SAMENA TRENDS

Convergence to Casablanca
Highlights

Developments in MVNO

Exclusive Interview

Nayla Khawam
CEO of Orange Jordan Telecom

A Crystal Clear Fibre View from the inside-out

International Roaming Rates

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EDITORIAL

Dubai, UAE November 10, 2010 Casablanca, something sort of like the White House in French, has come and gone. The meeting set records in attendance as well as in quality of speakers. SAMENA had its fourth annual Convergence meeting and it appeared that everyone who went had a great time. I certainly did, where SAMENA had its fourth annual Convergence meeting and each progression showed growth in attendance, quality of presentation, committee meetings and overall success. The ability to transform the challenges of the market into successes was the major Theme of the meeting and its goes without saying, that SAMENA, its membership, its Board of Directors and the attendees rose to the challenge with its 2010 edition. All of the pictures, reports, meeting notes, presentations are all on the SAMENA website for members to download at anytime. Even the pictures from Rick's Café are online. Rick's was FAB!!!

This month, the major new topic for SAMENA Trends are MVNO's and their growth in the region. A couple of very important metrics are very important when determining whether or not a market is ripe for a potential MVNO services, let alone including the opinion of the regulatory environment in those specific markets and they include ARPU and number of subscribers. These are a couple metrics that have a huge impact on the viability of a market. They are very useful in a number of instances, and also with the case of MVNOs, they are used to determine whether the market can use a non-facilities based service provider to visit specific market applications.

ARPU is a number that is often quoted and the numbers range from as low as just above one USD to as high as 95 USD per month, depending upon the market. However, it would be interesting to ferret out what exactly does the term ARPU actually refer to. The hype relative to ARPU in the market is obviously very strong, given what is at stake for the operators, the images of the markets and the revenues for private and publicly owned operators and service providers. I am opening this subject matter as an item of interest, for there seems to be a bit of ambiguity in the terms of how ARPU is actually calculated from one market to another. This study is something also that SAMENA has initiated and hopefully something along the lines of a standardized metric can be built that really can be published and used as a reference that allows proper bench marking.

Along with ARPU values, another term that seems to lose form going from country to country, market participant to market participant is the actual real number of subscribers that operators own or possess. Does the public number include transition SIMS, pre-paid SIMS and post paid SIMS and other SIMS that none of us even know about? In many countries in the SAMENA region, the population of expatriates and visitors far exceeds the actual local population. This has an effect that can wildly distort subscriber counts. Also in some countries, many may own a SIM card but they rarely if ever make a call, preferring to make a call, letting it ring and then hanging up and letting the called party call them back, in order to save dial out charges. Ask most any taxi cab driver about this, and surely they may inform you why, if you ask nicely. The first unanswered call actually does use the network, no matter what the cabbies think and this if performed by more than one cabbie at a time, may have impact on a local cell site or network. I wonder how these SIMS count in the number of subscribers sold. Perhaps there should be a reference point or group of metrics that allow for a simple system of benchmarking growth on real terms. The business case for the operators most surely account for this, but the mindset of the customer to allow someone else to pay for their mobile service effectively most undoubtedly creates a distortion of the subscriber count, for they in some ways, are really an extended service set for others who actually make the calls.

These are only a couple interesting idiosyncrasies that may have a cause to be addressed, so information is uniform and accurate for all to better understand the real market and that professionals can actually gain some sense of benchmarks for serious category activities. What good does it mean to anyone, financial, business or technological if statistics are quoted for these two terms (ARPU or number of subscribers) when no one really knows what the number represents. Somehow, a collection of stake holders should take this discussion seriously, whether mobile or fixed (although fixed is far easier to track, however what do you do about wireless broadband with its myriad of access manners). Perhaps we can gain a foothold on these two very important metrics and see if there exists a tried and true real statistic or even perhaps find a way to create a useful standard. Time will tell.

In closing, I would like to thank everyone that came out to Casablanca to the Hyatt Hotel for Convergence 2010. It was definitely a memorable occasion. We look forward to seeing all of you make plans for Beirut for Beyond Connectivity will be going in April to "Paris by the Sea". I can't wait. However, I already do miss my Moroccan Coffee.

Yours Very Truly,

Thomas Wilson
CEO

CONTENTS

EDITORIAL

TOP REGIONAL & MEMBER NEWS

Alcatel-Lucent to Enable All IP Transformation

Alcatel-Lucent enhanced its mobile backhaul solution to enable mobile network operators to support 'AnyG to LTE' radio access network technologies. The Alcatel-Lucent mobile backhaul solution is part of the company's High Leverage Network (HLN) architecture. Alcatel-Lucent is introduced 7705 Service Aggregation Router (SAR)-18 to its mobile backhaul portfolio, along with end-to end, unified network and policy management from Radio Access Network (RAN) to the packet core.

Nokia Siemens Networks Unveils Flexi Ns for Mobile Operators

Nokia Siemens Networks has unveiled its new Flexi NS. The packet core network server consumes 59 watts per 100,000 subscribers. Flexi NS also allows operators to serve smarter device users. The Flexi NS will work both as Serving GPRS Support Node for 2G/3G/HSPA networks and as mobility management entity for LTE. It is based on the industry-standard ATCA-based platform. The product is fully compliant with 3GPP Release 8 specifications.

Turk Telekom Extends Public Phones Promotion in Schools

Turk Telekom has extended a promotional campaign launched in 2009 that offers 1 minute long local calls at no cost from over 7,000 public phones in primary schools, high schools and supplementary educational institutions until the end of 2010-2011 school years. The campaign, which led to a 12-fold increase in the public phones call traffic in schools ever since it began, will also be available for the Sosyal Hizmetler and Cocuk Esirgeme Kurumu orphanages.

Qualcomm Gets Snapdragon in New Windows Phones

Microsoft's bid to become a player again in the mobile phone market is being helped along by chips from Qualcomm. The Seattle software giant unveiled nine new smartphones for the worldwide market running on its new mobile operating system, Windows Phone 7. All of the new devices include Qualcomm's top end Snapdragon processor chip to power the applications on the phones.

du Showcases DC HSPA+ DATA Card

du is set to launch a DC HSPA+ mobile broadband data card, which will enable the company to offer mobile broadband download speeds of up to 42.2Mbps. The company displayed this technology at the Gitex Technology Week 2010 in Dubai last month. du's CCO, Farid Faraidooni said that "Now, du's customers are among the few worldwide – and the first in the region – to enjoy fastest mobile broadband speeds of up to 42.2Mbps. Recently, du launched a network upgrade from HSPA+ to DC-HSPA+ to increase peak download speeds from 21Mbps to 42.2Mbps. The upgrade was mainly carried out by Huawei and Qualcomm.

STC Offers Unique "BlackBerry TORCH 9800" with BlackBerry 6 Features

STC has offered to its customers, the new Blackberry smart phone "Blackberry Torch 9800" for SR 2550. The Blackberry Torch 9800 is equipped with features that are specially made for social network fans and businessmen alike. The new device is distinguished by its classy look, unique features and high performance. The "BlackBerry Torch 9800" is considered the first of its kind to combine BlackBerry keyboard and ultra sensitive touch screen, as well as being the first to highlight the characteristics of the "BlackBerry 6".

The launch is part of STC's strategy that focuses around its customers by offering the best services with the best prices. In addition, it also serves as an assurance to the continuous efforts towards providing the latest high quality technologies and global exposure.

Etisalat Demonstrated its Fiber Optic Experience and VAS at "Convergence to Casablanca 2010"

Etisalat showcased a number of new convergence and connectivity solutions at SAMENA Telecommunications Council's 'Convergence to Casablanca 2010'. Held recently in Morocco, the event was themed 'Transforming Challenges into Growth' and provided SAMENA members and non-members the opportunity to discuss key technology areas and their impacts on technological progression and revenue generation. In a panel on Optical Networks & Applications and how IPTV is stimulating investments in FTTx networks, Ahmed bin Ali, Group Senior Vice President highlighted Etisalat's role in developing telecom infrastructure in its markets with particular reference to UAE. He also referred to Etisalat's successful broadband experience in Saudi Arabia, Pakistan and UAE.

ERIS Picks TELES for Wholesale Operations in SAMENA Region

Eris Telecom, a subsidiary of MVNO Friendi Group, has selected NGN and access gateways vendor TELES for SAMENA region wholesale operations. TELES has supplied Eris with high capacity switching, billing, and gateways. TELES C4 Softswitch meets all carrier-grade requirements including, full component redundancy and multi-protocol support. The first implementation phase of TELES Class 4 Softswitch, a wholesale trading platform, and a number of access gateways is completed.

Huawei to Invest Us$500 Million in India

Huawei is planning to invest US$500 million in a manufacturing plant in India, with the first phase of the facility opening before the end of this year. Huawei already has an R&D centre in India employing around 2,000 people. Confirming the establishment of manufacturing plant, A Sethuraman, executive director, Huawei India, said that this multi-product facility, which is to be constructed across an area of 30,000 sq ft near Sriperumbudur, will become operational before the end of December.

AREEBAAREEBA IS PIONEERING THE PROFESSIONAL SOCIAL NETWORKING AND ONE OF THE BIGGEST BUSINESS REVOLUTIONS, DEDICATED TO THE MIDDLE EAST REGION,

Dubai, United Arab Emirates, November 5th, 2010 -- It's here. Areebaareeba Inc., www.areebaareeba.com is the latest web based and social networking site to hit the Middle East.

Areebaareeba was created by a visionary group of people and has grown at a rapid rate in its Beta form, which incorporates several different marketing tools to grow your businesses, your services and programs.

"Areebaareeba is a one-stop-shop solution for the Middle Eastern communities in the region and all over the world. Professionals in the Middle East and beyond can promote their competences, artwork activities and of course their creativities. Members of Areebaareeba members can create a personal profile, add other members and send messages including automatic notifications when they exchange or update their status.

AreebaAreeba is user friendly and has a green design which gives members a breath of fresh air, and giving the community a vision of what the future is bring. Special features was added to allowing members to create events as a method of informing their friends about upcoming events in the region and share information, set up meetings before and after the event is occurred.

"Areebaareebais structured to help businesses and professional interact and create new sales channels. For example, members can establish themselves within their community and beyond, by building a network of business associates, creating a web store-front or showcase of their

services, promote events, and blogging about their specific businesses, products or programs to those in the know and their counterparts." Various industries will be represented on the site from captains of business and industry, to doctors, lawyers, telecommunications, marketers, event planners, retail owners, media professionals, and health and wellness specialists.

Ayman Irshaid the CEO and Founder of AreebaAreeba said "Businesses will use Areebaareeba to exploit their marketing and public relations budget". He added; "Businesses need to start being creative in how they build their awareness of their brand and products".

Areebaareeba holds many different social tools where you can connect with other Areebaareeba members and also, incorporates several different marketing tools to grow and promote your business, your services, programs and products.

About AreebaAreeba

AreebaAreeba is the pioneering professional network, where you can interact and create links with professionals, through sharing of multimedia content of the latest offerings from leading companies. Areebaareeba is one-stop-shop for the latest product and service news from companies all over the world. Members can discuss and share what they're up to and what they're planning through Areebaareeba's unique professional multimedia content

OPERATOR LEADER'S VISION

Nayla Khawam
CEO of Orange Jordan Telecom

Ms. Nayla Khawam is the Chief Executive Officer of Jordan Telecom Group. Before holding this position, she was the Territorial Director for Ile de France (Paris region) in charge of commercial and technical departments for Mass Market and Business Clients. Before that, Ms. Khawam was Head of Customer Services for landline, mobile and Internet for the whole France Telecom Group in France. Earlier, Ms. Khawam was a member of the Executive Board in Orange France and

Head of Customer Services for mobile phones. Previously, she was the Senior Vice President in charge of the resellers Distribution Network for the French territory at France Telecom and prior to that held the positions of the Human Resources Director for the Paris Region and Regional Director in the North of France. Ms. Khawam also worked as a forecast manager in charge of building econometric models for the Telecom Industry, as a consultant in BIPE

(Bureau d'Informations et de Prévisions Economiques) and as a product manager in the Peugeot marketing department. She actively took part in negotiations which led to the signature of "the Contrat de Plan" with the French Government in 1994. Ms. Khawam holds a degree in statistics & Economics from ENSAE in Paris (National Institute of Statistics and Economic Administration), and in Mathematics from the Université de Paris VI.

Have there been any plans of Orange Jordan to prospectively entering into other markets, if so, which are those markets?

Orange is a global brand with a universal vision of simplifying the way people communicate. Our long-term objective is to carry this vision to as many markets as possible in all regions around the world. The Middle East and North Africa is one of the most promising markets for telecoms with a myriad of opportunities for lucrative long-term investments. We have every intention of maintaining our march onwards and to carry our brand to more markets in the region and beyond, with particular focus on MENA region. Orange is currently present in 17 countries in Africa and we recently launched our operations in Tunisia. We have also acquired a 40 percent stake in the leading Moroccan operator, Meditel, which will also help carry our brand to yet another active telecom market. In the Middle East, in addition to Jordan, we have a presence in Egypt through Mobinil as well as a subsidiary in Bahrain called Lightspeed Communications, which is the nation's first alternative fixed-line telecommunications operator. More recently. Orange FTG bid for a telecom license in Syria. Any actual investments that come up in the future will be announced in due time.

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Did you face any obstacles while getting 3G license?

The 3G licensing process was fairly challenging as the Jordanian Telecommunications Regulatory Commission was essentially devising an entirely new regulatory framework with substantial ramifications for the local telecom landscape. The primary challenge was the bidding process itself, which entailed a plethora of legal stipulations and regulatory conditions that caused frequent delays. Despite the fact that Orange Jordan was the sole operator with the intention to bid, requests for continuances by other operators also resulted in the process being delayed several times. We were eager to see this side of the process complete and to begin the implementation procedures as we knew that 3G was important for the development of the Jordanian telecom sector. We believe that the regulatory environment in the region is quickly evolving and this will have a lasting impact on the manner in which new technologies are adopted. The cooperation and understanding between all stakeholders is essential for the long-term development of the telecom market.

Please tell us about Orange Jordan's investment plans

Our investment portfolio will focus on several revenue streams. Roaming, for example, is an integral element for telecoms and we intend to sign more competitive regional and international roaming agreements to provide improved services to our customers as well as inbound roamers. We also plan to sign various partnership agreements with regional operators and their affiliates as we believe such partnership is essential for the evolution of the regional telecom landscape. We also wish to support

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Lightspeed Communications – our affiliate in Bahrain – by providing improved rates on international destinations. Additionally, in line with the direction we took with the recent JADI and RCN agreements, we intend to broaden our network of partnerships with operators in the region to reinforce the regional telecoms infrastructure by improving connectivity and providing more affordable alternatives.

What is your opinion on the regional broadband market, and what are operators lacking, in general, to be able to make progress on this end more effectively? Can Orange Jordan play a direct role?

The regional broadband market has experienced tremendous growth over the past few years, which has helped show its true untapped potential. Two shortcomings fundamentally affected the industry: penetration and infrastructure. The penetration issue is currently being addressed by many operators through a series of price management strategies and internet education initiatives, with the objective of promoting internet use in non-urban locations. Orange Jordan's recently launched Internet Fund is a good example of such an initiative. These projects will definitely have a long-term effect, which will become quite apparent in the coming year or two.

On the infrastructure front, what was essentially lacking was a regional infrastructural base that utilizes cutting-edge technologies to lessen our dependence on conventional cabling. Regional operators are increasingly coming together to address this issue and many of these initiatives were spearheaded by Orange Jordan. Good examples include the recent JADI cable and the Regional Cable Network (RCN). Overall, we are sowing the seeds of change and we anticipate a substantial revolution to take over the regional broadband market in the near future.

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Would you like to shed some light on roaming trends while keeping in view your recent strategic alliance with Palestine's Wataniya Mobile?

The Wataniya alliance substantially helped us bolster traffic between Palestine and Jordan simply due to the competitive tariff outlined by both operators, which delivered added value from both wholesale and retail perspectives. The success of our venture has driven to pursue similar strategic alliances with other operators in the region to leverage on our strengths through multiple product lines in the arenas of voice and data. We believe that the simplicity of the pricing approach outlined by this collaboration contributed largely to its success and we hope to carry this simple yet aggressive pricing system to all services we provide in partnership with other operators.

What is your opinion on BlackBerry ban in the region, how has it affected the market?

To clarify, there was never an actual 'ban' on BlackBerry in the region. Certain governments – including the United Arab Emirates, India and Saudi Arabia – had concerns over the security protocols implemented by BlackBerry's manufacturers, Research in Motion (RIM), which limited the ability of these governments to monitor BlackBerry transmissions for security threats and illegal content. While we endorse and encourage the easy and free transmission of data and content, we respect the right of any nation to safeguard the privacy and security of its citizens.

What are your thoughts as one of the very few leading lady telecom CEOs in the world and probably the only one in SAMENA region?

The gap between men and women in the region, while still fairly wide, is rapidly contracting as people embrace progress and awareness. It is imperative, however, that women arm themselves with both education and courage. Gender discrimination still thrives in almost all cultures – even in more developed countries – and women often fall prey to the illusion that they are less than, less capable. In reality, studies are increasingly showing that women have an edge in corporate governance and that female representation on corporate boards actually increases the bottom line. Fear is the only element holding us back. I encourage every woman to exercise her individuality and to pursue her dreams.

For revenue generation, other than IPTV, What other services are you looking at or looking forward to?

As mobile broadband is quickly becoming the preferred medium of communication in the region, one area we intend to pioneer is that of content. The presence of quality, syndicated 3rd party content geared toward Arab audiences is imperative for the continuation of the industry's evolution. The three arenas we intend to focus on are news, entertainment and social networking. A world of possibilities can be made available to our customers and we are looking forward to increasing our backlog of 3rd party partnerships in this regard. Other areas of growth for us include increasing data usage (primarily for mobile), signing more regional partnerships and alliances, in addition to building and developing the "managed service provider" expertise.

> *The three arenas we intend to focus on are news, entertainment and social networking*

Please tell us about your Corporate Social Responsibility. How Orange Jordan has contributed in the past and what do you aim to contribute in the future?

As the key propeller of Jordan's ICT sector, and with roots in the community dating back ten years, Orange Jordan has an unwavering commitment to achieving sustainable development in the Kingdom. Traditionally, corporations focus on poverty alleviation and sustainable development. At Orange, our CSR strategy did keep in mind this mainstream direction with prime objectives such as to fight for digital inclusion by making technology more accessible to all segments of society, and to combat poverty. We continue to maintain several long-term partnership agreements with key national initiatives and organizations in the Kingdom, collaborating on CSR projects that gauge the company's unique position in the market to achieve the outlined objectives.

> *Orange Jordan has an unwavering commitment to achieving sustainable development in the Kingdom*

But this year, we launched our most ambitious CSR strategy to date, introducing a new concept in CSR and with a total investment value of JD3.5 million. The strategy draws on Orange Jordan's longstanding experience in the field to bring two key projects: Orange Villages and the Orange Internet Fund. The first comprises of a series of essential development initiatives targeting several impoverished communities in the Kingdom by helping them establish self-sustaining socio-economic environments. The latter is geared toward the residents of the Kingdom's governorates and has three prime objectives: to bolster their awareness on the importance of the internet in productivity and education, to help them acquire internet access, and to make the internet an integral element in the educational curricula adopted by their schools.

Preliminary reports show that these far-reaching campaigns will undoubtedly have a remarkable effect on both the communities they target and the trends of private sector participation in sustainable development.

Please share your thoughts on winning Best Wireless Broadband Service Provider of the Year award from SAMENA Council.

The award was indeed a great honor for Orange Jordan and came to crown an accomplishment to which we had dedicated substantial time and effort. Given SAMENA's status as a multi-continent telecom consortium with more than 80 members, we appreciate that the title was awarded to Orange Jordan after an extensive evaluation process that took various quality and performance benchmarks into account.

This has further reinforced our confidence in our position as a pioneering telecom provider not just on a local scale but on a regional one as well. I would like to take this opportunity to thank SAMENA for their unwavering dedication to promoting telecom growth and innovation in a region that has massive untapped potential. The council's various initiatives over the years have had a marked effect on the evolution of the sector, and operators like Orange Jordan fully appreciate the effects of such dedication.
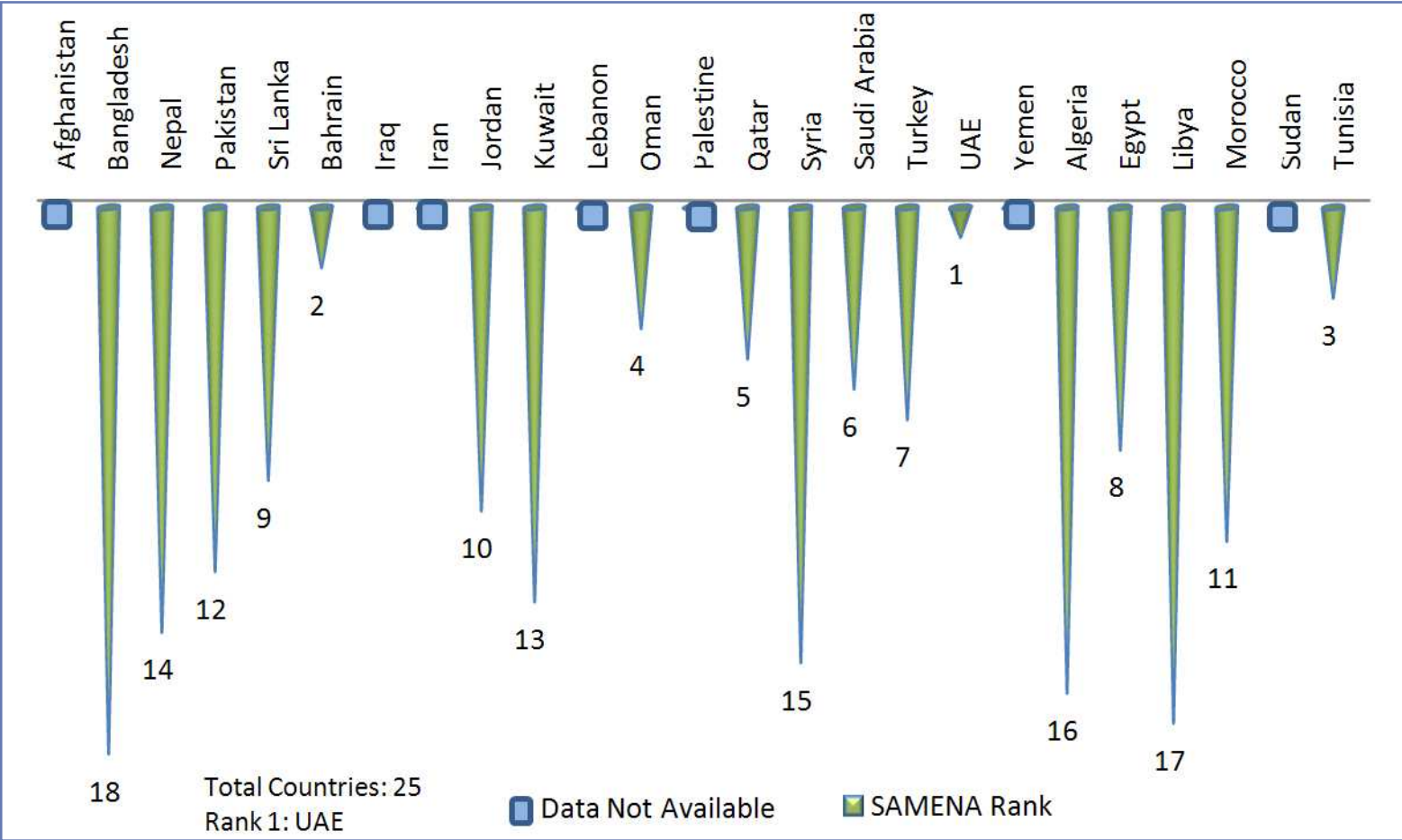
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LAWS RELATING TO ICT (SAMENA RANKING)

Laws relating to the use of information technology
(electronic commerce, digital signatures, consumer protection)

Research Note: Ranking done by SAMENA based on data from The World Economic Forum. Within the SAMENA region, the UAE appears to have the most highly developed and implemented laws relating to ICT. Middle East scores the 4th position among the top five position holders from with in SAMENA region. Tunisia is the only country from North Africa to rank among top five regional markets, while there is no country from South Asia to rank among the top five countries of the SAMENA region with well-developed and enforced telecoms and ICT laws.

Data Source: The Global Information Technology Report 20092010 by World Economic Forum & INSEAD
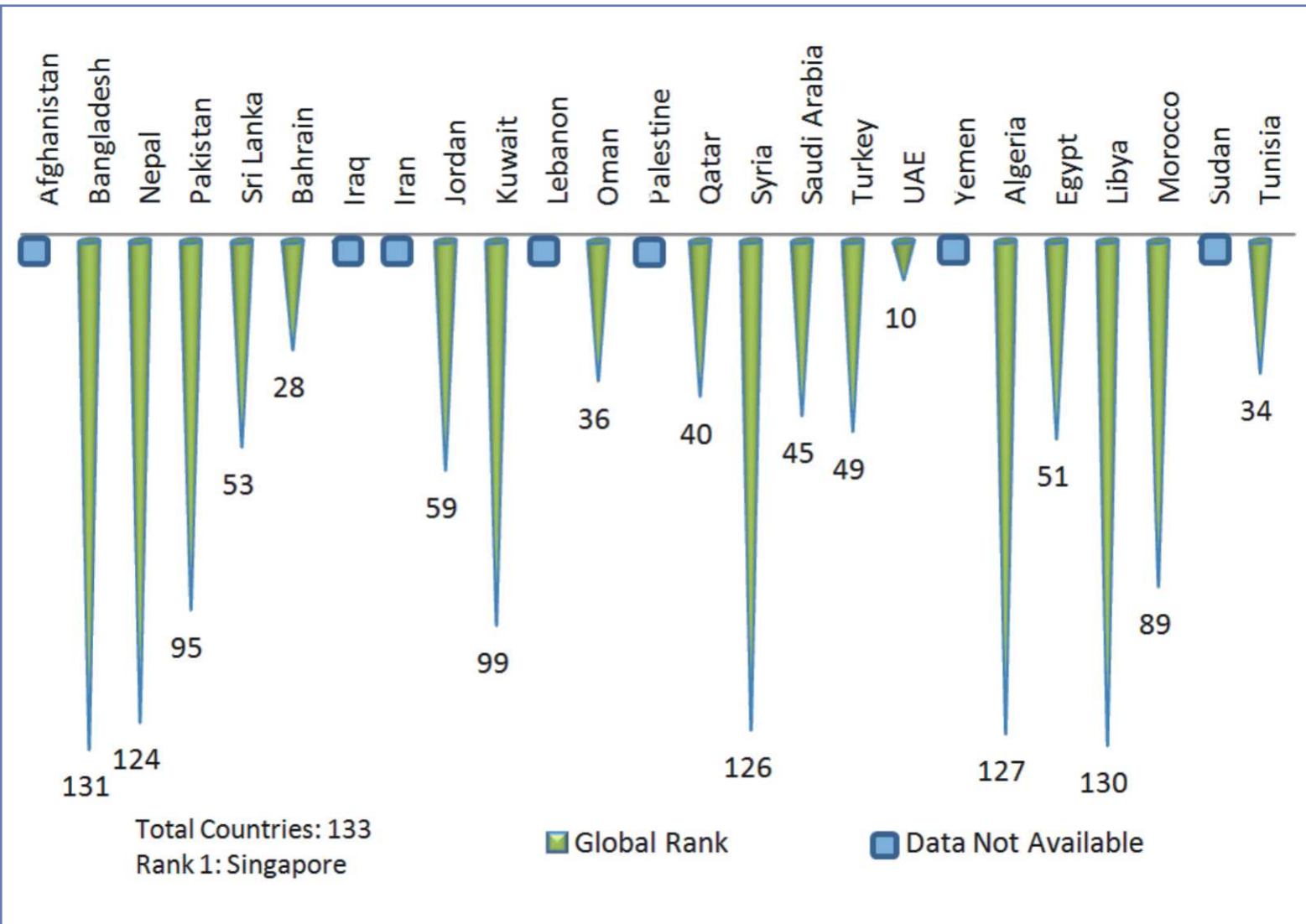
LAWS RELATING TO ICT (GLOBAL RANK OF SAMENA COUNTRIES)
Laws relating to the use of information technology (electronic-commerce, digital signature, consumer protection)

Total Countries: 133
Rank 1: Singapore

Global Rank   Data Not Available

Data Source: The Global Information Technology Report 20092010 by World Economic Forum & INSEAD
Image Source: SAMENA

A SNAPSHOT OF REGULATORY ACTIVITIES IN SAMENA REGION

The Telecom Regulatory World during the month of October (October 4-22, 2010) remained actively busy in tenth ITU Plenipotentiary Conference 2010 (PP-10) in the city of Guadalajara, Mexico. All regulators from the member states including SAMENA regions participated in the event. The event elected the incumbent Secretary General for another term and also elected the other important council members. The Plenipotentiary Conference is the key event at which ITU Member States decide on the future role of the organization, thereby determining the organization's ability to influence and affect the development of Information and Communication Technologies (ICTs) worldwide.

In yet another important Global Symposium for Regulators (GSR) held in Senegal, defined a set of Best Practice Guidelines that will help stimulate the roll-out of the next wave of information and communication (ICT) networks, particularly in the area of broadband access. The new Best Practice Guidelines encourage regulatory frameworks that foster innovation, investment and affordable access to broadband and other services in markets worldwide, through a set of core principles all regulators can adopt and then adapt to local market conditions. The GSR welcomed 432 participants from 81 countries and arrived at a shared vision and understanding of the complex challenges facing ICT regulators in today's converged markets. The delegates urged to redouble efforts to eradicate the digital divide that separates those in the developing world from the benefits of ICTs. A report from the preceding Global Industry Leaders Forum helped shape debate during the course of the three-day event. The GSR also saw a meeting of regional regulatory associations, where experiences were shared and discussions focused on ways to further intra-regional cooperation. The Best Practice Guidelines argue that "a new ladder of regulation may now be required" to achieve the

right balance between service and infrastructure competition. This includes ensuring equal and non-discriminatory access to networks, and the lifting of potential bottlenecks that could prevent users from enjoying the full benefits of a digital environment that is increasingly driven by speed, ubiquity of access and affordable prices, irrespective of the location of network providers and users.

Country-wise Regulatory activities

Afghanistan
The Afghanistan Telecom Regulatory Authority ATRA is all set to introduce   G and WiMAX in the country The regulator has issued a request for consultancy to provide   G service in   GHz frequency band with   x   MHz blocks while the WiMAX in   MHz frequency band with unpaired blocks of   MHz

Algeria
The dispute between Algerian government and Orascom Telecom (OT) remained the hottest issue in the regulatory horizon of the country. The Algerian government apparently is not ready to recognize Russia's Vimpelcom, which have purchased the Djezzy. A new term will be placed in the deal which allows Djezzy to be included if it is sold to the Algerian government for more than US$2 billion. OT's stake in Djezzy makes up 12-15% of the proposed US$6.6 billion deal. Vimpelcom and OT are pricing, as a whole, between US$1.6 billion and US$2 billion. If Djezzy is sold for less than US$2 billion it will be excluded from the deal, bringing down the total value. If the Algerian offer price is

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Country-wise Regulatory activities

Afghanistan

The Afghanistan Telecom Regulatory Authority (ATRA) is all set to introduce 3G and WiMAX in the country. The regulator has issued a request for consultancy to provide 3G service in 2.1 GHz frequency band with 2x10 MHz blocks, while the WiMAX in 3.6 MHz frequency band with unpaired blocks of 20 Mhz.

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Bahrain

The Bahraini Telecom Regulator one of the most active regulator of the region barred the two unlicensed VOIP operators to provide service. The regulator also issued a clarification that Orange Telecom was never licensed to provide mobile service in the Kingdom and also award of any new mobile license in near future is not on its agenda. In another move the regulator launched the State of the Nation Review into internet and digital media safety awareness and risk assessment, "Online Safety: A Road Map for the Future", at which the recommendations designed to move towards a safer online environment for all will be unveiled.

Bangladesh

Due to harmonious regulatory environment in Bangladesh, the subscriber base is increasing day by day and during the month as per repot of regulator the total number of mobile phone subscribers in Bangladesh reached 65.14 million at the end of September 2010, up from 50 million a year earlier.

Egypt

The national regulator told that Egypt will sign its first triple-play license with a Vodafone-led Egyptian consortium, Teletech. A second license will be signed in a few weeks with Link, a consortium including Orascom Telecom (OT) and Mobinil to provide cable, telephone, internet and voice services in residential compounds. The license is expected to bring in US$1 billion in investments within five years. In another development a state website showed that the number of mobile phone subscriptions in Egypt rose by a fifth in July from a year earlier and subscriptions grew to 60.3 million in July, up 1.3 million from June. A year ago, Egypt's three mobile operators had just over 50 million subscribers.

Iran

The Iranian Communication Regulation Agency (CRA) announced that it has no plan to offer another 3G operating license for at least three years.

Iraq

The Communications and Media Commission is actively considering awarding the country's fourth national mobile license in the first quarter of next year. According to Communication Minister more than 15 companies have so far expressed an interest in the concession including US-based Verizon Communications, South Africa's MTN, Turkcell of Turkey, the UAE's Etisalat, France Telecom and UK-based Vodafone since the cabinet initially approved a plan for a fourth operator in July 2009.

Jordan

The Jordanian government signed an agreement with Jordan Telecom Group - Orange Jordan to provide mobile communication services to the government. The Minister explained that the agreement falls in line with the government's cost regulation and cutting policy, under which the government has designated a singular tender to cover the communication needs of all ministries and public departments, universities and institutions at minimum cost.

Lebanon

The Telecommunication Regulatory Authority (TRA) Commissioner touted plans to bolster Lebanese broadband at the US-Lebanon ICT Forum. The Commissioner emphasized "affordability" as a core component of efficient broadband and said that the achievement of broadband expansion depended heavily on stake-holders from different economic sectors. In another move the Lebanese government has extended the management contract for the local mobile network, Alfa with Orascom Telecom Holdings (OTH) until January 2011. The Lebanese government owns two mobile networks, but has outsourced the management of the networks while it tries to sort out a long-delayed privatization of the networks.

Libya

Chairman of the bourse said that the two State-owned Libyan mobile phone operators Al Madar Telecomm Company and Libyana would be among as many as 20 local firms expected to list themselves on the exchange in 2011. The move suggests further progress in the gradual opening up of Libya's economy; long-standing international trade sanctions were lifted by the US in 2004, after Libya publicly turned its back on weapons of mass destruction.

Morocco

The national telecom regulator and Maroc Telecom signed fourth and final agreement under the country's universal service scheme with the latest phase to cover 1,573 villages as part of a project to serve 7,338 rural communities including many in remote areas, under a total investment of around MAD2.8 billion (US$345 million). In another move the Morocco's government has scrapped its proposed sale of an 8% stake in incumbent PSTN operator Maroc Telecom. The state had previously slated a sale of part of its 30% stake in the fixed line, mobile and broadband operator for sometime in 2011 to get money to plug its budget deficit rather than sell Maroc Telecom from which it earns dividends.

Nepal

According to the regulator the mobile phone subscriber base jumped to 9.34 million in the middle of August from 8.93 million a month earlier. Of the total 7.21 million were GSM users, up from 6.90 million a month earlier, and the remainders are connected to the CDMA network. The

regulator is also considering allowing infrastructure sharing to reduce the need for extra investment by the mobile operators.

Oman

To upgrade the regulator's operations through providing spectrum licensing services electronically via the Internet, the TRA signed a contract to implement advanced automated spectrum management system project with OHI Telecommunications Company. The project will be implemented in two phases and will be completed in 2012.

Pakistan

During the month the Pakistan Telecommunication Authority with the help of law enforcing agencies mostly remained busy in nabbing the illegal call termination operators and was quite successful at least in ten raids conducted during the month.

Qatar

During the month the regulator awarded three licenses for Very Small Aperture Terminal VSAT networks and services in the country The regulator also sought proposals on its proposed Radio Spectrum Policy.

Saudi Arabia

During the month the telecom regulator issued a Public Consultation on "Assessment of the establishment of International Internet Exchange Points (IIXPs) in the Kingdom of Saudi Arabia". The objective of this consultation was to assist the regulator to decide whether to establish one or more International Internet Exchange Points (IIXPs) within the Kingdom and, if so, the most appropriate means by which to do so.

Sri Lanka

Sri Lanka Telecom is to raise 125 Million US$ from sale of bonds for expansion activities. It has received several proposals from investments banks in this regard. The rating of the SLT has been raised by the Fitch Ratings to 'positive' from last month's rating of 'stable'. The Chief Financial Officer of the SLT said that company is looking to increase capital expenditure for investing in the North and the East, and they extended their fiber optic network to Jaffna recently and the general business conditions are improving.

Sudan

During the month the regulator in collaboration with International Telecommunication Union hosted a three day regional workshop on 'Connecting Rural Services'. Representatives from the Arab Regulatory Authorities and telecom service providers participated in the workshop.

Syria

The Saudi Telecom Company (STC) has expressed its interest in bidding for Syria's third mobile license. In August the Syrian cabinet approved plans for the licensing of a third cellular license to compete with incumbent operators SyriaTel and MTN Syria.

Tunisia

The Tunis stock exchange confirmed that Tunisie Telecom (TT) is planning a dual listing by the end of this year on the Tunis exchange and a European bourse. The CEO of the Tunis stock exchange said the Tunisian state would contribute 10% of the company's shares, while a further 10% would come from the company's United Arab Emirates shareholders.

Turkey

The Turkish Transportation and Communications Minister told that a national regulation on encryption services won't ban the use of Blackberry devices; and a national encryption regulation is on the agenda of the country's Information and Communication Technologies Authority (BTK). This regulation is prepared and it is about to be completed. When this regulation is published, the problems related to Blackberry will be overcome the Minister told. In August the regulator said the authority was continuing a security probe on Blackberry handsets and it was mulling whether to regulate the encryption of data and a probe had been launched into Blackberry use in Turkey amid concerns over the product's security architecture.

UAE

The Regulator confirmed that it no longer plans to suspend Research in Motion's (RIM's) BlackBerry services from October 11, 2010 as the solution is 'now compliant with the UAE's telecommunications regulatory framework. The regulator also announced the opening of the Arabic top-level domain name dotEmarat for trademark institutions. During the month the regulator issued a new policy to determine the level of non-ionizing radiation yielded by telecommunications networks in conformity with safety standards set by the International Commission on Non-Ionizing Radiation Protection. The new policy will affect all telecommunication services offered by service providers via wireless technologies, such as mobile services provided in cellular zones. In yet another move the Regulator, RIM and telecom operators Etisalat and Du announced a new strategic partnership focused on fostering mobile innovation across the Middle East. This partnership will support the regulator's mandate to encourage, promote and develop the telecommunications and information technology industry in the UAE and across the region.

REGULATORY NEWS

Bahrain Set to Create New Internet Council

Bahrain is to create a special Internet council to help promote and ensure online safety for adults and children. It will also lunch an Internet safety tutorial provided on DVD or USB drives and a virus protection program for all citizens. "We recognize today that while the Internet has a wealth of good attributes and uses, it also attracts criminals,' said Telecommunications Regulatory Authority (TRA) chairman and acting general-director Dr Mohammed Al Amer on behalf of conference patron Cabinet Affairs Minister Shaikh Ahmed bin Ateyatala Al Khalifa."Council for Child Internet Safety will be made up of government agencies, TRA, lawmakers, industry and NGOs,' said Dr Al Amer. The TRA is working on the launch of the tutorial due next year and within the next six months.

Nepal Regulator Considers Infrastructure Sharing

The Nepal Telecommunications Authority (NTA) is considering infrastructure sharing to reduce the need for additional investment by the mobile operators. A recent study explores the possibility of sharing infrastructure sharing in the country. It appears that mobile operators will share towers in the first phase, and share other equipment such as microwave links and fiber optic links in later stages.

Mobile Phone Towers to be Powered by Solar Energy

Indian government will make it mandatory for mobile phone towers to be powered by solar energy, hoping to cut pollution and tamp down a key driver of diesel consumption but this would raise construction costs by up to 50% for cellphone operators. A test project on adoption of solar power panels is being carried out in 600 towers. This will be completed by second half of the next year.

UAE TRA Fosters Mobile Innovation

The UAE's Telecommunications Regulatory Authority (TRA) has announced a partnership with Research in Motion (RIM), Etisalat and du, to foster mobile innovation across the region. The partnership will support the TRA's mandate to encourage, promote, and develop the telecoms and information technology in the region. The partnership is also committed to bringing more localized content and applications to the BlackBerry platform in the Middle East. This collaboration demonstrates the TRA's commitment to sustain technological leadership in eGovernment through mobile services.

TRA Introduces Regulations on Radiation Levels

The UAE's Telecommunications Regulatory Authority (TRA) issued a new policy to determine the level of non-ionizing radiation yielded by telecommunications networks in conformity with safety standards set by the International Commission on Non-Ionizing Radiation Protection. The new policy will affect all telecommunication services offered by service providers via wireless technologies. The policy binds those licensed to install and run radio communication according to globally-recognized safety standards.

Ofcom Issues Decisions on Super-Fast Broadband

UK communications regulator Ofcom has issued a number of decisions designed to promote competition and investment in super-fast broadband services across the UK, stating that there is "a long way to go" to deliver the networks of the future that the UK needs. Ofcom plans to allow competitors to have access to a dedicated virtual link over new fiber lines laid by BT ("virtual unbundling"). "The development of the UK's super-fast broadband future is well underway with the roll-out of services in large parts of the country.

FCC Proposes Warning to Cell Phone Users Nearing Monthly Limits

The Federal Communications Commission is proposing regulation that will push cellular operators to inform consumers when their bills are about to rise, according to the media reports. The agency said about 30 million Americans were surprised by additional fees on their monthly bills. FCC Chairman Julius Genachowski said, "We want to make sure that competition is based on price, value and service -- not on confusing consumers," Meanwhile, the cellular operators maintain that the change is unnecessary and that they already have systems to inform customer.

Bahrain Orders Blocking of Illegal VoIP Services

The Telecommunications Regulatory Authority (TRA) of Bahrain recently ordered ISPs in the country to block a number of illegal VoIP service providers' websites. The regulator said that both services are in breach of Bahrain's Telecommunications Law. These websites offer consumers in the Kingdom an unlicensed public voice telephony service, and call back service. These websites were found to provide the facility through which users can buy credit online, and then make national and international VoIP calls.

THE THREE SCREEN CHALLENGE: QUALITY, ALTERNATIVES AND FREEDOM

The expectations of today's subscriber are dramatically different from those of just a couple of years ago. In recent decades, terrestrial "over-the-air" TV broadcast was joined by cable and later satellite service, both of which greatly expanded the number and variety of channels available to the consumer. The rapid proliferation of Internet service created a plethora of additional pipelines for carrying content to viewers, including wired broadband services. Most recently, the explosive spread of mobile phone and adjacent wireless data services have created additional avenues, including 3G, 4G and Wi-Fi networks.

Perhaps most profoundly, consumer expectations have changed. They want their TV service to be available anywhere, anytime and with features that give them control over how they watch. They are no longer satisfied with a schedule that is dictated to them by a network or cable provider.

> *Subscribers demand "personal TV" in which content is chosen from amongst an enormous and varied menu, drawing from a wide variety of sources, and ready to be consumed whenever they like on any device of their choosing*

Subscribers demand "personal TV" in which content is chosen from amongst an enormous and varied menu, drawing from a wide variety of sources, and ready to be consumed whenever they like on any device of their choosing.

For the service provider the opportunities offered by multi-screen services are many: targeted advertising across varied delivery streams, monetization of advanced services, increased entrenchment of the consumer, and lower operational costs through efficient, IP-based distribution technologies.

Drawn by this opportunity, service providers are considering expanding or even completely redesigning their businesses. Along the way, they are finding themselves in competition with companies who once previously existed in separate worlds. Telecom companies are not only competing with cable and satellite, but with online companies such as Apple, Google, Hulu and Netflix who seek to use existing networks as a conduit for their own premium multi-screen TV services. A recent Nielsen report found that, "Globally, 70% of online consumers watched video over the Internet in March [2010]."

> "*Globally, 70% of online consumers watched video over the Internet in March [2010]*"

In this environment, service providers are searching for the means to adapt to these changes. Video presents a significant technical challenge—it demands more bandwidth and is less tolerant of performance fluctuations than voice or data services, as are the viewers. There are important new issues to be considered as well, such as maintaining quality and protecting content across networks without quality of service mechanisms.

At the same time, video is the application that presents the greatest revenue opportunity and the one most likely to entice consumers to purchase other bundled services. For service providers with existing infrastructure to reach subscribers, effective multi-screen services enable them to capture a portion of the content supply market and increase the value of their own networks.

Serving Many Devices without Duplicating Investments

The ever increasing variety of popular devices on the market-Android, Apple, Windows and other tablets and phones-presents a dynamic challenge. Following traditional video headend design quickly leads one to multiple, virtually identical silos of equipment and processes, with a separate stack for each potential target device. Using a dedicated head end for each target device, however, quickly becomes costly to build and maintain and may dramatically impact the time it takes the operator to succeed. It may even make it impossible for the operator to create a profitable business. The solution is to leverage a system that is designed to deliver multiple profiles from within a single workflow.

> *Today it is possible to create a head end that provides comprehensive support for HD and SD IPTV and satellite broadcast television, as well as any of the world's important mobile TV broadcast standards*

Today it is possible to create a head end that provides comprehensive support for HD and SD IPTV and satellite broadcast television, as well as any of the world's important mobile TV broadcast standards. Efficient video codecs can also deliver live and on demand video streams over 3G, 4G and Wi-Fi networks to the latest generation smartphones and other devices, including iPhone, iPad, Android, Blackberry and Windows Mobile devices.

For Internet delivery, H.264 compression can be used in conjunction with adaptive streaming technologies, to ensure top-quality, bandwidth-efficient video delivery for any application up to HD resolution. Encoding and transcoding for Flash, Silverlight and the newest Apple HTTP streaming formats ensures compatibility with popular Internet devices and players, as well as leading content delivery networks.

Providing support for a broad number of devices make the service more attractive to the subscriber, giving them the freedom to view content from their favorite screen and to purchase new devices as they come to market. On the operator side, designing and deploying a single multi-scren head-end not only   provides the necessary fundations to build the most compelling services and user experience but drastically reduces the operational costs compared to more traditional silo approach.

Maximize Quality to Retain Subscribers

Successful multi-screen service requires considering more than solving the challenge of delivering content from point A to point B. While demonstrating support for their favorite platform may entice the subscriber, video quality will be critical to retaining them for the long term. The complete solution will optimize the source material to reduce noise and other errors that can be introduced during transport via satellite. Compression is then applied using codecs that have been optimized for the target devices. Transport strategies must account for networks both with and without QoS support. Support for HTTP adaptive bitrate streaming technologies ensure a continuous, quality viewing experience in changing wireless network conditions, and over the open Internet.

Content Protection

Distributing premium-caliber content requires the use of proven and trusted content security technologies that will protect stakeholders' investment in the content. Rights holders need assurance that their content is protected from piracy while operators need to guard against service theft. For service providers, managing and protecting the contentmeans remaining in control of the content from the moment it arrives at the headend through playback and storage on the user's device. Content protection and digital rights management DRMis a necessity for service providers who want to engage with premium content providers and acquire rights to distribute the most desirable content to PCs and other connected devices. To service the expanding range of consumer devices, the headend mustsupport Apple HTTP live streaming, Microsoft Silverlight with PlayReady DRM framework, and Adobe Flash HTTP dynamic streaming. Integrating file encryption and today's most recognized DRM technologies ensures that content is secured throughout its transport and playback, making it possible to securely deliver premium content over public HTTP networks.

Ultimately, creating a great experience for subscribers will dictate who wins in this changing market. With increasing options available to them, consumers will choose the device, network and service provider who gives them the most desirable content and the best possible viewing experience—and will not hesitate to make changes if a service fails to deliver to their expectations. A well implemented multi-screen infrastructure is essential to succeeding against traditional competitors and insurgents.

Bocar A. BA, President-SAMENA

Potential graphic illustrations:

Multi-screen head-end
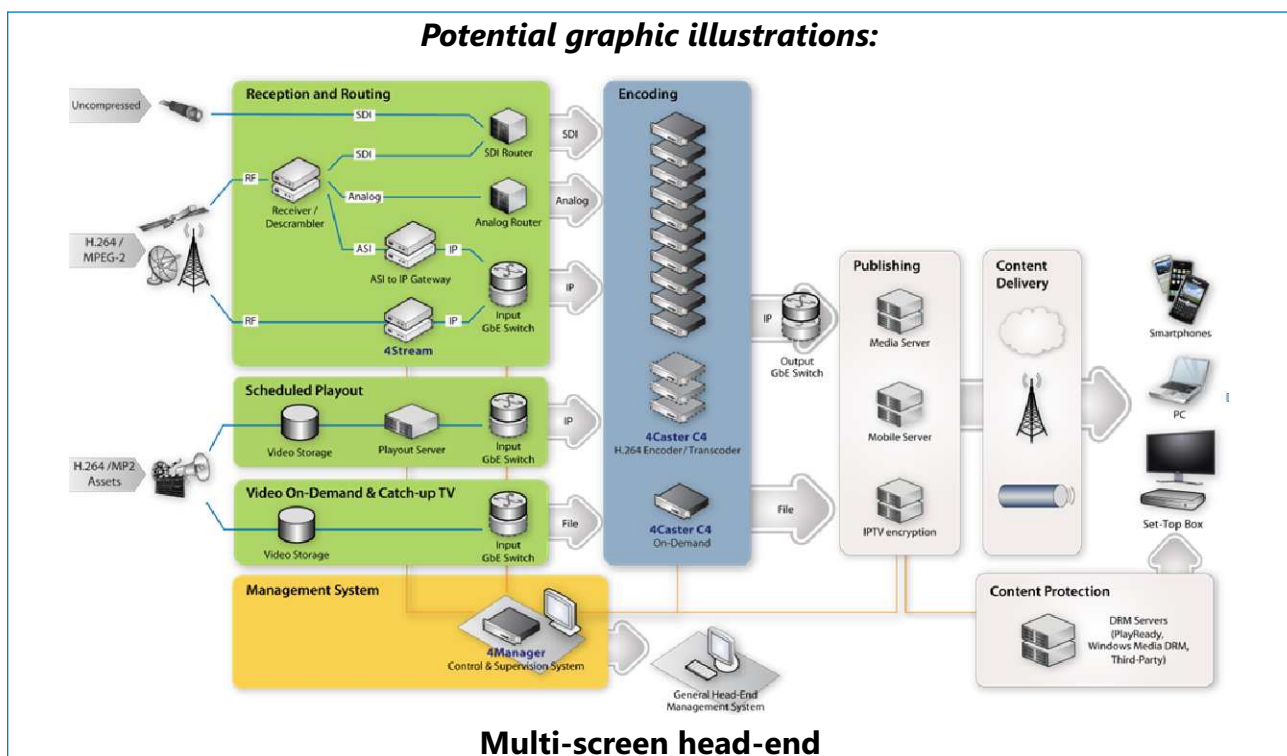
TOP TECHNOLOGY UPDATES

RadiSys Introduces High Performance LTE Security Gateway

RadiSys Corporation has announced the RadiSys LTE SEG, a security gateway targeted for Long Term Evolution (LTE) deployments. LTE mobile networks need security capabilities for user authentication, data integrity and encryption at a carrier grade level. The RadiSys LTE SEG is the first 3GPP Network Domain Security (NDS) compliant security gateway that enables high performance firewall and IPsec tunneling in a single carrier grade solution.

Vodafone Portugal Launches Three-Screen VoD

Vodafone Portugal has extended its VideoClube video-on-demand service to mobile users.

This service is also available on its IPTV service "Casa TV" and "customers will now be able to rent films and TV series to watch across all three screens - TV, PC and mobile." The service will enable starting to watch a movie on the mobile screen and continue watching it on the television screen. It will work initially on Vodafone 360, Samsung H1, M1 and Nokia's S60 handsets.

Amino Launches its Next Generation IPTV STB

Amino is set to launch its next generation IPTV set-top boxes. The company also announced its plans to introduce a new look hybrid/OTT media center and user interface in the country. Amino will demonstrate its complete range of the latest IPTV set-top boxes running on a variety of middleware in the U.S. market. A combination of Amino's stylish design and the latest SoC technology included in the new IPTV devices will enable network operators and hospitality providers to deliver world class entertainment services.

Sterlite Technologies Launches its End-To-End FTTH Solution

Sterlite Technologies Limited has announced the launch of its new passive solution offering for the FTTH (Fiber-to-the-Home) segment. Sterlite displayed this new end-to end solution at Gitex 2010. Sterlite's FTTH solution comprises a comprehensive suite of passive equipments for central office locations, distribution and drop networks to connect SFUs (single-family units) and MDU (multi-dwelling units). Oben Uluc, Vice President – Systems & Solutions, Sterlite Technologies, said that "Our end-to-end solution enables fast installations, is highly scalable and requires low skill to install. FTTH is an emerging market segment where Sterlite has been involved to the extent of supply of cable products

Extreme Networks, SARA and CERN Complete World's First Long-haul 40 GbE Link

Extreme Networks, Inc. has announced world's first long-haul network demonstration of standards based, 40 GbE switching. The demonstration was successfully completed between SARA in Amsterdam and the European Organization for Nuclear Research (CERN) in Geneva, as part of the annual Global LambdaGrid Workshop. This demonstration was made possible with Extreme Networks first-to-market, standards-based 40 GbE switch. This test has demonstrated for the first time that we can cost-effectively achieve 40 Gigabit speeds using standards based Ethernet switching over a long distance to carry critical data predictably.

IMT to Partner GigOptix in Optical Chip Fabrication

GigOptix, provider of electro-optic units for optical networks, has chosen Innovative Micro Technology (IMT) as an optical chip fabrication partner. GigOptix is in the process of shifting the production of the TFPS modulator chips to IMT. The TFPS optical modulator chips will be developed at IMT by utilizing GigOptix' electro-optical polymer material. The TFPS technology is used for manufacturing 100 and 40G Mach-Zehnder (MZ) modulator chips and decreases power consumption by over 20% when compared to Lithium Niobate technologies. GigOptix also plans to bring wide-ranging optical modulator chips to manufacturing at IMT to resolve several modulation formats such as 100G DP-QPSK, 40G RZ-DQPSK and 40G DPSK.

and network integration. We would like to contribute more significantly to the network value-chain by becoming more involved, from the first stages of planning and designing, prior to roll-out a project for a client."

PCTEST Lab Performs LTE 3GPP Conformance Testing

PCTEST Engineering Laboratory, Inc. Providing Long Term Evolution (LTE) 3GPP Conformance testing for device manufacturers and operators. PCTEST Lab now performs LTE Conformance testing encompassing the requirements for operating in the 700MHz Blocks, and in the Advanced Wireless Services (AWS) Bands, and the 3GPP frequency bands. Steve Coston, PCTEST Lab Conformance Technical Manager say "I'm confident PCTEST's LTE conformance and performance testing solutions will help accelerate industry deployment schedules and reduce their time to market for device manufacturers and carriers worldwide."

Internode Launches VoIP Number Portability

Broadband service provider Internode has launched a number portability service that lets customers of its Naked ADSL2+ product retain their existing analogue telephone number. Local Number Portability service was initially available to residential customers of Telstra's fixed-line services only, but would be extended to business customers and other telephone service providers over time.

NATIONAL BROADBAND NETWORK DEVELOPMENT: FOR AN EFFECTIVE PUBLIC PRIVATE PARTNERSHIP

Many agree that high speed broadband networks are important and vital for the economic development. Indeed, over the last decade, a number of developed and emergent economies have drawn up broadband strategies to bridge the gap in supply in this domain. However, despite many reforms in the telecommunications sector conducted in a majority of countries and despite the impressive development of the Telco industry, much of the developed countries' population don't have access to ultra-fast broadband infrastructure and few of the population in the emergent countries have access to high speed broadband services.

> *despite the impressive development of the Telco industry, much of the developed countries' population don't have access to ultra-fast broadband infrastructure*

Development of fiber infrastructure to the home/ building has encountered major barriers such as the level of investment required –in particular in remote areas-, competition of legacy technologies (mostly DSL), lack of national coordination, and low government incentives.

Regulators and governments, realizing the importance of "enabling" the development of such infrastructures on the long term, are today considering different tools to promote the delivery of broadband infrastructure, enhance customer's experience with multimedia and next generation services, and increase the penetration rate. Devoteam, through recent engagements for similar developments, has identified three main approaches which are outlined below:

1. Infrastructure sharing regulations and incentives: After the introduction and promotion of facility-based competition and strong push towards investment in infrastructure, regulators are considering more service-based competition and fostering passive and / or active infrastructure sharing strategies. The resulting decrease of capital and operating expenditures will help service providers to focus on investing in innovative services bringing higher benefit to customers. The infrastructure sharing policy should be established through a clear framework taking into account fair competition, protection of

> *The infrastructure sharing policy should be established through a clear framework taking into account fair competition, protection of existing or planned investments, wholesale model licensing (e.g. utilities companies) and lowering barriers for new entrants (end-users providers)*
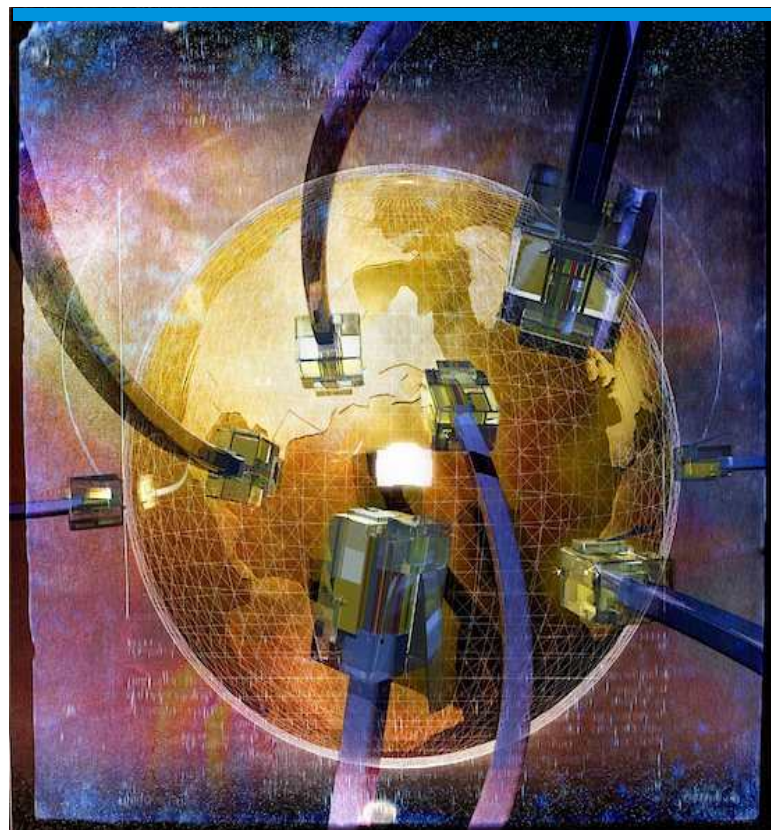
such PPP collaboration will decrease the deployment timeframe and focus will be directed into areas the private sector cannot primarily address.

The PPP is a combination of both infrastructure sharing and government funding. Such partnership will significantly reduce the investment expenditure for both the communication service providers and the government. In general, the PPP is expected to encourage all facility-based owners to take part of partnership. Therefore, incorporating part or all of the existing infrastructure (Telecom incumbent and utilities companies), will ensure an efficient delivery of the broadband strategy (The Singapore and Australia initiatives are good examples for a best practice PPP in telecommunications). Also, PPP projects will help introducing at a large scale the service-based competition which drives the telecommunications sector development especially in the emergent markets, thus improve customers' experience and ensure affordable access to the community.

Possible approaches and models to build the PPP project have to be carefully assessed by the regulator, including financial, governance, and stakeholders contribution aspects –in particular with regards to the implication of the incumbent in such project. Also, potential concerns with PPP such as market distortion, anti-competition should be addressed at the earliest stage of the PPP project definition. Particular regulatory provisions should be introduced to ensure the open and fair access nature of the network.

existing or planned investments, wholesale model licensing (e.g. utilities companies) and lowering barriers for new entrants (end-users providers). Although beneficial for new entrants, the infrastructure sharing has proved so far that in most of the cases it does not go beyond sharing the passive infrastructure and does not lead to the expected benefits for the market (higher competition and penetration rate, better coverage) and end-users (lower prices, better customer's experience).

2. Pure Public funding, where the government gets involved directly in building and operating a new access infrastructure. Today, and especially with the current economic downturn, the delivery of a national broadband network is costly, cash intensive, and takes time (variable depending on the country geography). Moreover, having a Government funded /operated infrastructure company competing with the private sector would false the competition and prevent the private facility-based companies from obtaining a reasonable return on investment.

3. Public-Private-Partnership: The cost and long timeframe of new government-funded deployment is the main reason why governments and regulators in both developed and developing countries are seeking a close cooperation with the private sector for the delivery of such challenging strategy. By extending rather than duplicating the existing infrastructure,

A CRYSTAL CLEAR FIBRE VIEW FROM THE INSIDE-OUT

Laurie Spiegel, Director of Product Marketing, Telcordia Technologies

Driving capital spend in these tough economic times is the need to push ever more bandwidth-demanding information across the network. This is achieved in two fundamental ways: by plowing new fibre cables onto the landscape; and by leveraging new technologies that pump more data into existing fibre strands. Communications service providers (CSP) worldwide are investing billions on fibre and fibre-based technologies to support mobile backhaul, variations on fibre-to-the-home (FTTH) deployment, Ethernet- and SDH/SONET-based enterprise services, and to augment core IP network transport.

Universal across each and every one of these scenarios is the need to accurately relate all of the customers and services riding on the fibre network to each of the fibre assets in play. With such an "inside-out" view of the fibre network, physical locations and logical assignments are linked. This means that provisioning and customer data are tied to network equipment. Efficient restoration is enabled from cable cuts to disaster recovery. Sporadic network faults can be traced to actual sites to determine if environmental factors are at play. Improvement in availability of data across the enterprise is enabled – from
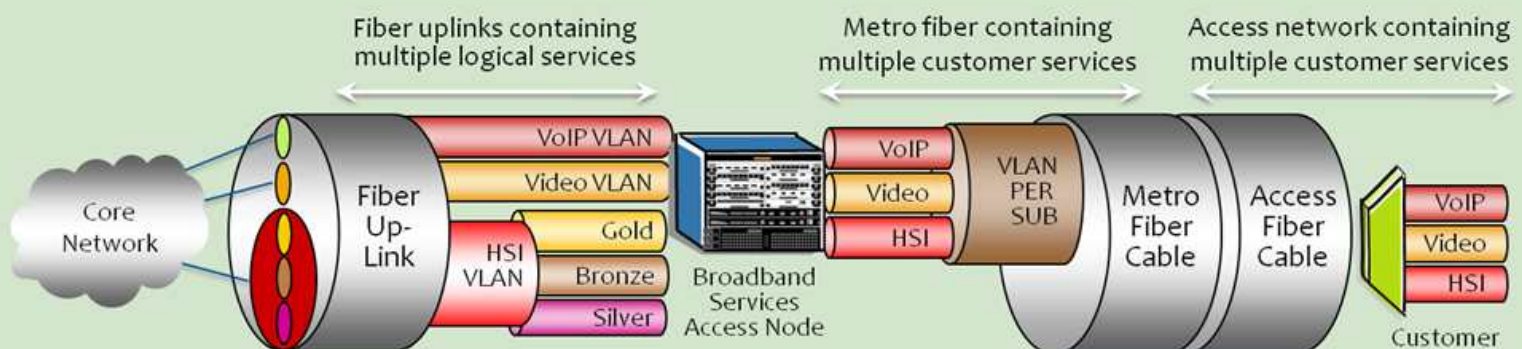
Two Fibre Views: End-to-End and Cross-Section

forecasting through to repair. And from a financial standpoint, CSPs who adopt this laser-sharp approach will realise improvements in productivity and capital efficiency.

Let's take one example – multi-play over FTTH – and look at how each of the high-speed internet, video, and voice services is delivered over the fibre network.

Starting at the subscriber end, all three individual services are combined at the subscriber gateway where they begin their upstream journey exiting the home and traveling down the street. At various points along the way, they are combined with their neighbors' services, eventually traversing a metropolitan fiber cable and terminating at a broadband service access node. To keep all of these services from jumbling together, each subscriber's bundle is defined by a unique virtual path.

At the broadband service access node, each unique service type such as high speed internet is separated from the other service types, and combined with all of the other high speed internet services coming from many homes and neighborhoods. To keep this high speed internet services package from jumbling with the voice services, the bundle is again defined by a unique virtual path and sent along its way across a fibre uplink through the core network to its ultimate destination – typically the internet service provider. This depicts the horizontal view of the fibre path, often described as the logical provisioned path across the network.

But the CSP also needs to have a crystal clear view of the customer's service at every cross-section along the way in order to understand how the service relates to the network component that is underpinning its delivery. For example, service degradations or outages must be isolated to the exact cause in the network with pinpoint accuracy based on network characteristics including physical location, fibre cable identification down to the fibre strand level, port assignment related to termination equipment, and virtual path assignment. Understanding how each of these components relates to each other and how they relate to the failed service, from the inside-out, plays a critical role in fault identification and timely resolution.

Best-practices in fibre network management dictate a federated approach to the multiple facets of inventory information. Not a single repository, but a single source for information ensures that inventory data is consistent from the physical implementation through the logical definition. Successful strategies are brought to fruition by defining each component of the next-generation network architecture layer by layer, quite literally, from the ground up. With such an inside-out approach, the complexity of data and logic is built into the model, so that the necessary composition and decomposition such as at the time of provisioning or fault analysis becomes a very basic task.

In a superior planning environment, unraveling each layer, one by one, can be intuitive, quick, accurate, and easy by using a map-based view for the analysis. Telcordia coined the term Total Perspective Planning for such an environment, an environment that provides the ability to compile and analyse a broad range of demographic, network, business, technical and other key data sets against a common geographical backdrop. With this comprehensive and actionable intelligence, CSPs can make highly informed decisions across their business functions, thereby reducing a new service's development cost, risk, and time to market.

Understanding the Fibre Layer Relationship
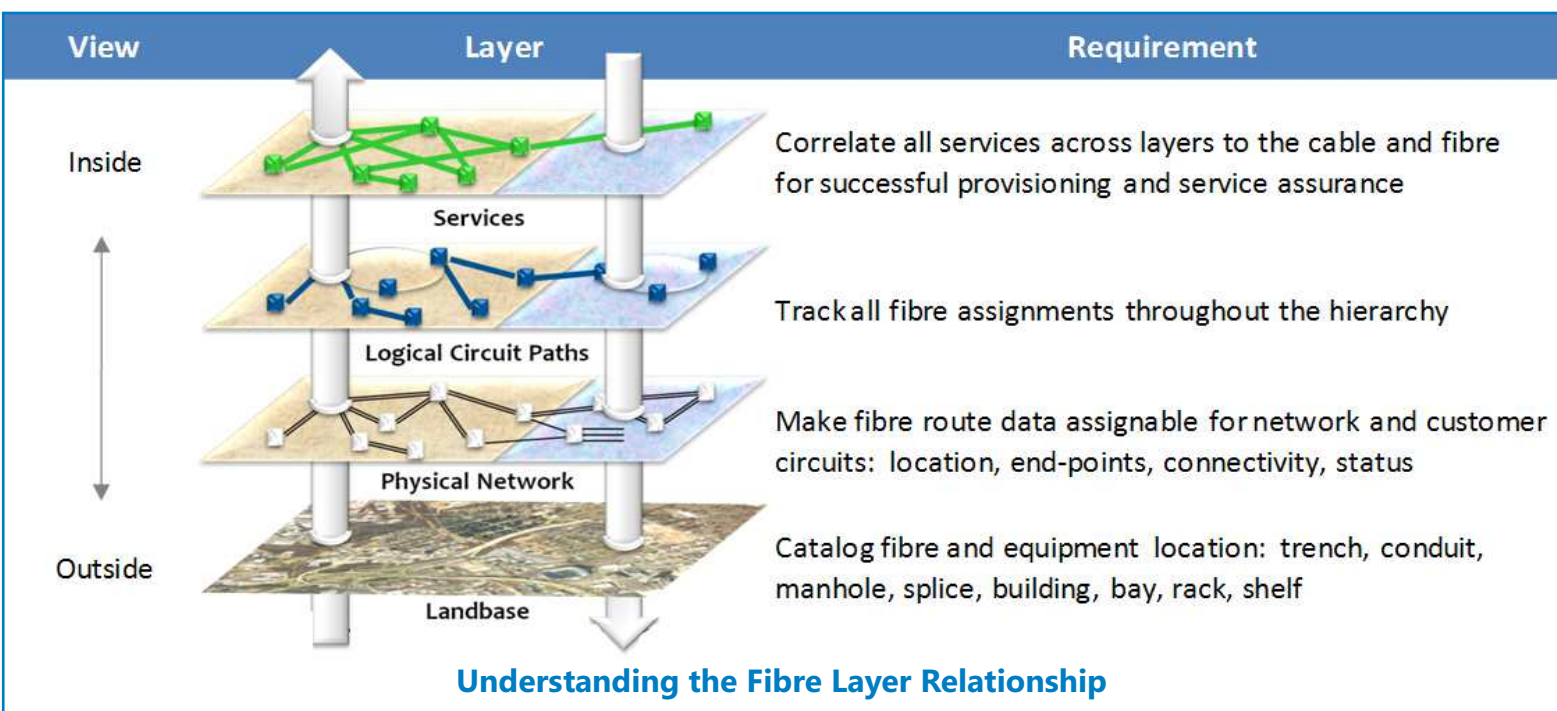
A total perspective planning environment for fibre planning and analysis allows the user to find and a relevant fibre leg on the map, and then drill down to see a multitude of related data – fibre type, capacity, termination locations and equipment, equipment utilisation, or customers and circuits transported over the cable – all down to the port and strand level. These items may be flexibly viewed to best meet the needs of the user – as diagrams, tables, or portrayed as colors, lines, or polygons on the map.

As an example, a prospective FTTH customer could use a web portal to access information about their ability to qualify for the service: Can I get FTTH services today? If not, when will it be available in my neighborhood? From the CSP's customer service vantage point, relevant questions that could be answered may be: How far is a customer from the closest connection point? Does that access point have sufficient available capacity? If not, what will it cost to build it?

With a more holistic approach, CSPs can address these and other critical questions with a crystal clear view of the network layers, in the way they are provisioned and maintained from the inside-out, or in the way they are actually commissioned from the outside-in. The end goal is to leverage a federated and integrated inventory repository with a focus on the end customer to reduce the time to turn up service by automating provisioning and by eliminating unnecessary truck rolls, and to quickly resolve problems by leveraging the multi-layer view to isolate and locate the issue.

The ability to fully correlate underlying physical changes to the network with the circuits and services that may be impacted by those changes means that technicians no longer have to manually fill in gaps in the data.

Whether the focus is on carrier business services, FTTH, or mobile backhaul, understanding the relationship of each component to adjacent components and across layers is the essential ingredient for success.

Fast and Easy Call-to-Quote

MAKING THE MOST OF BROADBAND

The world is changing for the Middle East telecom sector's largest and most established operators. The rise of next-generation broadband is creating new demands from their customers and forcing them to reassess their business models. Emerging opportunities could offer substantial avenues for growthbut they are not without risks. Every operator will need to look at its own portfolio and capabilities to determine how to move forward as the ground shifts beneath its feet. Their decisionsand their successwill be critical to the growth of the ICT sector in their respective markets.

Broadband has fundamentally transformed the ways in which businesses, consumers, and governments function. For businesses, broadband has enhanced labor productivity, enabled innovation, and supported the creation of a new generation of entrepreneurs and business models. For consumers, broadband it facilitated an information explosion, exponentially increasing the amount of information available and linking them to each other in ways that facilitate knowledge, social networks, and communal inclusion. For governments, it has enhanced opportunities for public health and education, enabled more efficient public services, and provided a powerful boost to economic growth. A 10 percent higher broadband penetration in a specific year is correlated with 1.5 percent greater labor productivity growth over the following five years.

> *Broadband has fundamentally transformed the ways in which businesses, consumers, and governments function.*

As governments and regulators have recognized the importance of universal high-speed broadband in developing their countries' knowledge industries, they have taken an increasing interest in the development of national next-generation networks. Regulators are determined to make sure these networks are built in a timely fashionwhether or not that agenda fits in with incumbents' plans.

Determining whether or not to engage in the deployment of national networks is complex for operators. Those that get involved are looking at substantial upfront costs with no guarantee of returns. Those that do not, however, may find themselves losing ground to competitors that are eager to capitalize on the opportunity. Governments may even create new entities to develop the infrastructure, cutting incumbents out of the process.

One way for operators to better understand how the deployment of a national next-generation network fits into their strategies is to take a holistic look at their potential areas of focus: infrastructure, communication services, and applications. Essentially, these three layers offer different dynamics in terms of innovation, competition, and investment. For example, applications and servicessuch as devices, digital content, and cloud computingoffer immediate opportunities but have a relatively significant risk profile. By contrast, the utilitarian model of building and operating network infrastructure typically requires high investment and has a long pay-back period but is characterized by lower risk.

Historically, operators have taken an integrated approach to these three layers. Now, however, there is increasing evidence that operators can be more effective when they adapt their business models to allow for greater focus on one or more of these levels.

> *One way for operators to better understand how the deployment of a national next-generation network fits into their strategies is to take a holistic look at their potential areas of focus: infrastructure, communication services, and applications*

In some markets, the separation of the infrastructure layerwhich is becoming increasingly commoditizedfrom the service and applications layers can lower cost structure and broaden return prospects as each layer receives more dedicated attention. The separation can also mitigate regulatory pressures, as the different layers require varying levels of regulatory attention; when the layers remain integrated, they will all receive the same intense regulatory scrutiny necessary for infrastructure.

Operators in other parts of the world have already begun adapting to this new layering modelsome voluntarily, others at the behest of regulators and policymakers. In Singapore, the government mandated the industry's restructuring and invested S$1 billion in incentives to market players to develop a national broadband network. Incumbent Singtel decided that even with the incentives, it would rather innovate in applications and services that build infrastructure. It leased out its existing infrastructure and became a minority shareholder and operating partner

in OpenNet, a network company that will build and operate Singapore's next-generation national broadband network.

Regional incumbents must recognize the way next-generation broadband has changed their world and actively determine what their response will be. For some, it may mean exiting the infrastructure business to focus on applications or services, as Singtel did. For those that decide their future lies in infrastructure, however, there are a number of options that will help them avoid the potential pitfalls of rolling out a national networki.e., large upfront investments with uncertain returns. There may be opportunities to receive subsidies from their governments; they may be able to partner with key stakeholders to reduce their own risks.

What is certain is that they cannot risk being sidelinedor subject to harsh government mandatesdue to inaction. Regional operators must formulate a plan now to determine where their growth lies for the coming years.

Bahjat El-Darwiche
Partner & Chady Smayra, Principal with Booz & Company
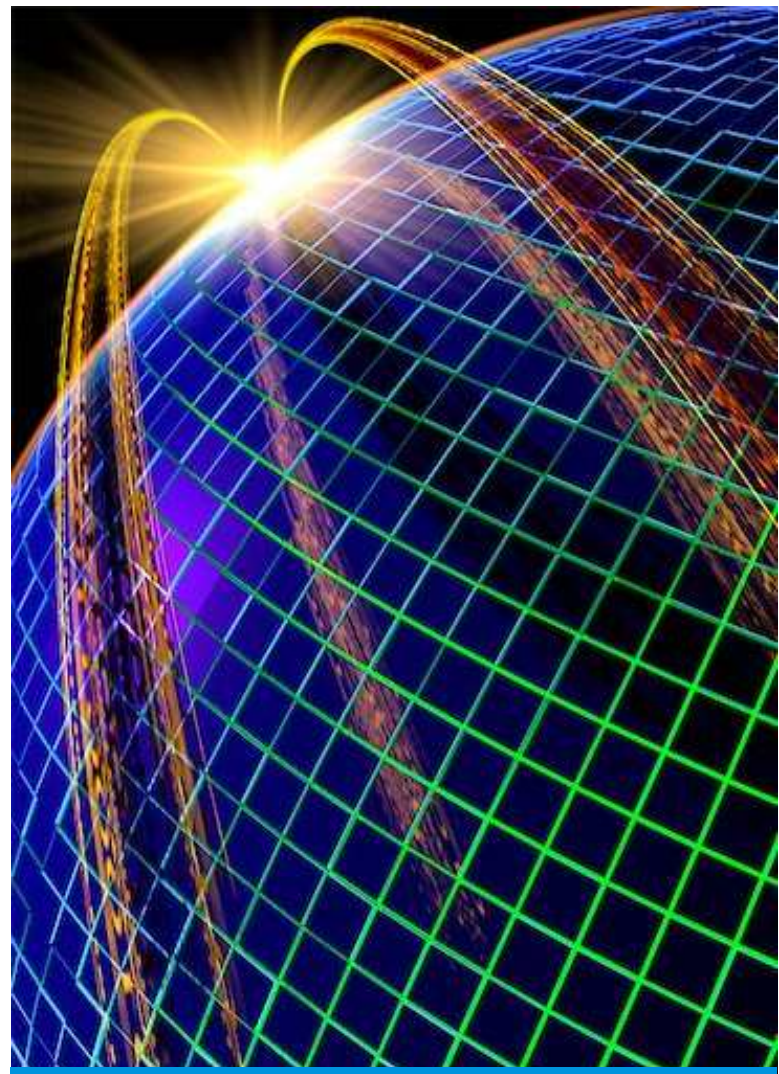
SATELLITE NEWS

du Announces Satellite Broadcasts Deal With TV Broadcasting Turner at GITEX

du has demonstrated its might in the broadcasting arena with the signing of a partnership agreement with Turner Broadcasting System Ltd (TBS), for providing a one-stop-shop for its broadcast needs in the Middle East. The deal will expand Turner's footprint to cover the Middle East via du Broadcast Services as well as including Cartoon Network Arabic on the du's IPTV platform in the UAE.

Soyuz Moves to Launch Pad for Globalstar's Six Satellite Launch

The Soyuz vehicle with Globalstar's initial cluster of six second-generation satellites is now on Launch Pad 6 at Baikonur Cosmodrome, where it is being prepared for launch. Arianespace has been contracted by Globalstar to perform four missions carrying six second-generation satellites each, which will be carried out by Starsem. The second-generation Globalstar satellite weighs approximately 700 kg and is has 16 transponders from C-to S-band, and 16 receivers from L- to C-band.

Turksat Nearing Award of Two-satellite Contract

Turkey's Turksat satellite fleet operator has received best-and-final offers from bidders struggling to manufacture the Turksat 4A and Turksat 4B telecommunications satellites. Turksat is already behind its stated schedule of announcing a winner in time to have the satellites in orbit in 2012, but it has received bids from Mitsubishi Electric Corp. (Melco) of Japan, Lockheed Martin Space Systems of the United States and a team proposing a satellite platform built by Orbital Sciences of the United States with a payload built by Astrium of Europe.
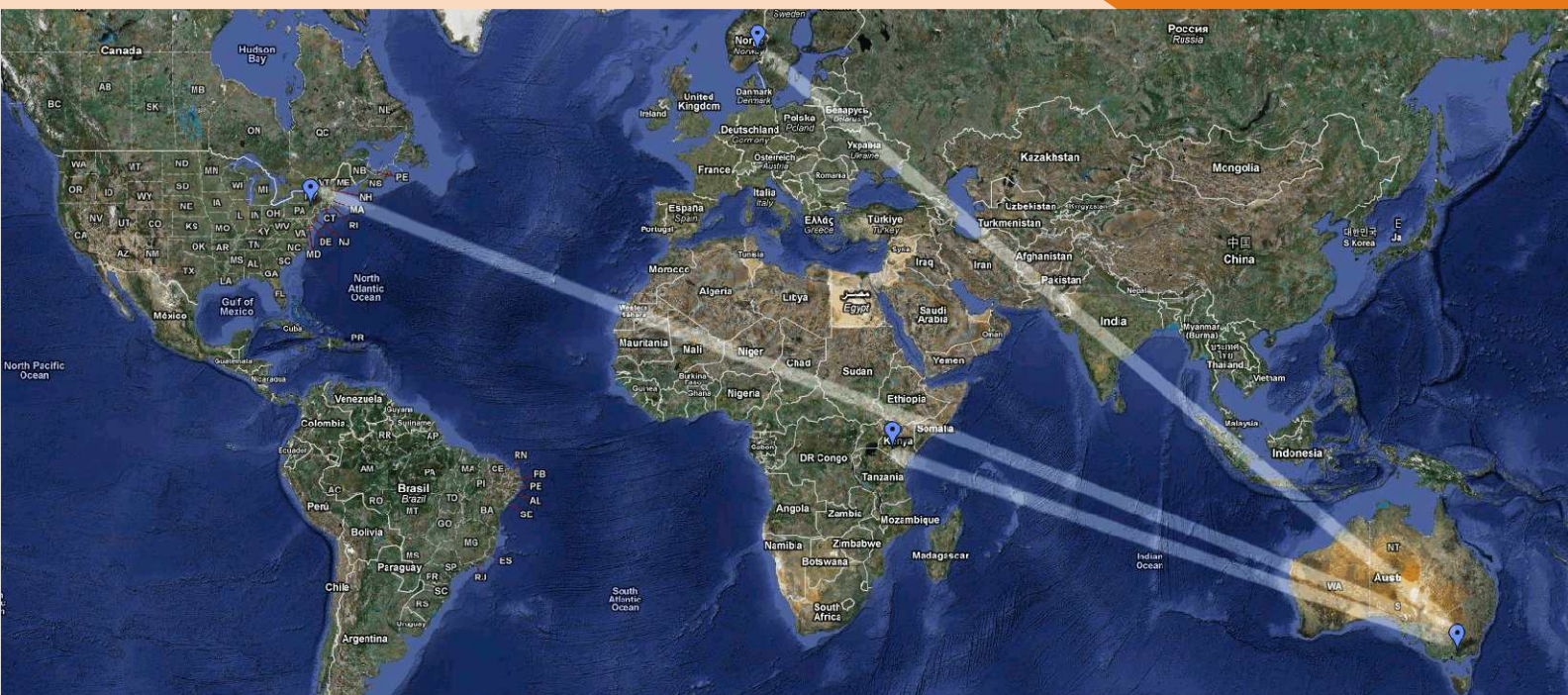
INTERNATIONAL ROAMING RATES

Plan to Scrap Mobile Roaming Charges

A core team of the Indian Department of Telecommunications (DoT), entrusted with the task of strategizing for future growth in the sector, has suggested that the entire country be considered as a single region, making the concept of 'roaming' redundant. The DoT panel feels that technology would now allow for the merging of all 22 circles into a common one covering the entire country. For the average mobile phone subscriber, this would mean huge savings in incoming and outgoing call charges while 'roaming' away from the home circle. India is currently divided into 22 telecom circles and subscribers have to pay higher charges for making or receiving calls when they are outside their 'home circle.

Globe Telecom Expands International Roaming Network

Globe Telecom continues to expand its international roaming network to steadily deliver superior experience to enterprise customers abroad. With the most roaming partners across all continents, Globe enables customers to conveniently use their Globe mobile account outside the Philippines. It offers roaming service to more than 200 destinations around the world, even in International Air Space and International Waters. Thus, Globe customers can make calls and send text messages while on board a plane or ship. Globe has currently established partnerships with more than 600 roaming partners.

Free Roaming Between Orange and T-Mobile Networks

Orange UK and T-Mobile UK, announced opened access to their respective networks to customers of either operator. This will allow Orange and T-Mobile customers to roam without additional charges on each other's networks. The move is part of the carriers' plans to put their businesses together in the newly formed company called Everything Everywhere. Tom Alexander, EE's CEO, said of the development: "[The] switch-on is the culmination of a unique and hugely complex technical project. But the result is simple – our customers now get two networks for the price of one." The company has also announced, the campaign costing around US$6.38 million to tell the subscribers of both operators (Orange and T-Mobile) that the roaming option is available to them.

Zantel Expands Network Coverage with Zain Roaming Deal

Zantel Tanzania recently announced that it has opened 236 new sites on its network, expanding services to almost every village in the country. This extension has been made possible through an agreement Zantel signed with Zain Tanzania to roam on its network. Zantel has invested over US$ 140 million in the past two years to expand its network coverage. The new sites are in Tabora, Shinyanga, Kigoma, Kagera, Mwanza, Mara, Pwani, Dar es Salaam, Lindi, Mtwara, Ruvuma, Mbeya, Rukwa, Iringa, Morogoro, Manyara, Dodoma, Tanga, Kilimanjaro and Arusha regions. Zantel acting Chief Commercial Officer Nitish Malik said that the network expansion was an ongoing practice to bringing services closer to the customers.

Convergence to Casablanca 2010

## 26th - 28th October, 2010
Casablanca, Morocco, Hyatt Regency Hotel

"Transforming Challenges into Growth"

In order to reach business efficiencies and to transform challenges into growth, stakeholders have to collaborate wisely, set goals and decide how they want to achieve them. SAMENA Telecommunications Council's Convergence to Casablanca 2010 conference was held in Morocco on October 26th through October 28th. Convergence to Casablanca was organized with support from Teralight, PCCW Global, Qualcomm, Nokia Siemens Networks, Huawei, du, Devoteam Group, Telcordia, among others. Keynote speakers from around the region shared business insights, market experiences, and growth prospects. The event discussed the significance of collaboration and knowledge sharing, and innovation in "transforming challenges into growth". SAMENA successfully managed to cover a variety of issues over the course of the three days and encouraged stake holders to join forces towards collaboration and consensus building. More than 120 participants coming from a number of organizations in the SAMENA region and other parts of the world witnessed the event. CEOs and telecommunications experts from leading telecommunication organizations were also present at the occasion.

Convergence to Casablanca 2010 Participants
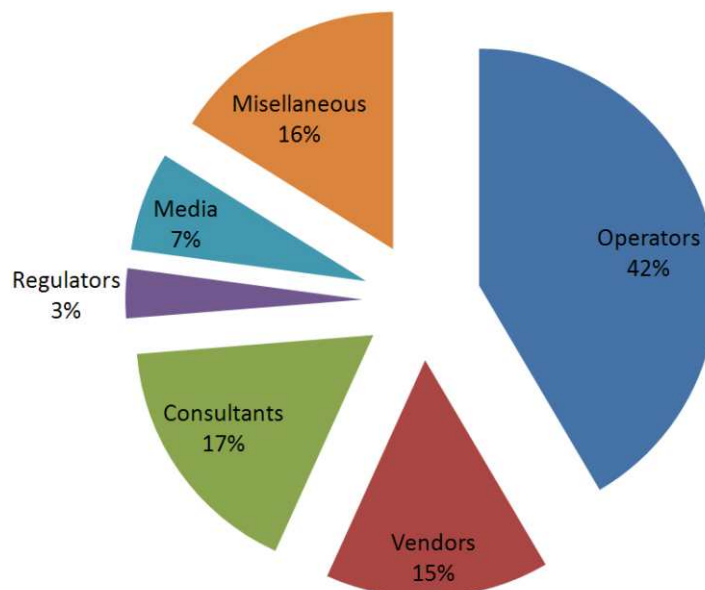
Panel speakers of Convergence to Casablanca included

♦ Saudi Telecom Company Group- Eng. Saud Al Daweesh, Chairman Etisalat- Ahmed Bin Ali, Global SVP of Corporate Communication
♦ ANRT- Ahmed Khaouja, Director of the Competition and the Follow up of the Operators
♦ Yahoo! Middle East- Ahmed Nassef, VP & MD Mobily- Akil Alakil, Vice President Regulatory Affairs
♦ Viva Bahrain- Andrew Hanna, Chief Commercial Officer
♦ Vedicis- Arnaud Gardin, VP, Marketing & Sales Cisco - Badr Al Badr, MD Smart Connected Communities Practice
♦ Omantel- Baha Al-Lawati, Senior Manager Account Management
♦ Meditel- Berada Munir, Director of all Operators
♦ Jordan Telecom Group- Dr.Ibrahim Harb, Chief Legal & Regulatory Officer
♦ Viva Bahrain- Ibrahim al Omar, CEO Booz & Co.- Jean-Sebastian Grail, Principal
♦ Meditel- Khalid Frir, Director of Regulatory and Strategy
♦ Zain Jordan- Ms Mervette Al Shihabi, CEO Office, Strategy & Business Planning   Telecom Egypt- Mohammed El-Nawawy, Vice President for Corporate Strategy
♦ Qualcomm- Moheb Ramsis, Director, Business Development North Africa Peppers and Rogers Group- Mujdat Ayoguz, Director
♦ STC- Munif AL Mutairi, Director of Roaming & Interconnection Personal Service Unit
♦ Orange – Jordan- Nayla Khawam, Chief Executive Officer
♦ du, Osman Sultan, Chief Executive Officer
♦ FTTH Council Europe- Prof. (FH) Hartwig Tauber, Director General
♦ Intigral- Samer Halawi, Chief Strategy and Business Development Officer
♦ Omantel- Sohail Qadri, Vice President Wholesale
♦ Turk Telecom- Tolga Akar, Access Group Manager Department
♦ On Demand Group- Tony Kelly, Chief Executive Officer
♦ Andrew- Ulf Lofberg, MENAPAK Operations Manager WIG
♦ Kalimat – Kuwait- Wilson Varghese, Chief Executive Officer
♦ SAMENA Telecommunications Council- Thomas W. Wilson, CEO, & Executive Managing Director
♦ SAMENA Telecommunications Council- Gary O'Neal, Chief Technology Advisor
♦ SAMENA Telecommunications Council- Eng. Samia Bahsoun, Liaison Officer, Americas Region
♦ SAMENA Telecommunications Council- Bocar A. BA, President

that operate within its domain." Eng. Saud Al Daweesh, Chairman of SAMENA Telecommunications Council said, "Industry shapers today need to be long sited to understand the end point in order to take the right path of evolution on services and technology. We need to accept that our role as operators is rapidly evolving to carry more traffic, at higher speeds, to more people, at lower prices, than ever before." He further added that" Policy makers should ensure that emerging business models are financially sustainable in order to avoid over-consolidation and return to a monopolistic environment which serves neither economies nor consumers." Talking about the broadband market in the region, the Chairman said "our broadband performance is still below the global average, in terms of speed, availability and take-up rates. While a few of our markets can match advanced markets of Europe, North America or some Asian markets, we have much to do still to ensure our region's deployment rates improve quickly."

The event discussed the significance of collaboration and knowledge sharing, and innovation in transforming challenges into growth. Secretary General, Ministry of Industry, Trade and New Technologies of Morocco, Mounia Boucetta, opened the event on behalf of H.E. Ahmed Reda Chami, Minister of Industry, Commerce and New Technologies of Morocco. In her opening speech, Mounia Boucetta, said, "Telecommunications is a rapidly evolving and fast-growing industry, which is crucial for the economic development of any nation today. I am happy to be present at this important conference by SAMENA and appreciate its efforts in promoting and encouraging dialogue and the sharing of information within the industry."

Bocar A. Ba, President of SAMENA Telecommunications Council said in his speech, "In today's extremely competitive and dynamic telecommunications environment which is driven by the highly demanding tech-savvy consumer, SAMENA is taking the initiative and leading the change that is absolutely essential and imperative for the regional telecommunications industry. Collaborative solutions and knowledge-sharing are key to the sustainability and progression of the industry and the various organizations

A wide range of panel discussions addressed the vital topics of Broadband, Optical Networks and Applications, Mobile TV, and Content, among others. In addition to the panel discussion, the conference provided an opportunity for the SAMENA International Roaming Group (SIRG), Regulatory Committee and Technology Committee to hold discussions. "CEO's Live Session" by the

developing telecom infrastructure in its markets with particular reference to UAE. He also referred to Etisalat's successful broadband experience in Saudi Arabia, Pakistan and UAE.

Thomas W. Wilson, CEO & Executive Managing Director SAMENA Telecommunications Council, highlighted the fact that "SAMENA region is set to become a key hotspot for roaming revenues for mobile operators within the next few years, driven by a strong subscriber base and increased inbound and outbound travel between Europe, Asia Pacific and other regional markets." He added that "regulatory measures are needed to encourage competition and investment, considering ROI related uncertainties for service providers, based on the current regulatory models."

Among key highlights of the Convergence to Casablanca conference were the annual awards, which were bestowed upon organizations and individuals serving in the telecom industry of the SAMENA region. The Council strives to provide its members the power and means to actively learn the dynamics of telecom markets in the three high-growth regions. Winners were selected for the awards from among a number of nominees and through a comprehensive and meticulous evaluation process. Awards ceremony was attended by a prolific gathering of executives from within and

leading CEO's and leaders offered the prospects to understand the evolving landscape and to be able to transform the challenges into growth. "Convergence to Casablanca 2010" was organized with support from Teralight, PCCW Global, Qualcomm, Nokia Siemens Networks, Huawei, du, Devoteam Group, and Telcordia, among others. Keynote speakers from around the SAMENA region, other parts of the world, shared visionary leadership insights and real market experiences.

Ali Amiri, EVP Carrier and Wholesale Etisalat, highlighter the primary challenges faced by operators. "Growth in broadband and internet traffic in the region over the last few years has exceeded that of the rest of the world. He added that the "major drive behind this significant increase in internet traffic has been broadband penetration, in which UAE stands as the highest in the region and also one of the highest worldwide. Another factor is the penetration and usage of smart phones, the impact of which is likely to be even more substantial with the implementation of LTE (Long Term Evolution) which is expected to be launched soon by Etisalat."

In a panel on Optical Networks & Applications, Ahmed bin Ali, Group Senior Vice President, corporate Communications Etisalat, highlighted Etisalat's role in

The award winners named included

- Etisalat Best Customer Experience Provider of the Year
- Etisalat Best Operator of the Year
- du Best Content Provider of the Year
- Qatar Telecom (Qtel) Best Telecom Deal of the Year
- Turk Telekom Best Fixed Operator of the Year
- Mobily Best Mobile Operator of the Year
- Orange Jordan Best Wireless Broadband Service Provider of the Year
- Etisalat Best FMC Operator of the Year
- Pakistan Telecommunications Authority (PTA) Best Progressive Telecom Regulator in South Asia of the Year
- Communication & Information Technology Commission (CITC) Best Progressive Telecom Regulator in the Middle East of the Year
- National Telecommunications Regulatory Authority (NTRA) - Egypt Best Progressive Telecom Regulator in North Africa of the Year
- Nokia Siemens Network (NSN) Best green Technology of the Year
- Huawei Technologies Best Innovative Technology of the Year
- Inmarsat Best Satellite Service Provider of the Year
- H.E Mohammad Omran (Etisalat) Best Telecom Operator Leader of the Year
- Mr. Osman Sultan (du) Best 2010 SAMENA Pioneer Award
- Eng. Saud Al Daweesh (STC) Best 2010 SAMENA Architect Award
- Dr. Mohammed Yaseen (PTA) Best Outstanding Telecom Regulatory Leader of the year

Following the world-wide technological development and its continuously increasing contribution to the telecoms & ICT landscape of SAMENA region, SAMENA is committed to bring advanced telecommunications to this region. In our efforts to continue facilitating collaboration and knowledge sharing in the region, our upcoming events are:

Mobile Broadband Summit 2011
4th week of January
Serena Hotel, Islamabad, Pakistan
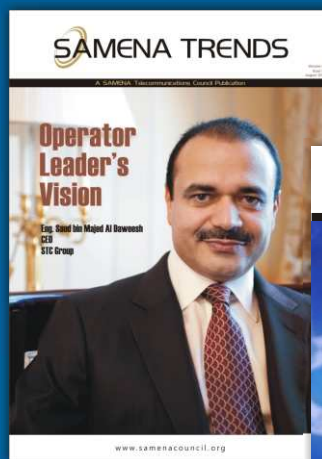
Broadband Summit 2011
4th week of February
Shangri LA Hotel, Muscat, Oman

Beyond Connectivity 2011
1st week of April
Beirut, Lebanon

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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.

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