL terminals to the ITU, to help provide communication and coordinate relief operations after the cyclone in Myanmar. Similarly, arrangements have been made to send the ITU another 100 mobile terminals in case they are required elsewhere in the region. In 2010, Thuraya donated 5 ThurayaIP Terminals for Data communication.

Thuraya's Notable Contributions Toward Disaster Relief

Often existing terrestrial communications infrastructure is destroyed or seriously damaged in natural or other disasters, making landline or GSM phone calls impossible. Thuraya's sophisticated satellite network covering more than 140 countries in Asia, Africa, Australia, the Middle East and Europe provides survivors and rescuers with a vital communication link.

Thuraya provided aid to different countries (2007): Thuraya provided similar aids in countries, such as Zambia, Uganda and Bangladesh when those countries were inundated with floods.

Asia (2008): In support of the on-going relief activities in Asian countries (Myanmar, Bangladesh, Pakistan, Afghanistan), Thuraya has given key telecom equipment to the ITU, with a view to distributing them to relief operation teams in disaster-struck countries.

China (2008): The ITU deployed 100 Thuraya terminals in support of the of the aid, rescue and relief operations in China and to help restore vital communication links in the aftermath of the severe earthquake that struck central China on 12 May 2008.

Myanmar (2008): Cyclone victims reconnected via Thuraya satellite terminals

Mauritania (2008): Thuraya Satellite Phones for Flooded Districts

Uganda (2010): Thuraya Satellite Phones for Flooded Districts

Finally and after what the Earth has been facing with the latest disasters such as Haiti, Chili and others, nations have started to deploy advanced monitoring measures and using the Space for satellite backup telecom systems. Governments, Regional inter-governmental treaty and International Organizations are highly and urgently recommended to handle emergencies through incentives such as :

- Developing better understandings and creating the necessary awareness through knowledge exchange and experience-sharing, as some systems may already be in place to provide immediate service such as Thuraya's
- Developing and initiating specific local and regional disaster recovery plans
- Involving Regulators and Telecom operators to take initiatives for Disaster recovery plans
- Enforce the implementation and tackle better options, in terms of cost-savings and system robustness

Response Draft for Thuraya (SAMENA member)

1. *http://www.govtech.com/gt/100148?topic=117674*
2. *http://www.itu.int/ITUD/emergencytelecoms/partnerships.html*
3. *http://www.ameinfo.com/157316.html*
4. *http://www.un.org/apps/news/story.asp?NewsID=19145&Cr=disaster&Cr1=*
5. *Thuraya Marketing & Sales Team, Thuraya- Setting trends for satellite*

TISCALI SELECTS EUTELSAT'S SATELLITE BROADBAND SERVICE

Italian independent telecommunications company Tiscali has signed an agreement with Eutelsat Communications to expand its range of broadband products. Branded Tiscali BroadbandSat, a new satellite service will target homes across Italy that the company sees as beyond the range of high-speed terrestrial networks. The service uses the Tooway consumer broadband technology, provided by Eutelsat Communications and its Skylogicm, to enable it to leverage the seamless coverage provided by satellites and reach the 12% of the Italian population currently not served by ADSL or fiber. Tooway is claimed to be the first satellite based product in Europe based on a two-way broadband solution. The solution already serves customers in more than 20 countries including the UK, Germany, France, Spain, Italy, Switzerland and Ireland, with additional countries preparing to roll out services.

IRAN PLANS NEW SATELLITE LAUNCH IN LATE AUGUST: MINISTER

Telecommunication Minister Reza Taghipour said recently that Iran is expected to launch a new satellite, Rasad 1 (Observation), into space on the back of a domextic carrier during the last week of August.

He said the launch would mark Iran's "newest achievement" in space technology. The minister had previously said that during the current Iranian year to March 2011, new satellites capable of transmitting data and images would be launched. Iran in February revealed details of three new satellite prototypes -- the Toloo (Dawn), Navid (Good News) and Mesbah-2 (Lantern), the last said to be a

telecommunications satellite. In February 2009, Iran launched its first home-built satellite, the Omid (Hope), to coincide with the 30th anniversary of the 1979 Islamic

ARABSAT

EXPECTS AN INCREASE OF SR800M IN PROFITS

The successful launch of two Arabsat fifth generation multi-mission satellites (5A and 5B) last month by Arianespace from the island of French Guyana is expected to increase profits of Arab Satellite Communications Organization (Arabsat) by 20 percent or SR800 million annually, said Nabil Shanti, Chief Commercial Officer (CCO) for Sales and Marketing. Shanti was speaking to reporters at a ceremony Monday in Riyadh to celebrate the successful launch of the two 5A satellites into Arabsat exclusive orbit 30.5° East. It has been a great achievement for Arabsat since the C-Band on 5A has already been sold out, mostly to the telecommunication clients in the region and beyond, he said. "In 2009 Arabsat has posted a profit of 20 percent and that's expected to continue in 2010 with the successful launch of the two 5A and 5B multi-mission satellites," said Shanti. "Arabsat 5C will share the same platform as its first two cousins in the fifth generation series which were designed as Eurostar E3000 models. It will provide expanded capacity with 26 active C-band and 12 Ka-band transponders, and comes with a service lifespan in excess of 15 years," he added. Balkheyour said Arabsat-5A multi-mission satellite will provide additional capacity at 30.5°East for a large range of satellite communications services such as television backhauling and broadcasting, telephony, business communications, Internet trunking and the provision of VSAT and other interactive services, over the whole continent of Africa, Central Asia and Middle East (MENA) region.

Founded in 1976 by the 21 member-states of the Arab League, Arabsat has been serving the growing needs of the Arab world for over 30 years, said Shanti. Saudi Arabia is the largest contributor of Arabsat with 36.66 percent. This is followed by Kuwait (14.59 percent), Libya (11.28 percent), Qatar (9.81 percent) and the UAE (4.66 percent). Together, these five largest contributors account for 77 percent of Arabsat, he said.

Optus WINS MULTIPLE SATELLITE SERVICE DEALS IN AUSTRALIA

Australian telco Optus has signed satellite capacity deals with regional broadcasters Southern Cross Media Group, Australian Broadcasting Corporation, Special Broadcasting Service and Imparja Television, the company announced July 27. All four deals are for 10-year periods and will see the broadcasters deliver next-generation digital free-to-air television services via Optus Satellite to Australian households in areas were terrestrial digital TV signals cannot be received. Optus, which is owned by Singapore Telecom, said the contracts are part of an Australian government program which will transition the country's analog free-to-air television signals to digital-only signals between 2010 and 2013. "Delivery of services via satellite continues to make sense for the size and scale of the Australian landscape and Optus' satellite solutions are a proven technology for the delivery of television services. We look forward to continuing to work with the broadcasters and the government in ensuring that everyone can continue to enjoy free view television," Optus Satellite Director Paul Sheridan said in a statement. Separately, Optus announced that it was awarded multiple contracts to supply mobile and satellite communications services to Australia's Northern Territory government. Under the terms of the three-year agreement, all government agencies can procure the full suite of Optus mobile voice and data services, including mobile broadband, as well as Optus Thuraya mobile satellite services for voice coverage in remote areas. The government's existing fleet includes more than 7000 mobile and 600 satellite phone services.

TOKYO LENDS HAND IN PUSHING SATELLITE SALES IN EMERGING ECONOMIES

The government is trying to help satellite manufacturers win contracts in emerging economies and hopefully establish a foothold in the lucrative and expanding international markets. Shuichi Kaneko, director of the Ministry of Economy, Trade and Industry's Space Industry Office, said government cooperation is indispensable for satellite manufacturers to win contracts overseas. In February, Japan sent its first public-private mission to promote overseas satellite sales to Egypt and South Africa. Its 15 members were drawn from the trade ministry and Mitsubishi Electric Corp. and NEC Corp., two Japanese satellite manufacturers.
Egypt is expected to place a launch order for a new Earth-observation satellite this year for flood control and other purposes. Egyptian officials told the Japanese mission that they expect Japan to join the project, according to sources. Japan plans to send similar public-private missions to Brazil, Argentina and Peru in August, with a goal of winning orders for five to 10 satellites a year. The global market for Earth-observation satellites, excluding those for military purposes, is expected to more than double from the 101 launched over the 10 years through 2008 to 206 in the decade starting in 2009, according to the trade ministry. Japanese officials expect demand for satellites will rise in emerging and developing countries because of the increasing need for data on water resources, agriculture, disaster prevention and mineral resource exploration. In the satellite business, a manufacturer's track record largely determines the chances of winning new contracts. Western rivals can procure satellite parts and components more cheaply because they are produced for the aircraft manufacturing industry, which is more developed in the United States and Europe than in Japan. Mitsubishi Electric, which used to spend four to seven years to develop, manufacture and test its satellites, has shortened the delivery time to two years, roughly the same as U.S. and European companies. The company has also lowered production costs and double annual sales in its space business from the current level of 70 billion to 80 billion yen by 2020. Hiroyuki Inahata, general manager of Mitsubishi Electric's Space System Division, said the company sees a chance in the market as 20 or so communications satellites are launched annually. NEC, which developed the asteroid probe Hayabusa, has also reduced production costs and delivery times. "We are becoming capable of competing in the global market," said Kunio Kondo, an associate senior vice president at NEC. The company plans to double sales in its space business from 50 billion yen in fiscal 2009 within 10 years.

ThurayaIP
Take *your world* wherever you go.

Mobile broadband that gives you the advantage of wireless high-speed internet, wherever you go. Now even the most remote locations will seem like the centre of the city.

- High speed broadband internet access
- Video streaming & conferencing
- Reliable congestion free network
- Compact in size
- User friendly connectivity

THURAYA
stay close

www.thuraya.com

"ILLEGAL WAYS OF BROADCASTING AND PIRACY RELATED ISSUES ARE NOW BEING TACKLED BY AUTHORITIES IN ARAB COUNTRIES"

The use of Illegal means to broadcast expensive TV channels and DVDs is a big issue nowadays in our industry. Authorities and concerned bodies are cooperating to stop such illegal activities.

Just recently, illegal satellite TV providers and the pirate subscription service "Dreambox device", which is a cheap means of watching TV through Internet, was banned in Bahrain. The Telecommunications Regulatory Authority has informed all 17 Internet service providers to block access to television channels across the Dream Box service in order to prevent access to improper channels. People are not happy to pay BD25 per month to use allowed satellite service as alternative. Very few of the public supported the idea in view of the quality of service provided.

A TRA statement strongly pointed out that the crackdown aimed to stop access of "Improper" channels that breach public morality and the illegal broadcasting of paid TV channels. However, many Dreambox users are still able to access the service as some operators have found ways to bypass, partly because Dreambox providers are not willing to stop providing the service. As with illegal voice traffic methods, such illegal access to content is being facilitated by innovative new approaches.

Batelco announced that "a company is obliged to comply with the TRA direction, which has been ordered by the Ministry of Culture and Information, responsible for regulation of internet content. Batelco is a law abiding corporation and is obliged to comply with the laws of the Kingdom."

There are no doubts as to how seriously this issue is being considered throughout the world, apart from Bahrain. It is with the help of these kinds of devices that people are watching channels like Al Jazeera Sports TV, Orbit-Showtime, and ART Sport TV for only US$450 per year, which is far less than the annual subscription for these channels.

The Middle East, being the hub for much global interaction and diverse business exchange, is considered as a "crossroad" for DVD and other software piracy. In order to improve the competitiveness of the UAE market, for instance, while ensuring that the interests of the intellectual property rights owners are protected; recently, foreigners have been punished after being convicted of engaging in "parallel imports", the practice of importing goods without the permission of the intellectual property owner.

In some countries, the Ministry of Economy (MoE) has organized a number of inspection tours at souks and markets. The raids have led to the seizure of a large number of pirated copies of CDs and violators were fined according to copyrights laws.

On the other hand, channels providers are taking action to save their subscriber base and to stop illegal access to their channels.

This issue is causing huge losses in subscriber revenue as companies are losing revenues from subscribers. According to TV Channel "Showtime" one of the pioneers in this approach, the official losses are not only the issue, but content and programs presented through these devices. In UAE, they are analyzing with authorities' means to crackdown this illegal action.

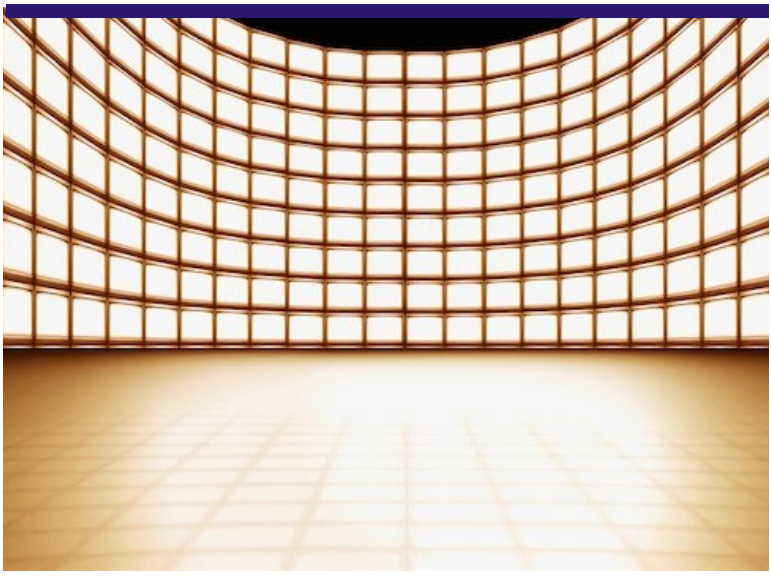
In the light of what has transpired lately and what could emerge, the following implications of content piracy exist:

- Local authorities need to act as catalyst of prevention, in order to discourage all kind of piracy related issues.
- As competition in market is increasing, telecom companies may need to provide offerings with more encrypted protection for their solutions.
- The cost of subscription for international and national TV channels could be more affordable for people according to local economy.
- Proper monitoring and international involvement is required by government agencies and international regulatory bodies.
- All operators, ISPs and TV channels should work together under one common platform to lay down the issue of content piracy with the support of authorities.

The piracy issue, though hard to tackle initially, is the need of the hour and must be projected throughout the industry. SAMENA would like to help in this regard and give support to the projection of this issue using its tri-regional platform.

Telecom operators are investing substantial amount of capital into their IPTV and VOD platforms and their means for broadcasting but the principal competition remains illegal download or illegal streaming on peer-to-peer networks or from illegal sites. It is considered by the copyright owners that if 10% of the pirates had stopped the illegal downloads to go onto authorized sites, the revenues from the VOD market would be multiplied by 3. Controlling content distribution means of preserving its investment and thereby, boosting revenues for new content services. Proven technologies and cutting edge solution are offered by specialized firms for increasing exponentially operators' revenues.

Bocar A. BA, President - SAMENA



A SNAPSHOT OF REGULATORY ACTIVITIES IN SAMENA REGION

The telecommunications regulatory bodies of the SAMENA region are a very smart observant group, which continually aims to leverage the vibrant characteristics of each regional market's telecoms sector toward maintaining a certain (and well defined) level of positive growth in technology adoption, creating leveled playing-fields, sustaining healthy competition (wherever possible and applicable), and, generally speaking, taking decisive measures to protect the interests of not only the telecoms sector but also the consumers.

SAMENA's general observation reveals that most of the regulatory bodies have remained steadfast in maintaining their independence while taking part in region-wide knowledge-generating activities, resulting in productive exchange of ideas and in the design of innovative policies. During the month of July 2010, a large number of regulatory activities were seen taking place in most of the SAMENA region. A brief account of the milestones achieved by the regulators for the month of July is presented here.

Part A
Country-wise Regulatory Activities

Afghanistan

Country being badly affected by the insurgency, the Afghanistan Telecommunication Regulatory Authority is trying its best to revamp the infrastructure and trying hard to build capacity. In this hostile environment, the regulator was successful in conducting Quality of Service Survey and imposed fine on the cellular operators not fulfilling the specified key performance Indicators.

Algeria

The echo of Algerian Government dispute over the tax payment with the cellular mobile operator 'Djezzy', a subsidy of Orascom Holding, Egypt is still in the horizon and both parties are in high hope to settle the issue amicably. The Regulatory Authority for Post & Telecommunication is trying to recover the outstanding dues from the 35 Internet Service Providers. The biggest regulatory news is about the regulator's plan to issue a 4G concession by next year. In another welcoming move the ITU has signed a MoU with the regulator on Information and Communication Technologies training and management co-operation.

Bahrain

This month also The Telecommunication Regulatory Authority (TRA) Bahrain kept its track record intact by participating and contributing at regional level meeting of Arab Regulators' network. TRA's delegation updated and presented to the Arab regulators the recently approved international roaming recommendation for the GCC countries and discussed with the benefit of agreeing on a similar recommendation for the Arab region. The outcome of "Achieving Ubiquitous Broadband Networks" Conference hosted by TRA last February was discussed. TRA also updated the meeting on telecommunications services

prices benchmarking studies led by TRA. Bahrain plans to establish a national broadband network (NBN) and its excess capacity will be made available on the fiber-optic network of the Electricity & Water Authority (EWA). Bahrain Internet Exchange (BIX) has been made responsible for overseeing all operational aspects of the planned NBN. In yet another important regulatory achievement TRA released its first ever report on the quality of broadband communications services in the Kingdom. The report is based on the data gathered from the Broadband Quality of Service (QoS) monitoring platform launched in the last quarter of 2009.

Bangladesh

To adjust the International Outgoing Call Charges with Settlement Charges and to provide affordable tariff to the subscribers and the stakeholders assured proper revenue sharing, the Bangladesh regulator issued a bold directive this month. The other major regulatory activity remained operation against illegal VoIP calls. The effort was slightly hit by the stay order granted by the High Court on regulator's decision to cancel licenses of five operators for three month. In latest information released by the regulator the country's total number of mobile subscriptions reached 59.98 million at the end of June 2010, up by 27% year-on-year.

Egypt

According to the Egyptian Regulator country's mobile market in last two years has registered over 25 million new subscribers which represent a 79% uptake on the referred period, 38% on a yearly basis and 9.5% quarterly growth on average. In another move regulator has allowed two consortia to provide triple-play services to residential compounds in Cairo's suburbs which contain between 50 and 5,000 housing units.

Iran

This month Iranian regulator with the collaboration of the Asia Pacific Telecommunity (APT) hosted a two day working group meeting of South Asian Telecommunication Regulator's Council (SATRC) on Frequency Spectrum. Experts and specialists from Iran, India, Pakistan, Sri Lanka, Bangladesh, Afghanistan, Maldives and Nepal participated in the moot.

Jordan

Due to sector friendly policies of the Jordanian regulator, the results of Cellular Competition Intensity Index 2010 released by the Arab Advisors Group on the sidelines of the 7th annual Media and Telecoms Convergence Conference in Amman ranked Jordan as the most competitive Arab cellular market. In yet another important move the Jordanian government has given tax incentives for companies providing Internet and communications services, under which sales tax was reduced and unified on Internet services regardless of the technology used.

Lebanon

The Lebanese Telecom Ministry has shown its intention to end the use of voice-over-IP (VoIP) from personal computers to land-line telephones because the practice is depriving the treasury of badly needed income but will not prevent individuals from using VoIP in Lebanon but only those using this service for commercial purposes will be stopped. For the better understanding of the Internet users the regulator has directed all ISPs to mention descriptions that the uplink and downlink speeds are 'up to X Kbits/s' especially whenever those services are offered on a 'Best Effort Basis'. In a wake of recent espionage incident the regulator has issued guidelines titled "Security Requirements for the Telecom Networks in Lebanon" focusing on Mobile networks security. The guidelines require auditing the existing MIC1 and MIC2 networks in order to isolate and clear any existing loopholes/backdoors or security breaches.

Libya

The telecom regulator during the month refused to grant approval to bids for a fixed and mobile telecoms license due to unsatisfactory proposals. A year ago Turkcell and Etisalat lodged bids with the regulator.

Nepal

The Nepalese regulator is fighting with the unauthorized users of banned VoIP and is very keen to clamp down on any calls which may adversely affect the revenue of a licensed telecoms service provider. Recently mobile operator Spice Nepal Private Ltd (Ncell) has barred calls from around 15,000 United Telecom Ltd (UTL) subscribers after it started receiving voice-over-internet protocol (VoIP) calls from some of them.

Oman

Due to sector friendly policies of the Regulator the telecom sector revenues jumped 8.2% to RO 635.086 million during 2009, underscoring the continuing lucrative appeal of Oman's telecom market for existing and new telcos. According to statistics compiled by the regulator, telecom sector earnings have maintained a healthy growth trend over the past five years. In another bid the statistics issued by the National Economy Ministry during the first four months of the year 2010 showed that subscribers of

incumbent fixed line service provider (Omantel) stood at 283,667, against 300,139 in 2009, showing a 5.5% decline and that subscribers of billed fixed phone service in the Sultanate stood at 203,793 at the end of April 2010, against 209,246 subscribers in 2009.

Pakistan

The Pakistani regulator is always fully supporting the telecom industry and making efforts in all possible ways to help operators through workshops and by establishing expert groups on development and launch of value added services and is also highly supportive of mergers and acquisitions and has been approving such requests on case-to-case basis. Due to these sector friendly policies the subscriber base of WiMAX and EvDO services of WLL sector has shown 73% growth in the last six months while the subscriber base has jumped from 190,947 in October 2009 to 331,416 in April 2010. To fight against the menace of 'Grey Traffic' (illegal call termination) the regulator with the help of the law enforcing agencies have successfully conducted 29 raids on grey traffickers throughout Pakistan.

Qatar

Due to sector friendly environment created by the telecom regulator in Qatar the Broadband penetration is the best in the Gulf region with 44% of households covered and the Gulf state's fixed line market's growth was being driven by internet usage and 44.5% of Qatari households possessed a broadband-enabled computer by the end of 2009, up from just fewer than seven percent in 2004. Qatar was well ahead of its Gulf neighbors on broadband penetration in 2009. The regulator is also investing highly to operate a high-capacity satellite at 25.5° East. During the month regulator was able to decide the fate of Virgin Mobile MVNO operated with the help of Qtel.

Saudi Arabia

During the month of July 2010, the telecom regulator imposed a fine of SR5 million on some mobile companies found violating the ban on free international roaming service. The regulator showed its firmness to continue imposing fines and penalties on companies found to be violating its rules. The regulator also warned that all free international roaming services are illegal. The regulator's decision on banning free international roaming services was challenged in the Administrative Court (in the Board of Grievances), but the court upheld the decision of regulator.

Sri Lanka

To stop the intense price war among the mobile cellular operators in the country, the regulator has imposed a floor prices and interconnection rates form mobiles. Presently 'sender keeps all' regime is in place, but now the operator will have to pay 50 Sri Lanka cents for each voice minute terminated in another network and 15 cents per text message. Regulator has also enforced floor rates of two rupees for off-net calls and one rupee on-net calls for new customers. According to data issued by the Central Bank, the mobile phone subscribers in Sri Lanka's grew 30% to 15.0 million in the first quarter of 2010, while fixed wireless users grew 4.7% and wire line users were flat. Fixed wireless subscribers grew to 2.58 million users in the first quarter from 2.47 users a year earlier, while wire line subscribers fell 555 to 875,509. But wire line users increased from a December quarter low of 871,248 ending a contraction in the category. The regulator is striving hard to save guard the loss of nearly Rs. 10 billion annually as a result of international calls being taken using the Voice over IP (VoIP) technology.

Sudan

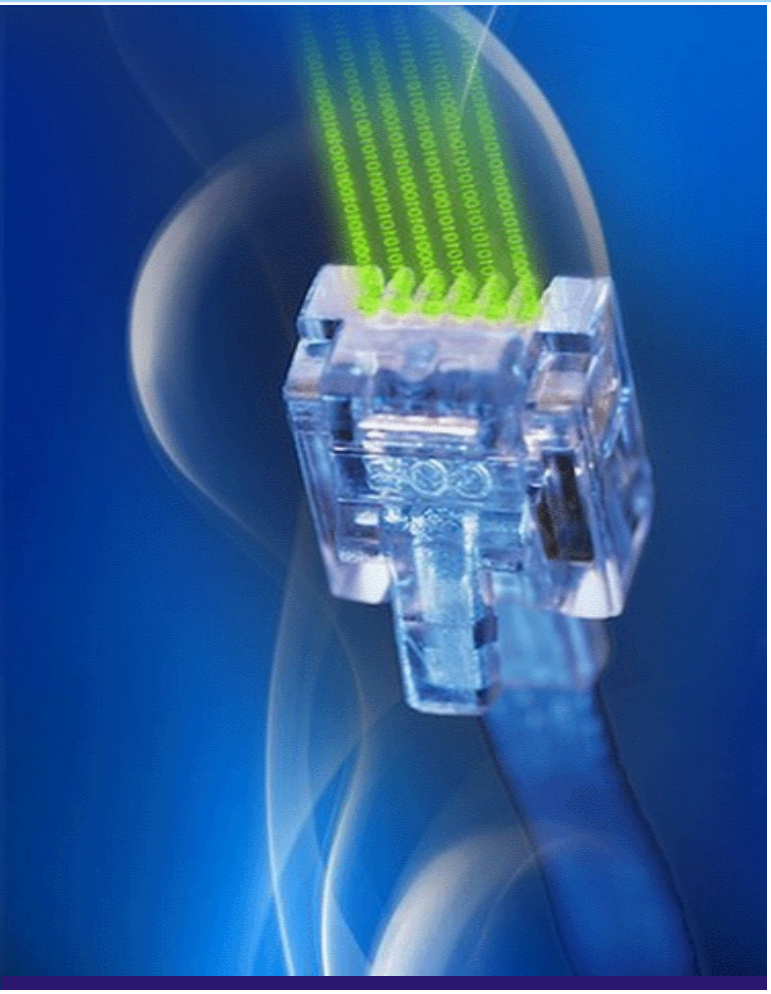
During the month Sudanese regulator was successful in holding a seventh meeting of the Arab Regulators' Network. The meeting was attended by the 13 Arab countries with observers from the International Telecommunication Union (ITU).

Turkey

During the month the Turkish regulator sought public opinion on the draft Regulation on Market Surveillance of Radio and Telecommunications Terminal Equipment.

United Arab Emirates

With the active intervention of the regulator the two fixed line operators of the Emirates have agreed to share fixed telecommunications infrastructure. Due to this arrangement both operators will be able to provide all fixed-line services, telephone and internet services, and in the near future television services everywhere in the UAE. The regulator has taken an initiative to protect Intellectual Property Rights by applying successful procedures to prevent illegal decryption of PayChannels on the Internet in collaboration of the telecom operators for the first time worldwide. The regulator is of the opinion that BlackBerry operates beyond the jurisdiction of national legislation, as it is the only device operating in the UAE that immediately exports its data off-shore and is managed by a foreign, commercial organization, but the same time regulator has no intention to block its operation.



Part B

During the month of July 2010, SAMENA Regions saw a cluster of activities on different regulatory issues mostly but not limited to the Broadband (mobile & fixed), Optical Networks and its Applications, Mobile TV, Contents and International Roaming.

In Broadband, SAMENA countries like Egypt witnessed a plan of LINKdotNET with the collaboration of SABA Electric to provide broadband facility to around 70,000 households over the power lines (BPL). The Communication and Information Technology Commission of Kingdom of Saudi Arabia has already issued comprehensive guidelines on the issue. So the stage for BPL has already been placed in SAMENA region.

To support the multimedia applications, Network operators in the region are following a rapid evolution towards the next generation networks. The generous support of technologies like WiMAX, 3G, 4G, FTTx and DSL is accredited the growth in broadband multimedia services like voice, data and video. The new revenue generation streams are being developed, the source being the delivery of the contents.

Being low Broadband proliferation rate in SAMENA region, a great potential for the broadband exists in the area and it is the high time that all the stake holders share their experience in converged and coordinated manner. The Regulator, Operator and Vendor (including content providers and aggregators) troika is the best solution to proliferate the broadband. Regulators can shorten the time period in granting license and reduce the cost of concession; the operators to revisit the pricing and the vendors to come up with more cost effective equipments. The last but not the least, the content provider should focus more on localized contents. The other factors of low penetration are poor infrastructure, slow pace of de regulation, less attention towards modern technologies etc. The issue of declining ARPU is hurting the fixed line operators like anything and it is now high time for them to add value to their services (such as IPTV & VoD) through Broadband. The mobile operators can follow the suite.

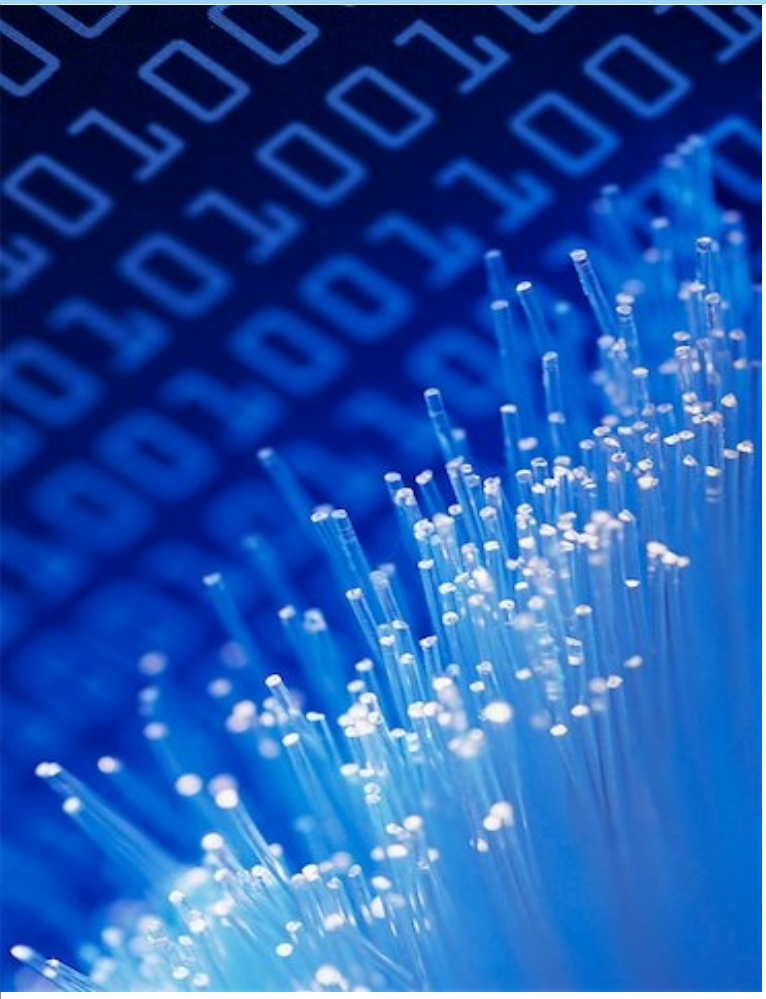
Global move towards the formalization of Internet Protocol Version 6 (IPv6) by 2012 has been an important issue of concern. In the SAMENA region, effective brain storming sessions and knowledge sharing between the stakeholders needs to be arranged for facilitating the vigilance and deployment of Ipv6.

Mobile WiMAX has been deployed in many SAMENA countries, whereas the 4G LTE technologies are under very active considerations of the regulators and operators and have been deployed on trial basis especially in Europe like Sweden, Norway, Italy and Germany. The 3G is also being rolled out, while licensing of 3G spectrum is being considered in number of countries.

The Universal Service Fund is helping to bridge the digital divide in number of SAMENA countries like Pakistan where Billions of Rupees have been given as subsidies to the operators interested in offering their services to the far-flung portion of the inhabitants.

Optical Network and Applications

Due to inhibited property of the optical fiber to have large capacity over traditional copper in terms of bandwidth, technologies like WDM and DWDM can be exploited. With the ever increasing of Internet traffic optical fiber is the appropriate transmission medium to carry the bulk of future network traffic. Optical networking can prove to be a viable technology for the growing size of the Internet and the backbone of the future large-scale networks. Some of the strong points of this architecture are: compatibility with packet switching at the network edge, simplicity, cost-effectiveness, efficiency, and flexibility of allocating different bandwidth granularities, depending on the application needs. Multiprotocol Label Switching technology is being widely adopted due to cost effectiveness and performance and the operators are seriously thinking of deployment.



IPTV growth will accelerate due to optical fiber as more and more operators are investing heavily on FTTx and further to that 4G will have heavy impact ADSL and FTTx services. GPON FTTx is also being widely adopted to deliver IPTV and HDTV services.

Mobile TV

LTE and WiMAX signify the transition towards the 4G. Mobile TV is viewed as part of the aim of what the 4G systems standards set out to achieve, which is to provide mobile broadband and interactive content such as mobile TV and internet gaming anywhere and everywhere. Mobility is the essence of the progress and transition of technology into the next generation and hence Mobile TV being the forefront indicator. Free Mobile TV is going to encourage the evolution of the next generation of technology and would aid the deployment of LTE and WiMAX. However, the economic implications of provisioning of this Free Mobile service would remain the question.

Content

Like in most of the developing world, SAMENA region also lacks behind localized contents. If the local contents are developed this can contribute very heavily in formulating ICT based economy, and the SAMENA region has high potential for its market. Application stores for devices like iPhone and Blackberry are flooded with applications which mainly delivered targeted customized content through means of content aggregation.

International Roaming

Interestingly the International roaming is catching attention with the growing competition backed by friendly regulations. International roaming rates and mobile termination rates have finally begun to drop as a result services such as unified roaming rates and the growing competition. As mobile operators search for new revenue streams, attention is turning to increasing usage of international roaming services. Regional countries have shown great interest towards international roaming. It is encouraging to see unified roaming plans in the region with the indication that the industry is on track to address the significance of international roaming rates, but still there is a need for lowering international roaming rates in the SAMENA region - much in the way the other regions such as EU has. International data roaming and its associated costs are of prime importance with the evolution of the next generation mobile technology which promises the availability of broadband access and anywhere.

Regulatory Issues

Apart from the above issues, the regulators of SAMENA region are working on regulatory issues like: Emerging trends in spectrum: a regional perspective; Mobile TV regulatory approaches; Electronic Transaction; Copyright & Trademark ; Changes in Termination rates; Legalizing VoIP under a legal framework; Passive Infrastructure Sharing; National integrated telecoms & ICT policy-making; Strategizing on cross-border and regional ICT policies and regulations; Evaluation, implementation and monitoring of national ICT policies and regulations for modern times; Rationalization on interconnection and tariffs; Implications of cyber threats: Developing a cyber rule of law; Developing disaster management frameworks; IPTV regulations: A progress check; Use of Universal Service Fund subsidy for proliferating broadband in rural areas; Spectrum pricing: The regional imperative for re-visiting and restructuring.

SAMENA INTERNATIONAL ROAMING GROUP

The SIRG was created in November 2009 as an initiative of telecommunications operators in the South Asia-Middle East-North Africa (SAMENA) regions in order to effectively address many of the critical issues and challenges facing operators with respect to international roaming. The purpose of the SIRG is to demonstrate leadership and develop consensus among telecom operators in the SAMENA region to develop and shape appropriate initiatives with respect to international roaming. As part of the broader SAMENA Council, the initiative further aims to promote best practices and support growth and innovation in the telecommunications industry. The SIRG had its first official meeting on 14 December 2009 in Dubai, UAE.

Knowing that Roaming is a Beyond Borders service and exclusively functional in the GSM networks, we have been focusing during the last 2 months on increasing the membership coverage for SIRG that reached 20 Mobile operators in 12 countries with the participation of 20 members.

Our target is to cover 25 countries of the SAMENA region in order to establish one unified voice in all over these countries speaking the same language the "Roaming language". Roaming has its own experts that move beyond borders to meet, discuss, debate and reach conclusion to help them protect their operator's services and revenues.

For almost 4 years, Roaming was on the top one priority of the EU Commission Agenda. The EU commission has succeeded to decrease the roaming prices between the EU countries.

The Arab Operators and Regulators have started to look after Roaming prices and planning for a similar decrease that is not yet applicable.

The GCC plan for Roaming decrease is to be applied by September of this year.

What the SAMENA operators think about it? To decrease or not to decrease?

That is what SIRG is going to find out through a survey to be fulfilled by its members to help them reach a consensus in this regard and build a strong position leading to a win-win solution internally with their management and externally with their regulators.

SIRG's aim is to deliver a peaceful environment for Roaming in order to satisfy all the players of the Roaming industry.

Stay tuned !

ROAMING PRICES IN GULF COUNTRIES

The Gulf Cooperation Council (GCC) meeting has approved plans to set a maximum cap on mobile roaming tariffs within GCC countries. Bahrain's telecoms regulator, TRA is currently working on an appropriate approach for the implementation of the roaming recommendation by this September.

The approved recommendation will provide up to 38% reduction on roaming charges currently paid by GCC consumers. The Gulf Cooperation Council is made up of Kuwait, Bahrain, Saudi Arabia, Qatar, United Arab Emirates and Oman.

Commenting on the approved recommendation, TRA chairman and acting General Director Dr. Mohammed Al Amer stated *"First of all I would like to thank H.E. Shaikh Ahmed Bin Atiyatallah Al-Khalifa Minister of Cabinet Affairs, Minister responsible for the Telecommunications Sector who supported the approval of this recommendation and the team within TRA who worked on this recommendation to benefit the Bahraini and GCC consumers. This recommendation, when implemented, will support cross border business activities and support growth in the roaming traffic."*

The Working Group committee consisting of other regulatory bodies within the GCC has also worked closely with the operators since 2009. Having accomplished this first milestone, the next objectives assigned to the working group include studying roaming charges for SMS, MMS and Data. The Working Group will also make sure that the approved recommendation is implemented by all members of the GCC countries.

ROAMING PRICES IN EUROPE

The next stage of European Union-mandated price cuts for voice calls and data downloads while abroad came into force, part of a process of incremental cutsthat began in 2007. The latest cuts will bring the maximum price for making a call while abroad down to 39 Euro cents a minute, down from 43 Euro cents, while receiving a call will cost a maximum of 15 Euro cents a minute instead of 19 cents. Both limits exclude sales tax.

Furthermore, the wholesale price of downloading data on a mobile phone or a laptop while traveling in the EU will fall to 80 Euro cents a Megabyte from the current EUR1. Mobile operators will also have to set an automatic data roaming limit at EUR50, unless the consumer has chosen a different level, to prevent exorbitant bills for downloading while abroad. Operators will have to send users a warning when they reach 80% of their data-roaming bill limit, and cut off the mobile Internet connection once the limit has been reached unless the customer chooses to stay connected.

"There will be no more bill shocks for tourists or business travelers surfing the Internet with smart phones or laptops while in another EU country. The EU is also cutting the cost of roaming calls for travelers," said telecoms commissioner Neelie Kroes in a statement.

The European Commission, frustrated by lack of competition, started regulating roaming prices in 2007. In July 2009, further cuts were approved that will reduce roaming prices in stages until July 2011, when maximum roaming prices will be capped at 35 cents a minute for calls made and 11 cents for calls received. These rules will remain in place until the end of June 2012, when the commission will reassess its roaming policy.

"I am determined to make the EU's telecoms markets more competitive," Kroes added.

The commission's telecoms regulation has substantially reduced profit margins for European mobile operators, who have often vehemently resisted the regulated reductions. Four of Europe's largest mobile telecommunications operators--Vodafone Group PLC, Telefonica SA's O2, Deutsche Telekom AG's T-Mobile and France Telecom's Orange--tried to challenge the legality of the roaming regulation in Europe's highest court, but lost the court case in early June.

SAMENA VISIONS 2010

Telecommunications Reference Guide to the SAMENA Region

The Visions publication, now in its next edition, builds onto the information brought earlier to its regional and international audience of executives and stakeholders in the telecom industry. Visions 2010 provides concise and detailed data on telecommunications activities, issues, and players in the SA-ME-NA region. This data, where appropriate, is also accompanied by maps. This reference publication also provides a very prolific contacts database, comprising c-level, d-level and m-level contacts from around the region and the world.

Targeted Advertisment Opportunities

Contribute to *Visions 2010* through your

Articles & Interviews

SAMENA TELECOMMUNICATIONS COUNCIL

Book Your Copy Today!

For orders & info
Telephone: +971.4.364.2700 | Fax: +971.4.369.7513 Email: info@samenacouncil.org
304, Alfa Building-Knowledge Village, DIC. PO Box 502544. – Dubai, UAE

OPERATOR LEADER'S VISION

Eng. Saud bin Majed Al Daweesh
CEO - STC Group

PLEASE TELL US ABOUT YOUR LEADERSHIP AND VISIONARY ROLES IN THE TELECOMMUNICATIONS SECTOR.

Telecommunications is considered to be the most vibrant and evolving sector in the world and STC's vision in realizing the huge potential, anticipating the rapid market growth and understanding that there would be continuous technological development has earned us the leadership role in region. STC has become the region's biggest integrated telecommunications provider by adopting new technologies as fast as they reach the market and implementing them with world class technical and marketing expertise. A profound understanding of our customers' needs play a key role in STC's growth by developing out products and services to meet the varied requirements of the business sector, families and individuals including the highly important youth market.

WHAT ARE YOUR CURRENT CORPORATE ACTIVITIES IN THE MARKET?

STC continues to dominate the telecommunications sector in Saudi Arabia and our strategy remains three fold: First we are focused on customer service and satisfaction; second is continuous innovation in line with technological advancements; and third we are committed to increasing our revenue sources by growing external operations. The launch of Viva Bahrain has been completely successful, we have strong operations in Kuwait and are consistently achieving continued growth in other markets, Turkey, South Africa, Indonesia, and Malaysia

WHAT ARE THE MOST SIGNIFICANT BUSINESS/TECHNOLOGY TRENDS AND SHIFTS THAT YOU FORESEE EMERGING WITHIN THE SAMENA REGION?

In 2010 and going forward, the trends that will characterize the SAMENA region's ICT industry include six key factors:

- Further liberalization of policies and regulatory developments
- Increase in the number of M&A's and convergent solutions between operators, solution providers, vendors, etc.
- Continued focus on broadband infrastructure investments
- Cloud-based services and applications
- High mobile penetration and increasing competitiveness will lead to a number of advancements in mobile and other technologies
- Also, with growing competitiveness and high demand, the end-consumer will drive innovation and technological advancements

WHAT HAVE BEEN THE MOST REMARKABLE OPPORTUNITIES THAT YOU HAVE AVAILED OF AS ONE OF THE PROMINENT PLAYERS IN MIDDLE EAST?

The most remarkable opportunity of all is the ability to build from scratch. Over the past 15 years the telecommunications sector in the Middle East and most probably in the world has grown by leaps and bounds. Starting from ground zero has given operators a great opportunity but also has given them as well a huge responsibility. And if we look at the achievements in the past few years we can only be fair and link them to this single opportunity which is being able to develop something from scratch and innovate as we go along. Although the telecommunications sector can be described as a "mature sector" but I believe there is still a long way to go because we as telecommunications experts have to say ahead of the game and always look for the opportunity that will, if utilized in the right way, will results in some sort of an achievement.

> *Customers drive the industry and shape the market through their own demands, wishes, and aspirations.*

> *Starting from ground zero has given operators a great opportunity but also has given them as well a huge responsibility.*

WHAT ARE THE CURRENT MARKET CONDITIONS THAT OPERATORS ARE TRAINING THEMSELVES TO GROW ACCUSTOMED TO?

The most important condition that we as operators have to get used to is the increasing competition not only from our direct competitors in the industry but also from what we call the "competition within." You see we need to always stay ahead of our game and in tune to what customers want. Customers drive the industry and shape the market through their own demands, wishes, and aspirations, In turn we as operators have to listen and respond with holistic product and services offering based on this listening and thinking and planning process.

WHAT ARE THE MOST IMPORTANT VALUE ADDED SERVICES (VAS) THAT YOU DEPEND ON FOR MAXIMIZING REVENUE GENERATION AND WHAT ARE THE TRENDS IN THE MENA REGION?

Our value added services are characterized in two parts: Development and launching new products to support our expanding product range with a focus on the high yielding products such as our broadband portfolio with different packages and speeds and or value added services (service add ons) that drive the value proposition to our customers. An example of this is our investment in sports whereby we have availed content for our growing number of sports loving customers as well as other services that enhance our existing range of products. This is clearly demonstrated in our recent new Tariff campaign which is supported by a series of add ons that drive value whether in international calls, SMS, closed group, and sports.

HOW WOULD YOU ASSESS THE PROGRESS OF THIRD-GENERATION (3G) TECHNOLOGIES IN THE REGION SO FAR?

The penetration rate of mobile phones in most of the SAMENA countries has crossed 100 per cent compelling operators to launch advanced services such as 3G in order to regain market share and enhance their revenues. The demand for better and advanced services such as 3G has been consistently rising owing to the large, young and technology savvy population but 3G hasn't been explored

to the fullest. However, the deployment of 3G technology for both mobile and fixed line purposes has definitely picked up speed and the technological benefits such as video conferencing, multimedia services, high data speed, and mobility are factors that are driving the fast deployment of 3G technology in the region

In a nutshell, customers appreciate technology and expect the best technological solutions for their day to day communications needs. There has been consistent development of the 3G technology in our region and in fact we are getting ready to deploy LTE to meet the demands of our discerning customers. I believe the progress has been excellent so far but operators have to continue investing in technology.

WHAT DOES A CEO NEED TODAY, TO BE ABLE TO MAINTAIN AN EDGE?

A successful CEO needs to always balance the scale, to continue looking at the bigger picture but at the same time to make sure that there is no loss of sight on the existing business which predominantly means employees, customers, and community. Also a success CEO will be able to anticipate trends, incentivize his team and encourage innovation in his respective organization.

DO YOU SECOND THE IDEA THAT CAPACITY-BUILDING IS AKIN TO NATION-BUILDING?

For sure, building nations is all about building capacities, efficiencies, and qualifications. A successful nation is one that works tirelessly to build the intellectual capital of its people therefore building capacities. Telecommunications providers have both a responsibility and role in fulfilling the national vision of their respective countries.

WHAT MAJOR CONTRIBUTIONS HAVE YOU MADE TO YOUR MARKET(S), WHICH, SUBSEQUENTLY, INSPIRED TREND FORMATION OR TECHNOLOGY ADOPTION?

As one of the most successful privatized Government entities almost 15 years ago, STC was able to create a paradigm shift on how Government agencies can be privatized. In addition to that, the seamless transition between public to private also helped pave the way for other mobile telecommunications operators to enter the Saudi market. We believe that choice which is predominately in the hand of the customer, competition amongst operators, and collaboration with the regulators like CITC creates a healthier and vibrant industry. In consequence this 3C approach encourages and incentivizes operators to bring in new technologies and invests in new services, generating more revenues which in turn leads to more investment.

In a nutshell, customers appreciate technology and expect the best technological solutions for their day to day communications needs.

WHAT MARKETING TACTICS HAVE BEEN MOST COMMONLY EMPLOYED BY OPERATORS IN YOUR MARKET?

I can talk here about our own marketing tactics which predominately revolve around our customers, a term we call customer centricity. In simple terms, everything we do must revolve around our customers and anything that does not fulfill this purpose does not make it past the planning stage. One of the greatest examples of our work is the investment in the sports system which was a result of our customers wanting to be more engaged in sports. So we struck up strategic alliances with key football clubs in the Kingdom, not only bringing sports content to our customers but helping the club generate additional income, a step we believe has enhanced the sports system in the Kingdom.

The most recent marketing campaign we just launched is a new and innovative product packaging and bundling strategy that targets our Post Paid customers and focuses on usage and retention while at the same time reinforcing the value proposition for customers In simple terms, STC devised a scientific approach to monitor and analyze customer usage and provide them with the most appropriate products and services that meet their growing demands and requirements at the same time providing value, value, and more value.

STC's new Jawal Tariff Plan is a multi-layered system that is designed to answer the needs of our customers based on their usage behavior. The new plan is structured around a combination of a fixed Tariff plan component with services based Add Ons (keys) that include the International Key, Clubs Key, SMS Key, and the Friends Key. This program aims at providing value and savings to customer while enabling them at the same time to control their monthly bills.

WHAT IS YOUR ASSESSMENT OF THE REGIONAL BROADBAND MARKET, AND WHAT ARE OPERATORS LACKING, IN GENERAL, TO BE ABLE TO MAKE PROGRESS ON THIS END MORE EFFECTIVELY?

Broadband is a major growth segment in the region and STC is way out in front offering unsurpassed performance and an unbeatable value comprehensive Jood package STC supported by 24/7 technical support. In fact we lack nothing necessary for continued growth in the broadband market.

We regard STC as a lifestyle operator and as such we are strongly positioned as a provider of individual services for all family members at home. DSL grew from 160,000 subscribers in 2006 to more than 1.5 million customers (7 million users) in 2010 and we expect 2 million users by end of the year.

A significant achievement we made this year is to provide our customers with a one stop shop solution where our services converge into one single point of contact, one number, and one bill. The need for convergence of services is become much greater and customers are expecting these types of services.

WHAT IS YOUR ASSESSMENT OF THE INTERNATIONAL ROAMING TRENDS IN THE SAMENA REGION?

When looking at international roaming we need to look at the international roaming trends which reveal a decrease in operating revenues, lower profit margins and intense competition. Having said that, a number of emerging trends have been witnessed such as new and liberalized regulations and policies, drop in international roaming rates, growing competition and an acute rise in the use of roaming data services. These trends have compelled operators to look for different deployment options and advanced solutions to maximize profits and meet business goals whilst maintaining quality of service.

"A significant achievement we made this year is to provide our customers with a one stop shop solution where our services converge into one single point of contact, one number, and one bill."

> *What will drive 2011 is anything and everything that will make the lives of customers much easier.*

WHAT ARE THE CLASSIC CHALLENGES THAT OPERATORS CONTINUE TO FACE IN SPITE OF THEIR RISING IMPORTANCE IN THE TELECOM SCENE?

There are key classic challenges faced by operators in the SAMENA region include some of which include the need to continuously expand and grow in order to meet increasing demand for new solutions and services, collaboration with various industry players to offer innovative services at competitive prices, and providing new and innovative services whilst maintaining and/or increasing operational efficiency.

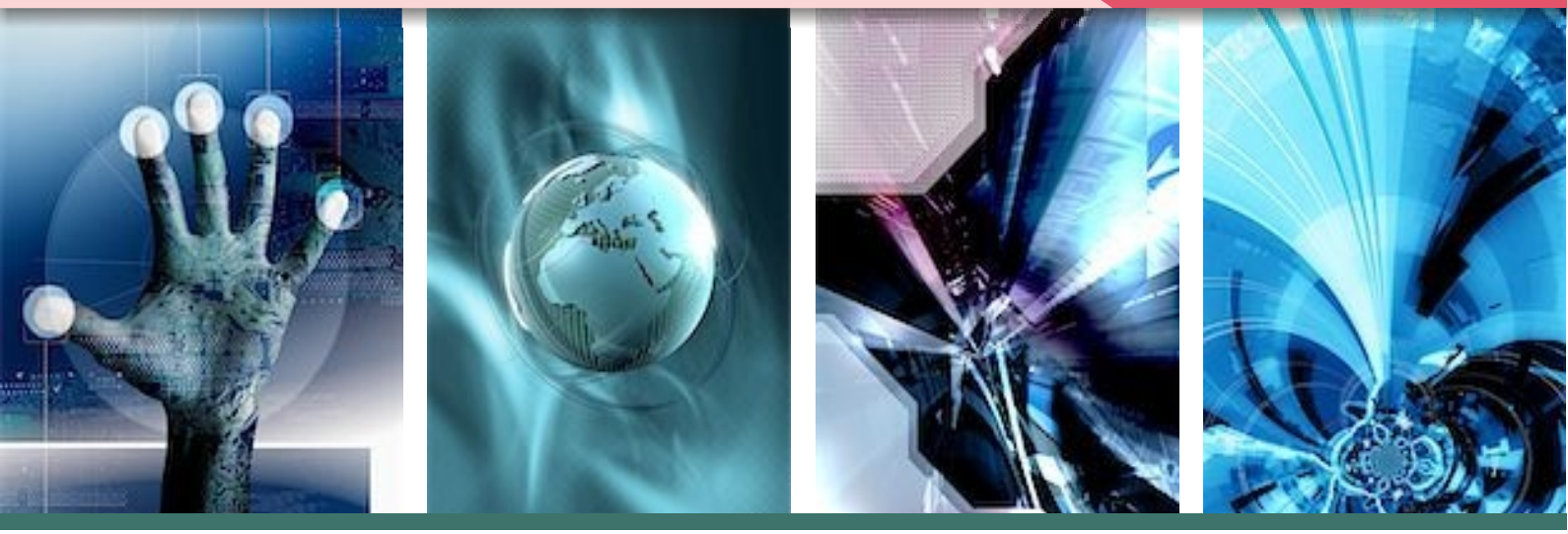
Operators are also faced with the rapidly changing and evolving dynamics and complexities of the telecommunications industry and the different regulatory principles and policies in each market in addition to the challenge in tapping into new growth markets which brings with it new challenges and opportunities

IN YOUR VIEW, WHAT WILL DRIVE 2011?

What will drive 2011 is anything and everything that will make the lives of customers much easier. If we talk about technology it can range from newly launched products and services such as the IPTV which we recently launched giving customers completely flexibility and choice in what they see and when they see it. Value Added Services is another driver which means that customers will get more for the same value. Finally convergence of services where customers have access to a multitude of services by making one simple phone call, dealing with one point of contact, and receiving one bill.

FINALLY CONTINUOUSLY PROVIDING VALUE IS A MUST AND AT STC WE WILL CONTINUE DRIVING THE MARKET WITH OUR OFFERS, SPECIAL PACKAGES AND DEALS AND DISCOUNTS.

Engr. Saud Al Daweesh is the CEO of Saudi Telecom Company since February 2006. Engr. Al Daweesh led the development of a revised corporate vision and strategy for growth (FORWARD) based on new developments in the telecom markets. He engineered an investment in Maxis Communications Berhad of Malaysia, Natrindo Telepon Seluler (NTS) in Indonesia, the third Mobile License in Kuwait, Oger Telecom Limited in Turkey and 3rd Mobile License in Bahrain. Before becoming the President and CEO of STC, Engr. Saud Al Daweesh was the Vice President of Mobile Business Unit (STC) from January 2001 to January 2006. Engr. Al Daweesh also was the General Manager for Royal Telecom from 1996 to 1998. He was also an Advisor in the Office of the Deputy Governor for the Eastern Province for H.E. Prince Fahad Bin Salman from 1987 1996. He graduated with a degree of Bachelor of Science in Civil Engineering, Class of 1982 from University of Southern California, California, USA.



TOP REGIONAL & MEMBER NEWS

Alcatel-Lucent secured contracts from China Mobile and China Telecom to install fiber optic networks in China enabling high-speed internet access. Both operators have adopted passive optical network solution provided by Alcatel-Lucent to upgrade broadband services such as HDTV and high-speed internet throughout the country. China Mobile will install the PON in 14 provinces and rival company China Telecom in at least 18 provinces. Alcatel-Lucent will deploy its platform and will offer network deployment, integration and maintenance. It is also providing a wide range of optical network units to support fiber-to-the-home and fiber-to-the-building.

Agreement To Deliver WiMAX

Brilliant Telecommunications Inc, a supplier of packet based network synchronization equipment and monitoring solutions, recently announced that it has signed a partnership agreement with Redline Communications Group Inc a provider of WiMAX and broadband infrastructure products. The company said that the agreement will see Redline using Brilliant's synchronization platforms to deliver high speed wireless backhaul solutions to its customers, offering lower operating costs and more reliable services to operators. Brilliant technology was included in Redline equipment deployed in Romania as part of a recent contract to supply fixed WiMAX radios for a network.

Nokia Siemens Bags US$7 Billion Network Contract

Harbinger Capital Partners, a US-based private investment fund, awarded a $7 billion contract to Nokia Siemens Networks to build and operate 4G-LTE wireless broadband network integrated with satellite coverage in the US. The $7 billion contract is in one of the largest deals in the industry's history. Harbinger Capital with $10 billion in assets under management, has formed a new telecom network venture called LightSquared for launching its nationwide 4G-LTE wireless broadband project, which will be headed by the former CEO of France Telecom's Orange mobile Sanjiv Ahuja. LightSquared will be competing with the likes of AT&T, Verizon and Sprint, while providing wholesale wireless to ISPs, cable operators, mobile device makers, content providers and others.

The nationwide LightSquared network will consist of approximately 40,000 cellular base stations that will cover 92 per cent of the US population by 2015. The 4G-LTE wireless network will be a combination of Nokia Siemens-developed mobile high-speed internet service and satellites and terrestrial spectrum to ensure constant connectivity. ''Nokia Siemens Networks is proud to have been selected for the largest-ever outsourced deployment of a wireless network in the United States,'' said Rajeev Suri, chief executive officer of Nokia Siemens Networks. ''Our organisation is prepared and ready to harness our global expertise to enable LightSquared to meet its aggressive rollout schedule.'' For Nokia Siemens, this $7 billion contract comes as a huge boost to its present plan of expanding in the US market.

PTCL
Broadband Subscribers Reach 0.5m

Pakistan Telecommunication Company Limited (PTCL) has announced that it has acquired over 500,000 broadband

users in 600 cities and towns. PTCL Broadband service has recently achieved a milestone by doubling its broadband data rate speed by introducing a new 8 MBPS package, which is effective from July 15, 2010. In addition to the new package, all existing 2MBPS and 4MBPS customers have been upgraded to 4MBPS and 6MBPS data rate respectively on the same tariff. This makes PTCL the highest data rate broadband service provider in the country.

The operator has become the leader in the proliferation and awareness of Broadband services across Pakistan. Not only this, to cater to the diversified needs of its broadband subscribers across the country, PTCL introduced WiFi modems with its fixed line broadband service. The WiFi modems provide customers with the convenience to move around freely and enjoy secure wireless high-speed broadband connectivity within their homes matched by no other wireless broadband service provider.

Understanding the pressing needs of technology-oriented era, PTCL has joined hands with USF to promote the development of telecom services (Broadband) in the un-served and under-served areas throughout the length and breadth of the country.

Nawras Comes Home With Exciting Internet And Voice Services For Residential Customers

People in Oman can start celebrating as Nawras ushers in a new era of telecom innovation by launching its exciting portfolio of fixed residential services, including Home Broadband & Voice. Nawras the award winning company is now delivering new opportunities for customers to get closer to friends and family with broadband internet and voice access at home. Already 54% of households have coverage through the first WiMAX technology network in Oman, and this will grow quickly to reach over 80% of households during 2011.

The plug & play simplicity of the Nawras Home Broadband & Voice packages allows customers to set up internet access within minutes, and as always, Nawras has made it easy for customers to buy, use, pay and get help. The launch of the fixed residential services marks Nawras' final step into becoming the Sultanate's pleasingly different full service provideroffering customers a one-stop shop meeting all their telecom needs whether in the office or at home, mobile or fixed, broadband or voice. From surfing the web to international phone calls, customers can look forward to enjoying the same innovation and customer focus that they have already seen delivered by Nawras mobile services.

Thuraya Focuses On NGOs As Major Market Segment

Non-government organizations (NGOs) and disaster management agencies which coordinate global humanitarian and relief efforts are a key market segment for Thuraya Telecom Co. Communications is one of the most vital requirements for NGO's success. These agencies which operate in numerous parts of the world are on many occasions based in indigenous and remote hotspots that are not appropriately served by terrestrial telecom networks. Hence, NGOs are always on the look-out for handy and reliable telecom solutions.

With this in mind, Thuraya has been very active in the NGOs communications market. "We have proven satellite IP, voice, rural telephony and emergency communications products that have been widely used by international NGOs within our 140-country coverage area," said Thuraya's Vice President Corporate Communications, Ebrahim K. Ebrahim. "In fact, most of the NGOs operating around the world today are in Asia, Africa and the Middle East which are core markets and which are supported by Thuraya's dynamic world-class network," he added. On top of the Company's service list is the world's smallest satellite broadband solution, Thuraya IP, which provides high speed data through a compact A-5 sized device that facilitates web browsing and video-streaming at efficient speeds for the NGO sector. Thuraya pioneered the Mobile Satellite Services (MSS) sector's first NettedComms solution for emergency communications. It integrates different telecom platforms in a closed user group allowing diverse humanitarian and aid agencies to communicate with one another even when terrestrial networks have been destroyed.

du Enhances Business Mobile Offering With Launch Of Smart Business Plan In UAE

As part of its efforts to transform business communications solutions in the UAE, du announced the launch of its innovative new 'Smart Business Plan', a business mobile plan which brings the latest Windows handsets with bundled benefits including unlimited internet and email.

"Data has become a vital ingredient for the running of any business, and with today's increasingly mobile lifestyle, professionals need to be provided with more flexibility and

accessibility of data even on the move. Therefore, we are pleased to introduce to our business customers the latest 'Smart Business Plan', which provides the benefits of unlimited internet and email, freedom to call anywhere in the world, and the latest windows phones, along with all the benefits of Business Super Plan and Premier Plan," commented Farid Faraidooni, Chief Commercial Officer, du. Business customers under Smart Business Plan can choose from a range of latest Windows phone, bundled with unlimited internet and email, national and international minutes and more.

Business customers under Smart Business Plan get a Windows phone and enjoy features such as e-mail, text messaging, instant messaging, and access to the web, mobile applications, calendar and contacts, and complete Windows synchronization with the latest 6.5 mobile operating system from Microsoft.

STC Partners With Leading Regional And International Airline

To provide passengers with full access to all voice and data services on their mobile phones during air travel, Saudi Telecom Company, the leading provider of telecommunication services in the Kingdom of Saudi Arabia has partnered with a group of leading airline carriers across the world including Emirates Airline, Saudi Arabian Airlines, Qatar Airways, Egypt Air, Royal Jordanian, Wataniya Airways, Turkish Airlines, Virgin Atlantic, Air New Zealand, Malaysian Airlines, Qantas, and British Airways to offer its international Roaming-on-Board service which enables passengers to use their mobile phones during air travel.

STC stated that the air roaming service is available for Aljawal customers after take-off and until landing so that travelers can enjoy all the advantages of the service including incoming and outgoing phone calls, SMS's, and emails, and internet browsing directly through their mobile phones onboard.STC launched airplane roaming in 2007 for the first time globally with Saudi Arabian Airlines Airbus A330 and the new Airbus fleet of Emirates.

STC is the largest telecommunications provider in the Middle East with regard to international roaming agreements and has signed more than 1200 agreements with international companies, ranging from postpaid roaming services and SAWA prepaid roaming services to 3G roaming, video call roaming, JawalNet roaming services and MMS service.

Telcordia Wins $80 Million In Contract Dispute

Telkom South Africa, Africa's largest fixed-line phone company, said it will pay U.S. software maker Telcordia Technologies of Piscataway $80 million to settle a nine- year dispute over a canceled contract. The companies reached an agreement based on an arbitration ruling, Pretoria-based Telkom said in a statement recently. Telkom made a provision of $77 million for the dispute in March.

The dispute arose in 2001 when Telkom terminated a contract placed with Telcordia for the supply of a customer-care management system. Telcordia claimed damages of $128 million plus interest at a rate of 15.5 percent annually.

Telcordia was acquired in 2005 by private-equity firms Providence Equity Partners Inc. and Warburg Pincus LLC from Science Applications International Corp., according to the software maker's website. The company is led by Mark Greenquist, a former General Motors executive.

SLT Strategic Partner For CIMA's Summit 2010

Sri Lanka Telecom, country's leading telecom provider continues to extend its support to CIMA's Business Leaders Summit 2010. This two-day flagship event is expected to attract over 400 diverse groups of corporate, business leaders and professionals. Given the opportunities available with the end of the war the focus of the summit has been appropriately fixed on the theme "Re-imagine; Recreate". To mark this occasion, the sponsorship cheque was presented to CIMA by SLT.

Greg Young, Chief Executive Officer, Sri Lanka Telecom commented that CIMA Sri Lanka Division, being a part of the world's leading and largest professional body of management accountants has worked devotedly towards producing top class management accountants. At SLT also, we understand the importance of professionalism, in advancing local industries as well as our nation as a whole. Therefore, it is our privilege and honor to extend our wholehearted support and encouragement to the CIMA as they continue to empower professionalism through these annual summits." Sutheash Balasubramaniam, Chairman CIMA Sri Lanka Board said "Sri Lanka Telecom has been a ready supporter for the CIMA Business Leaders Summit for years. An alliance with Sri Lanka Telecom is an encouragement for a professional body like CIMA in

enhancing the knowledge of the professionals in Sri Lanka".

Nepal Telecom Adds 1.2m Subscribers

State-owned national fixed line and mobile operator Nepal Telecom (NT) has added a net 1.2 million subscribers in its financial year ended June 2010, At the end of the period under review the operator claimed a total of more than 5.45 million connections, broken down as 3.96 million GSM lines, 905,000 CDMA subscribers and 584,000 fixed line PSTN customers. The NT official noted that the popularity of GSM services in particular has helped to consolidate the telco's position as the country's leading operator by subscribers. However, the firm is not resting on its laurels and intends to add a further five million fixed and mobile lines over the next three years to retain its top spot.

As part of its ambitious expansion plan NT is looking to further penetrate rural areas, he said. Specifically, the company plans to add 1.8 million GSM users in smaller villages over the next two years as well as around 600,000 CDMA lines. In addition, NT is looking to upgrade 3.5 million mobiles lines to cater for 3G/4G services and to that end is currently 'analysing technical parts of the system', he said. Moreover, the former monopoly will roll out Wi-Fi services in 500 public places in 2010/11 to improve the brand image of NT, Singh said, including coverage of hospitals, bus stations and colleges. The expansion is backed by a board-approved CAPEX budget of NPR48.7 billion for the current financial year, of which NPR44.2 billion will be funded from internal resources and the remainder from outside the company.

Libyan Firm Takes Control Of Zamtel

Libyan investment vehicle LAP Green Network has taken control of Zamtel, the incumbent telecom operator in Zambia.

LAP Green agreed to pay $257 million for a 75% stake in Zamtel and make an additional investment of $127 million for network expansion in June, and the Libyan firm has now taken control of the operator following a handover ceremony, according to online news site, Zambian Watchdog. Situmbeko Musokotwane, Zambia's minister for finance and national planning, said he hoped the sale of the shares would save the struggling firm from collapse, the report added.

As part of a "revitalization" plan for Zamtel, LAP Green has committed to a five year business plan to modernize the operator and return it to sustainable growth, according to the Zambian Development Agency.

The government, which retains a 25% stake in Zamtel, will continue to play a role in the management of the company by retaining two seats on the board of directors. It will also hold veto rights on some decisions. Zamtel runs Zambia's fixed line network and also has a mobile network, Cell Z, which has struggled to compete with market leaders i.e. Zain and MTN.

Egyptian Mobile Market Registered Over 25 Million New Customers In Just 2 Years

Egypt, one of the most populated countries in the Middle East and Africa region with its 75 million plus inhabitants has proved to be a land of great potential for mobile communications services since their inception in the early 2000s. Today, the same trend is still ongoing as just in the last two years the mobile market has registered over 25 million new subscribers which represents a 79% uptake on the referred period, 38% on a yearly basis and 9.5% quarterly growth on average according to Dataxis Intelligence last analyses.

While the country ended 2009 with 55.3 million mobile phone users, this number stood at 57.6 million in March 2010, thus bringing the penetration rate to more than 74% of the population, compared to just over 43% two years earlier.

As for market players, it would be relevant to notice that Egypt is home to three national mobile network operators of which Mobinil (jointly owned by France Telecom and Orascom Telecom Groups), Vodafone Egypt (controlled by the UK-based Vodafone Group) and finally Etisalat Egypt a subsidiary of the UAE's telecommunications operator.

As featured on the figure below, Mobinil controls half of the total subscribers, followed by Vodafone Egypt with 44% and eventually Etisalat makes do with the remaining 6% as a latest market entrant.

PCCW Global And Dialog Telekom Sign Network Interconnection Agreement

A PCCW Global subsidiary, HKT Global (Singapore) Pte.Ltd

and Dialog Telekom, a major telecommunications service provider in Sri Lanka, have signed an Inter-Carrier-Interconnection (ICI) agreement to interconnect the companies' Multi-Protocol Label Switching (MPLS) networks. PCCW Global is a subsidiary of Hong Kong's premier telecommunications provider, PCCW Limited.

With the ICI agreement, Dialog will leverage PCCW Global's MPLS network to provide corporate customers with access to a wide portfolio of international data, voice and video applications, in addition to value-added and managed services. The agreement also gives Dialog a competitive edge over its industry counterparts by enabling the company to become a global service provider for converged enterprise solutions. At the same time, PCCW Global will be able to capture the rising demand for international connectivity to Sri Lanka.

Commenting on the company's partnership with PCCW Global, Dialog Mobile's Chief Executive Officer Mr. Supun Weerasinghe, said, "It gives us immense pleasure to partner with PCCW Global to enhance our international presence through the provision of seamless data connectivity to suit the diverse requirements of customers from around the world. This cooperation will provide significant benefits to our existing customer base, as well as potential customers who seek superior data communications networks, which facilitate increased performance, cost efficiency and reliability."

Mr. Frederick Chui, PCCW Global's Senior Vice President, EMEA, said, "PCCW Global continues to position itself as a global leader for the provision of best-in-class converged data and voice solutions, and this agreement has further extended our network coverage to over 1,100 cities in more than 100 countries. Our solutions portfolio is based on a combination of superior services, regional partnerships and technology advancements, as demonstrated aptly by our MPLS service offering. The agreement with Dialog is a result of our shared vision to offer world-class solutions to our customers around the globe, and we will leverage each other's individual strengths in a mutually beneficial fashion."

Turk Telecom Awards Fixed Network Equipment To ZTE

ZTE Corporation has been selected by Turk Telekom as the sole supplier of core network equipment and services for a nationwide all-IP network transformation project. The total capacity of the network will be 17.5 million lines, making it the one of the world's largest fixed network replacement contracts. The network will enable Turk Telekom to launch converged services including VoIP over broadband (VoBB), voice call continuity (VCC), converged one number, converge centrex, unified message service (UMS), multimedia messaging service (MMS), multimedia ring back tone (MRBT) and number portability (NP). ZTE will also deliver a comprehensive next generation solution including an IP multimedia subsystem (IMS) core network, a comprehensive service platform, multi-service access nodes (MSAN) and large-capacity trunking gateways.

First NEC Partner Conference For SEMEA Region On IT Platform Solutions

NEC Computers has completed the transfer of activities to the IT Platform Solutions Division (ITPS) of NEC, providing cutting edge IT business solutions based on Intel processors. With new products, new solutions, new partnerships, a sharply focused strategy, NEC is climbing new heights.

Regarding the SEMEA market, ITPS is represented by interFRONTIERS interconNECt Ltd, the business development unit based in Cyprus, responsible for partner channel selection, training and support in terms of distribution, sales and technical assistance. NEC hosted the first regional conference for its SEMEA resellers, in Cyprus. The event provided partners with the latest updates with regards to the ITPS strategy and direction as well as a comprehensive roadmap on servers and solutions. The conference also welcomed aboard new resellers expanding the offerings and reach of NEC's solutions in the region.

NEC aims to become one of the three leading players in the EMEA Server & Storage market by 2015, by combining the power of innovation with respect for the environment. NEC's solutions for the infrastructure refer to areas such as Unified Communication, Desktop Virtualisation, Server Consolidation, Data Centre Solutions and Management, Business Continuity and Disaster recovery Solutions.
"The skills and commitment from our channel partners in the region combined with the NEC technology put us in a unique position to give your customers' organizations this performance benefits, providing immediate answers to your clients' most urgent questions but also opening up a long-term conversation with them" said Annick Reyngoudt, Senior Marketing Manager EMEA of NEC, "We strongly believe that together, we can make this difference and create an era for growth."

SAMENA, a multi-continent telecom consortium with eighty-plus members, aims to be the ultimate promoter of telecom innovations in South Asia, the Middle East, and North Africa. Since its inception in 2006, the council has been facilitating collaboration and knowledge-sharing among regional telecom entities by providing a balanced platform. The Council strives to provide its Members the power and the means to actively learn the dynamics of telecom markets in the three high-growth regions.

SAMENA has shown strong ongoing growth, very recently welcoming Mobily, Batelco, Avea, Draper Investment Company, and other new members. This year, the Council is working towards publishing VISIONS 2010, a Telecommunications Reference Guide to the SAMENA region. Visions 2010 will provide succinct and comprehensive information on telecommunications activities, issues, and players in the SAMENA region. VISIONS will also provides a very prolific contacts database, comprising C-level, D-level and M-level contacts from around the region and the world.

SAMENA held its Telecom Chairman and CEO's Dinner 2010 in Dubai where operators discussed their view points with respect to the development of strategies to maximize their position in the value chain. Discussions were held with national, regional and multi-national networks for the creation of greater market significance with respect to "Over The Top Providers" (OTTP) content. It is this discussion that will drive the formation of SAMENA's Global Telecom Operators Alliance, an initiative undertaken to facilitate operators working with these relevant issues, and in potential collaboration with the OTTP industry. The Council also held its annual conference "Beyond Connectivity 2010" in Lebanon. I personally would like to thank STC, Etisalat, Turk Telecom, Huawei and other valued memberswhose support was elemental in organizing these events.

SAMENA is holding its "Convergence to Casablanca 2010" conference on October 26th -28th in Casablanca, Morocco. The event will discuss key areas, which include Broadband, Optical Networks and Applications, Mobile TV, Content, Roaming, and the latest Regulatory trends and updates in the region.

SAMENA is looking for new inputs and ideas from its members. Collaboration among the regional entities and involvement with SAMENA can help us all drive strength and develop strategies, which would not just help each of its members but also add force to SAMENA's purpose and ability to act in support of its members and the industry.

SAMENA
TELECOMMUNICATIONS COUNCIL

#304, Alfa Building, Knowledge Village, PO. Box: 502544, Dubai, UAE
Tel: +971-4-364-2700 I Fax: +971-4-369-7513

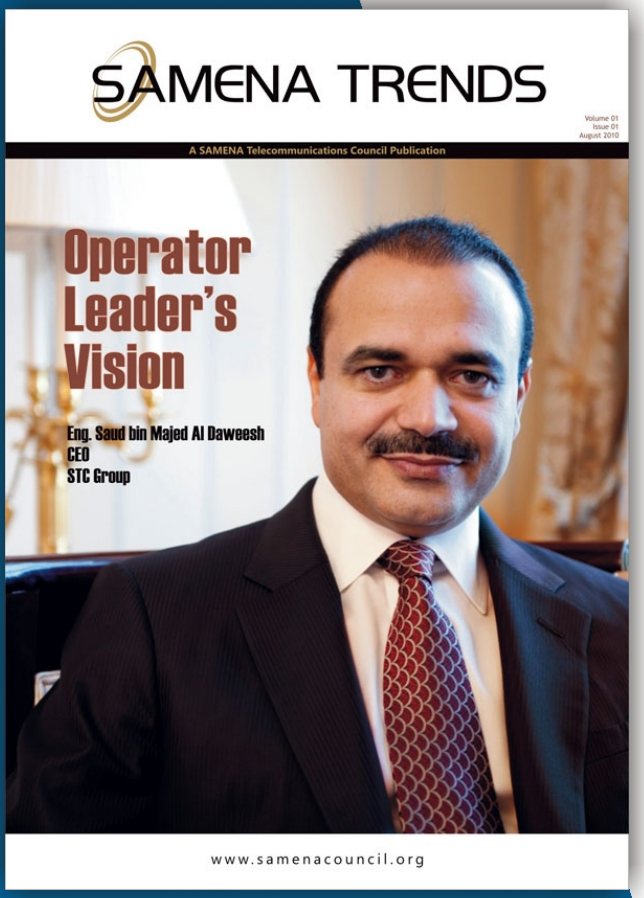
SAMENA OUTPUT

1. *Monthly check on industry's hottest topics and issues associated with SAMENA's current areas of focus, including Broadband, Optical Networks & Applications, Mobile TV, Content, International Roaming, and Regulatory Issues*
2. *International Roaming related topics and FAQs*
3. *Two more sections (SIRG Watch and Mobile Content) added to the Daily news update, available to subscriber and members*
4. *Regional Operator Updates 2009*
5. *SAMENA Awards 2009 research on regional organizations*
6. *Broadband surveys*
7. *Broadband study (under finalization)*
8. *Visions 2010 (under finalization)*
9. *Recent Regulatory Updates newsletters*
10. *3G WCDMA global map available. (Broadband and WiMAX maps in progress)*
11. *"Visions 2008": Research reference guide on regional telecommunications and beyond, published in 2008.*
12. *"Current Facts & Regulatory Updates 2007", SAMENA's first publication (next edition expected this year)*
13. *Technology research, titled "WiMAX, iBurst and TETRA A multi-parameter comparison"*
14. *Paper, titled "Threats and Opportunities of Disruptive Technologies"*
15. *Paper, titled "Choosing to Co-brand with Vodafone: Things to Consider"*
16. *Internal research report, titled "Pakistan: Telecom Operators' Info"*
17. *Internal research report, titled "The Current Status of FTTH"*
18. *Internal research, titled "Mobile TV and CITC Information Saudi Arabia"*
19. *Research report, titled "MVNOs & Relevant Info on the SAMENA Region"*
20. *Research, titled "The MVNO Viewpoint for Egypt"*
21. *Point of View: "Seamless Roaming: The Zain Issue"*
22. *Research, titled "Satellite Launchings in the SAMENA Region 2008"*
23. *Internal research, titled "Problems in the Distribution of Scratch Cards in Pakistan"*
24. *Research, titled "VSAT Opportunities in the Mideast & Saudi Arabia"*
25. *Research, titled "Major WiMAX providers and examples of WiMAX partnerships"*
26. *Research draft, titled "Regulatory Environment and VSAT Services in Libya"*
27. *Research draft, titled "Regulatory Convergence"*
28. *Data collection on 3G, NGN migration, WiMAX and other technical information*
29. *Daily news briefing archive*

SAMENA output includes data research, reports, SAMENA-specific publications, assistance to members in preparing presentations, and other data.

Subscribe!

Welcome to SAMENA monthly magazine. This magazine incorporates news, analysis, data and research on Telecommunications and ICT industries in South Asia, the Middle East and North Africa.



Name:

Nationality:

Company name:

Industry name:

Position held:

P.O. Box:

City:

Country:

Telephone:

Mobile:

E-mail:

Fax to:
+971.4.369.7513
or visit
www.samenacouncil.org

Signature:

Date:

SAMENA TRENDS

coming Soon....

"Customer behaviors and latest trends in Mobile market"

Advertising Opportunity in SAMENA TRENDS	
Size	**Rate**
❶ 2page Spread (w/Bleed) 42 x 29.7 cm	6,000 USD
❷ Full Page (w/Bleed) 21 x 29.7cm	4,200 USD
❸ Full Page (non-bleed) 19 x 27.7cm	2,800 USD
❹ ½ Page (Horizontal non-bleed) 17 x 12.85cm	1,800 USD
❺ ½ Page (Vertical non-bleed) 8.5 x 25.7cm	2,000 USD
❻ ⅓ Page (Horizontal) 17 x 8.5cm	1,000 USD

For more Information Contact: ads@samenacouncil.org

Welcome to

SAMENA

careers

Be part of the SAMENA Careers Portal!

Find Employment Opportunities by
Job Classification, Job Type & Location
in South Asia, The Middle East & North Africa

Opportunity is knocking at your doorstep!

Find better career prospects within
South Asia, the Middle East and North Africa

SAMENA
TELECOMMUNICATIONS COUNCIL

www.samenacareers.com

Unlimited Ambitions

Expanding from **Saudi Arabia** to the world

STC
الاتصالات السعودية
easier life