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Ooredoo in Asia: the CEO's perspective

Dr Nasser Marafih,
Group CEO

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Revisiting Malaysia's National Broadband Initiative

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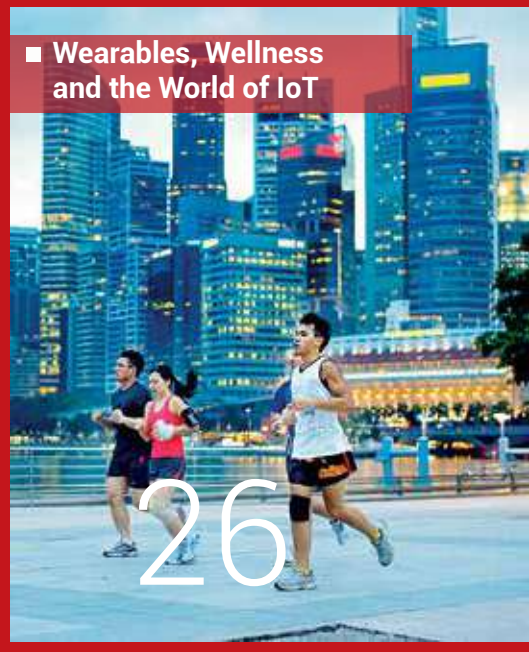

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Communications secrets of Formula One

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CommunicAsia on the eve of the IoT era

Anticipating CommunicAsia 2014 in our pre-event edition of 2014 I wrote: "The Internet of Things (IoT) will loom large at the event. The organizers [argue] that both emerging and developed cities must 'adopt IoT to transform how [they] deliver services and how business and people interact with one another.'"

Their focus on IoT was a good choice. In the past 12 months its importance has become abundantly clear, and in the view of many analysts, our region will lead the world in many aspects of IoT.

Charles Reed Anderson, head of mobility and IoT at IDC Asia/Pacific, said recently: "The IoT industry has matured considerably over the past year, with a number of large government initiatives across APeJ, and China in particular, driving demand."

IDC says that China will continue to dominate the Asia/Pacific region, accounting for 59 percent of the APeJ market opportunity by 2020, and will be one of the leading markets globally with nearly one out of every five units connected by 2020 being in China.

There are numerous subsets of the IoT market, such as telematics (connected cars), smart cities, and IoT in manufacturing - which is closely linked to Industry 4.0. It seems Asia could lead in all three.

In my last editorial I highlighted the growing importance of smart city technology in Asia, citing predictions that the region would likely lead the world. As regards telematics, Future Market Insights (FMI) in its recent *Asia Pacific Automotive Telematics—Market Analysis and Opportunity Assessment, 2014—2020,* predicts Asia Pacific will achieve a CAGR of 11.6 percent, outpacing the global growth rate of 8.8 percent.

In the case of Industry 4.0 and the Industrial Internet, EuroAsiaIndustry magazine recently quoted Deepak Achuthashankar, industry analyst at Frost & Sullivan, saying: "Thanks to Industry 4.0—an all-encompassing concept that has achieved global resonance—we are at the brink of witnessing yet another industrial revolution. ... As an emerging high value-added manufacturing hub, Asia is set to chart its own course thanks to Industry 4.0."

A report from the World Economic Forum and Accenture *Industrial Internet of Things: Unleashing the Potential of Connected Products and Service*, is in no doubt as to the transformative potential of Industry 4.0. It says: "...the Industrial Internet is indeed transformative. It will change the basis of competition, redraw industry boundaries and create a new wave of disruptive companies."

I'll leave the last word to David Mann, strategy lead with Accenture Australia. He argues that IoT will shake up a lot of industries and businesses in ways very different from how the Internet did, which was about information and the ability to use information.

"The Internet was important, but it did not tap into the real fabric of how businesses work and operate in the same way that IoT will," he says. "The speed with which that happens will be a telling point."

I suspect that will be faster than most expect, and faster than they wil be able to adapt. Carpe Diem!

Stuart Corner
Senior Editorial Manager
Telecom Review Asia Pacific

Huawei to offer public cloud services

Huawei has announced plans to launch public cloud computing services in China in July and in other countries in partnership with telcos at an unspecified time in the future.
The announcement was made by Eric Xu, Huawei's rotating and acting CEO in front of 400 members of the global media and analyst community at Huawei's 12th annual Global Analyst Summit in Shenzhen on 21 April.

No details of the proposed service were provided but Xu dismissed concerns that the move would put Huawei in competition with its major telco customers, saying that cloud was not a major part of their business. That may be true in China but overseas carriers are making aggressive pushes into the cloud market as they seek to move up the value chain and replace diminishing revenue from legacy carriage services.

At the summit, Xu explained the company's first service strategy, saying: "We've redefined our carrier business strategy. Instead of prioritizing products over services, we are now attaching equal importance to both of them. We will invest more in services to provide customized commercial solutions that suit the different requirements of carriers at different development stages.

Chinese Gov't blamed for decade long cyber espionage campaign

Cyber security technology company, FireEye, has revealed details of the operations of an advanced persistent threat (APT) group that it says is most likely sponsored by the Chinese government and that has been conducting cyber espionage since at least 2005 against targets in India, Malaysia, Vietnam, Thailand, Nepal, Singapore, Philippines, Indonesia and elsewhere.

FireEye has dubbed the group APT 30 and says its attack tools, tactics and procedures have remained markedly consistent since inception – a rare finding because most APT actors adjust their tactics regularly to evade detection.

Dan McWhorter, FireEye's VP of threat intelligence, said: "Advanced threat groups like APT 30 illustrate that state-sponsored cyber espionage affects a variety of governments and corporations across the world."

FireEye said that the analysis it had conducted on APT 30's malware revealed "a methodical approach to software development similar to that of established technology businesses – an approach that aligns closely to the various diplomatic, political, media and private-sector environments they intended to breach."

It added: "Their targets possess information that most likely serves the Chinese government's needs for intelligence about key Southeast Asian regional political, economic and military issues, disputed territories and discussions related to the legitimacy of the Chinese Communist Party."

The full report is available at: http://bit.ly/1ynqkZt.

Internet Society outlines ASEAN's Internet potential

The Internet Society (ISOC) and consulting and research firm TRPC have released a report that they say, "identifies the concrete steps necessary to unleash the potential of the Internet and transform the 10 ASEAN member economies (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam) into a highly competitive, single market and production base.

The report, 'Unleashing the Potential of the Internet for ASEAN Economies," takes stock of the Internet infrastructure of the region and outlines the actions necessary to support the Internet connectivity goals of the ASEAN Economic Community (AEC) Blueprint, a comprehensive agenda for the economic transformation of the region, released at the 'ISOC-TRPC Rethinking the Digital Economy' Forum in Manila.

Rajnesh Singh, the Internet Society's regional bureau director for Asia-Pacific, said: "The ASEAN region represents over 600 million people and is one of the fastest growing regions in the world, with a projected real average GDP growth rate of 5.4 percent per annum between 2014-2018. As a single entity, it would represent the seventh largest global economy."

This report "provides a view of Internet infrastructure in the region and indicates where each of the 10 countries stand, and the steps and actions that need to be taken to move to a digital economy, which will be key to the ASEAN integration plans."

IBM in iOS app deal with China Telecom

IBM has struck a deal with China Telecom to offer and manage corporate-grade mobile apps. China Telecom will host on its servers IBM's MobileFirst service, which helps corporations manage apps for iPhone and iPad.

Reuters reports that the two companies have not yet disclosed any customers but will seek out the full range from large, state-owned enterprises in sectors like banking and insurance to private startups. Twenty-four apps have been translated into Chinese, and additional ones will be tailored for retail, travel, transportation, government and healthcare, among other sectors. Reuters said.

Reuters also reported IBM CEO, Virginia Rometty, saying in a speech before the business and political elite in Beijing in April that the company would share its technology and help Chinese companies to continue doing business in the country.

The move follows an alliance between IBM and China Telecom, announced last August to help small and medium businesses (SMBs) implement secure, cost-effective and scalable SAP cloud-based applications. Under that agreement China Telecom is managing clients' infrastructure that includes cloud platform resources, networking and mobile devices. IBM is integrating the software, hardware and end-to-end service capabilities to create a complete environment that supports SAP applications on the cloud.

Viettel Cambodia's Metfone to acquire Sotelco's Beeline

Viettel (Cambodia) Pte Ltd, which operates the Metfone mobile service, has reached an agreement for the purchase of the assets and telecom licenses of Sotelco Ltd, which operates the Beeline Cambodia mobile service, including its 2G, 3G and 4G licenses. The move represents the first acquisition by a Vietnamese company of an active telecom operator oversea.

The deal will make Viettel the leading mobile operator in Cambodia, with a 50 percent market share and the biggest Internet service provider with coverage of 96 percent of the population, including remote and isolated areas. Viettel says that, as part of its business strategy for Cambodia, it will look at enhancing and developing the country's telecommunications infrastructure with the addition of 4G and 5G services in the future.

Mr Tao Duc Thang, general director of Viettel Global, said customers could look forward to enjoying better quality and coverage, higher speeds, value-added services, and access to 4G services in the near future. "We will continue to develop the infrastructure and our capabilities in Cambodia to provide users with technologically advanced, affordable and reliable solutions."

Viettel has invested in 10 markets over the last 10 years and today connects over 260 million people in South America, Africa and Asia, including Vietnam, Cambodia, Laos, Timor-Leste, Haiti, Mozambique, Peru and Cameroon. It is also expected to launch services in Burundi and Tanzania later this year.

Brocade opens new Indian R&D center

Brocade has opened a new development center in Bangalore to support its IP R&D and has said that it will invest $300 million in India over the next five years. The 15,000 square meter Brocade Bangalore Development Center contains engineering labs and customer demonstration, briefing, and training centers. The LEED Gold-certified building makes extensive use of green products and water efficiency.

Brocade says that India is the ideal test bed for its new IP architecture because enterprises and service providers in India are receptive to open standards and are well positioned to leap directly to the new IP technologies over proprietary, legacy networking equipment. India is also home to the engineering teams of two recent Brocade acquisitions, Vistapointe and Connectem.

"The center will enable Brocade India to showcase proofs-of-concept and pilot projects for customers and partners while contributing to the development of next-generation, fabric-based and software networking solutions," the company said.

"The center will also work closely with Brocade technology and solution partners and networking industry thought leaders across India, enabling the company to achieve greater penetration in industry verticals such as service providers, media, banking and finance, education, and the public sector."

According to Gartner, the Indian data center infrastructure market, comprising server, storage, and networking equipment, will reach $2.03 billion in 2015, making India the second-largest market for data center infrastructure and the second-fastest-growing market in Asia Pacific.

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Ooredoo in Asia: the CEO's perspective

Qatar based mobile telecom operator Ooredoo Group has operations in Myanmar, Indonesia and the Maldives. Group CEO, Dr Nasser Marafih, outlines the company's approach to and achievements in these growing Asia markets.

In your opinion what opportunities do Asian markets offer?

Asia's telecommunications industry offers great potential. Ooredoo's Asian markets are some of our biggest and fastest growing, driven by young, ambitious populations. The fundamentals of these markets also strategically align with our vision, which is based on a strong belief that we can use communications technology to stimulate human growth and help enrich people's lives.

The telecommunications sector has transformed almost entirely in recent years, a transformation that offers great opportunity for communities in Southeast Asia. The digital era has changed everything – for customers, operators and everybody in between.

What services does Ooredoo offer in Asia to capture this opportunity?

As a group we are passionate about being part of the digital future of the communities that we serve. A key part of this is delivering faster, higher quality performance through better networks.

We are leaders in data in a majority of markets across our footprint. In Myanmar we were the only operator to launch with a purely 3G+ network, bringing people the convenience, speed and high definition voice of ultra-modern technology from the outset. In Indonesia we are introducing 4G LTE and the fastest speeds. This is being rolled out across 23 of the country's towns and cities.

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To be part of our customer's digital future we must first support people's digital lifestyles. Our Asian operations have some great examples of how this looks in practice; launching digital content services, such as carrier billing with Google Play and internet.org with Facebook in Indonesia; mobile financial services; and even dedicated apps, such as maternal healthcare app MayMay in Myanmar, which address real issues facing different communities.

We are also aware of the importance of helping our customers protect their digital identity and were the first operator to trial Mobile Connect with the GSMA in Indonesia.

Talk to me more specifically about your investment in Indosat?
We first invested in Indonesia in 2007 and remain very committed to Indosat, and Indonesia. We are actively involved in the business and together with Indosat have invested to further increase capacity, roll out upgraded technology and bring new services to the people of Indonesia.

Our digital services strategy in Indonesia is underpinned by this network modernization and we are working with Indosat to leverage the technology to provide customers with services that go beyond traditional communications. This has included significant investment into a growing app ecosystem, through initiatives such as startup incubator ideabox, and into delivering mobile finance, education and e-commerce services. An example of this is Dompetku, Indosat's mobile wallet and eMoney service, which provides customers with access to a comprehensive suite of mobile financial services including mobile wallet, microfinance and m-insurance services tailored for those who do not have bank accounts or easy access to financial services.

Indonesia is an important market for us. And we're excited to be strengthening the Ooredoo brand here, increasing our visibility in the market. This is another example of our commitment to Indosat and part of our strategy to bring all of our operating companies together under one brand. This makes us stronger and more agile as well as better positioning us to exploit synergies and launch common services across our global footprint to give our customers a better experience.

Looking to human growth, what role does your CSR program play in your investment in Indonesia?
Our commitment to stimulate human growth is about more than technology. Our mobile health clinics initiative, operated in partnership with the Leo Messi Foundation, local NGOs and medical associations, is a good example of what we mean when we say this. We have 16 mobile clinics stationed across Indonesia that travel out to remote areas and actively work with communities. They educate on disease prevention and the importance of a healthy lifestyle as well as providing a range of free services, which includes medical checks, dental checks, nutritional advice and vitamin distribution. The clinics also provide much needed support during natural disasters, such as that given in 2014 to victims of landslides, floods and the volcanic eruption of Mount Sinabung in East Java.

The clinics have seen great success in Indonesia, reaching over 600,000 children. With the added support of Messi the ambition is to create maximum impact from these clinics.

Coming back to Digital, which areas hold the most opportunity for you in Asia?
In all of our markets, we have an opportunity to build the infrastructure that can meet the evolving demands of consumers, improve their mobile commerce experience and create a vibrant digital eco-system.

An example of how we are doing this can be found in ideabox, a startup incubator program in Indonesia which takes concepts from ideas to fruition over an intensive four-month period. During this period the selected startups receive mentoring, seed funding, facilities, a structured curriculum and access to an extensive network of local and international startup founders and advisors. Two of the startups to graduate from the program have received Series A growth funding from SB ISAT, a $50 million venture fund jointly established by Indosat, Ooredoo and Japan's Softbank to target Indonesian growth-stage startups.

Ecommerce is also an area where we see good potential. To help us capture opportunities here in 2014 we entered into a 50/50 joint venture with Rocket Internet in Asia Pacific. Asia Pacific Internet Group (APACIG) is focused on investing in startups and building online ventures in 15 markets across Asia Pacific. It is progressing well with growth spurred by growing consumer confidence, rising disposable income and increasing internet penetration in Southeast Asia.

How do these digital services fit into a market like Myanmar that has only recently opened up to the rest of the world?
Mobile phones and technology are great tools to facilitate the flow of information and increase productivity. The reality is that, as Myanmar opens up it is leapfrogging into a connected era, embracing these digital tools and the economic and social benefits that accompany them. From what I have seen it will not be long before Myanmar is not only able to compete on a regional scale but moreover to educate its neighbours on the far reaching benefits of this technology.

The development of local content in the Myanmar language has been a critical element to this, helping to educate people and improve technical and digital literacy – especially among underserved communities. It is not just about building the infrastructure but rather about introducing people to the services now available and taking the time to demonstrate how this technology can improve their day-to-day lives.

And how is rollout progressing here? Any other progress to report?
We continue to rapidly roll out across the country and as of 31 March 2015 our network covered 41.2 percent of the population. Myanmar's hunger for affordable access to fast internet is clear and data is already a big slice of our revenue. The majority of our customers are using the internet with 80 percent of these using a smartphone. This is above any existing benchmark and clearly indicates the importance of data in the Myanmar market, validating our data-driven approach. TR

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Envisaging digital infrastructure for the ASEAN Economic Community

With the ASEAN Economic Community set to transform the 10 nations of ASEAN into an integrated economic community that will rank as the world's seventh largest, the Internet Society has produced an in-depth report examining the connectivity barriers to the community's success, and recommending the actions needed to overcome them.

The ASEAN Economic Community (AEC) is due to become a reality in December 2015, eight years after it was set in train by the 10 member nations of ASEAN adopting the ASEAN Economic Blueprint, the master plan guiding the establishment of the AEC.

According to a blog post in the Financial Times "The AEC blueprint envisions a fully integrated economic community that would allow a free flow of goods, services, skilled labor and investment, and a freer flow of capital. ... If the AEC is successfully implemented, standardized legal and regulatory frameworks will make it much easier to do business across the region, although companies will need to adopt a regional strategy to take advantage of the shifting investment landscape."

The blog post continued: "Taken as a whole, ASEAN ranks as the seventh largest global economy with a collective GDP of over $2.4tn. The bloc is well set to receive manufacturing capacity that relocates from China and represents an attractive prospect as a consumer market. It is no surprise then that robust regional growth forecasts suggest that the combined economies of South-East Asia will be a crucial, long-term driver of the global economy."

However it saw significant hurdles to this being achieved. "Realising the AEC's full potential is likely to be challenging. What ASEAN needs more than anything is a powerful supranational body, something akin to the Commission in the European Union, which could compel its disparate members to comply with their pledge to integrate."

Internet infrastructure will be crucial

Another major factor in the success of the AEC, not surprisingly in this digital age, will be the capabilities of the digital infrastructure of member nations, and the infrastructure that connects them with each other and with the rest of the world.

This is the focus of a timely study from the Internet Society (ISOC) and research firm TRPC *Unleashing the Potential of the Internet for ASEAN Economies*. It takes stock of: the progress ASEAN member economies

have made in terms of Internet access and regional connectivity; the prospects of Internet interconnections enabling inclusive, integrated and sustainable development; and the potential opportunities for and constraints on the emergence of an ASEAN digital economy. It then outlines the actions necessary to support the Internet connectivity goals of the AEC Blueprint.

Releasing the report Rajnesh Singh, the Internet Society's regional bureau director for Asia-Pacific, said: "This report provides a view of Internet infrastructure in the region and indicates where each of the 10 countries stands, and the steps and actions that need to be taken to move to a digital economy, which will be key to the ASEAN integration plans."

He added: "It is no overstatement to say that the successful launch of the AEC in 2015 will depend upon the ability of the ASEAN nations to interconnect. However, the benefits of a shift from the economies of scale of an Internet economy to the economies of scope of a digital economy will be truly transformative."

Digital inclusion is urgent

The report says the December 2015 implementation of the AEC has lent a sense of urgency to the achievement of digital inclusion across the region. "Connectivity encompassing the physical, human and digital arenas is one of the most critical requirements the ASEAN economies need to achieve in order to reduce development gaps, enhance competitiveness by improving the production and distribution networks in the region and ultimately move closer to the ambitious goals of the AEC."

In recognition of this, ASEAN leaders in 2010 adopted a Master Plan of ASEAN Connectivity to enhance intra-regional connectivity. That plan recognized that the Internet and other ICT infrastructure would be "fundamental to supporting trade, facilitating investments and enlarging markets through its ability to facilitate information exchange, to connect people, to support delivery of services and to reduce the cost of business and trade-related transactions."

It is against this background that ISOC has produced the report, the objectives of which, it says, are threefold:

- "Examine the status of Internet access and adoption across ASEAN economies by taking stock of progress that has been made along the Internet supply-chain, from international bandwidth to last mile connectivity.
- "Highlight the remaining challenges in achieving robust and affordable Internet connectivity through an analysis of market and regulatory drivers that can explain the current landscape of Internet access.
- "Provide recommendations for unleashing the Internet's potential so as to achieve the goals of the AEC."

The report is divided into two parts. Part one reviews the state of Internet adoption and usage in ASEAN countries with a focus on the Internet connectivity supply chain. Part two explores the interconnectivity of networks, people and devices that rely upon IP on the basis that "the Internet economy is the first step towards a digital economy which is an economy in which the use of the Internet and of IP-enabled networks is pervasive across all major sectors of society, irrespective of what they produce, sell or trade," and: "The transition from basic connectivity to the Internet to the interconnectivity of networks and interoperability of systems is a progression lower-income A5EAN countries need to accomplish to lay the foundations of their digital economies."

Prohibitive costs

The study found the costs, and therefore prices, of providing Internet connectivity to be prohibitive for many citizens in lower income countries, saying: "There is no reason to believe that latent demand is any less in these countries, and if policy makers can find ways to encourage the necessary investment in the infrastructure to provide greater coverage at affordable prices, demand will be forthcoming."

It found wireless broadband to be of growing importance as a means of providing Internet access for low and middle-income citizens of ASEAN economies, but identified the lack of adequate national backhaul infrastructure and of international connectivity as being major barriers to Internet development in many ASEAN economies.

"The successful launch of the AEC in late 2015 will depend heavily upon the ability of ASEAN nations to interconnect

with each other. Without better interconnectivity and interoperability, the growth of e-commerce, for example, will be muted, and the ultimate aim of a digital economy and society—meaning a society in which Internet-based digitally delivered services are able to achieve inclusiveness and empowerment of those at the margins of society—will be forestalled. As such interconnectivity represents something of a new, or extended, challenge to the digital divide between ASEAN countries."

ISOC is calling on member governments of ASEAN to take some initiative to address the problem. "There is a chicken-and-egg problem here as the lack of Internet development means traffic volumes and revenues are insufficient to attract private-sector investment in these networks, and insufficient network capacity chokes off access to the Internet, keeps prices high and the quality of service low," the report says.

A role for governments

"The role of government in cases of market failure is to bridge the gap between supply and pent-up demand until a virtuous cycle of development can kick-in. For example, government can play a leadership role in creating a national backbone either by building it themselves, subsidizing it or working with private sector partners."

One issue cited that, it was suggested, merits government involvement, is "the general absence of carrier-neutral IXPs within the ASEAN region."

This, ISOC says, is not a technical issue but an issue of business strategy by incumbent carriers. "Without effective carrier-neutral IXPs smaller ISPs can be forced to trombone their traffic, adding to cost, latency and a loss of competitiveness so consumers suffer."

It added: "In some cases, for example in Vietnam and in Thailand, governments have either tried to regulate interconnection between ISPs or set up IXPs with the expectation that ISPs would each connect to them, but these policies proved ineffective.

"What needs to be appreciated here is that governments have options. For example, they can encourage third-party carrier-neutral IXPs and, if necessary, assist with start-up costs or ongoing capital costs with safeguards in place to end such subsidies once critical mass is achieved. Such measures are more likely to be effective if accompanied by policies that help to bring down costs of Internet access and usage." TR

The recommendations

The report outlines 10 steps the governments of the region can take to encourage and accelerate the shift from basic connectivity to a more fully interconnected and interoperable digital economy:

1. Prioritize access to wireless networks by extending them to unserved and underserved areas;
2. Ensure affordability of network access;
3. Prioritize affordability of devices, including ensuring that device distribution and retail networks are fully competitive;
4. Promote infrastructure sharing and equal access, especially where resources are dominated by one or two carriers, to protect smaller new entrants and maximize services competition;
5. Plan for and promote the transition to IPv6;
6. Promote interoperability via voluntary agreements or state-supported clearance systems;
7. Build interoperability into all service delivery by adopting open Internet standards, which allows devices, services and applications to work together across a wide and disperse network independent of the actual platforms they run on;
8. Lead in using ICTs—potentially starting with health, education and disaster risk management services—extending inclusion to marginalized communities considered 'uneconomic' by the private sector;
9. Recognize that populations are mobile-centric and adjust Internet access and national digital economy plans accordingly; and
10. Involve populations that are marginalized by gender or disability in the planning process and distribute resources and capacity building to enable greater access and participation.

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Telecom Review was once again a media sponsor for the Pacific Telecommunications Council's annual conference - an event that goes from strength to strength.

The Pacific Telecommunications Council (PTC) occupies a unique place in the dynamic, rapidly growing world of global communications.

An international, non-profit, non-governmental organization, PTC is the leading membership organization for telecommunications and information and communication technology (ICT) professionals with interests in the Asia-Pacific region. It was created in 1978, held its first annual conference in 1979 in Honolulu, Hawaii and was incorporated as a non-profit, non-governmental organization in Hawaii in 1980.

Through its annual conference, committees, community, events and initiatives PTC brings together senior industry leaders and provides them with opportunities to build partnerships with one another and share insights on industry trends, business strategies, policy and regulations, best practices, and new communication technologies and services.

PTC facilitates the open exchange of ideas and commerce and supports ongoing research, education and training to foster positive social and economic development.

Its latest annual conference, PTC'15, attracted more than 1800 registered attendees, building on the success of previous conferences and offering them unparalleled opportunities to hear diverse perspectives on emerging issues as well as to interact with senior executives, global regulators and renowned academics, innovators and thought leaders spanning telecommunications equipment, facilities and services, information technology, over-the-top services, and related industries.

This year's theme, Networked Planet, explored how the forces of mobile, social, big data, cloud computing, the Internet of Things, growing cyber threats and greater global connectivity through subsea and satellite data transport are transforming the world. It examined these changes from a myriad of perspectives: economic, technological, competitive, regulatory and policy, industry structure and customer needs.

To effectively compete in this new world requires leadership, not just management; re-imagination, not just business as usual; transformation, not just cost-cutting; and new strategies, rather than mere tinkering.

There were a number of exciting social events, keynote discussions, and technology discussions, including one of the first demonstrations anywhere of 8K television and a detailed discussion of its impact on operators.

PTC 2016 will be held, as always, on the expansive grounds of the Hilton Hawaiian Village in Waikiki, Honolulu. Dates will be 17 to 20 January, 2016. TR

Revisiting Malaysia's national broadband initiative

Like most governments, Malaysia's is striving to boost the country's broadband infrastructure. It's been on the journey since 2002. Telecom Review Asia Pacific examines progress.

According to a GSM Association report entitled *The Mobile Economy Asia Pacific 2014*, by mid 2013 there were 134 national broadband plans enacted in countries around the world, with many variations in scope, technology and funding models.

The report said that some were focused solely on broadband, while others encompassed IT and constituted comprehensive roadmaps towards developing and implementing their country's move towards becoming an information driven society.

The importance of developing an information driven society is further supported by a report from the ITU-led Broadband Commission for Digital Development entitled *Planning for Progress: Why National Broadband Plans Matters*.

This report highlighted how broadband plans can underpin and drive a nation's growth. The report said that some broadband plans could be enshrined in legislation, others were mere policy frameworks/strategies and some were realized through regulation.

More importantly the report put significant emphasis on the importance of strong partnerships and alliances between governments, industry and other stakeholders to fully realize broadband initiatives, increase national competitiveness and empower citizens.

Malaysia's broadband journey

In 2002 the Malaysian government started planning for an information driven society under the guidance of the then Ministry of Energy, Communications and Multimedia and with assistance of the Malaysian Communications and Multimedia Commission (MCMC). The plan included details of how current infrastructure would address the country's future needs. The project looked at requirements 10 years out and the Commission started developing what is now known as the National Broadband Plan (NBP). MCMC forecast that the country's future growth would be anchored on its communication infrastructures.

By May 2008, the Malaysian government had released implementation strategies to widen broadband penetration in Malaysia. The Malaysian Government designated Cabinet Committees to boost broadband implementation in the country and to develop strategies for both the supply and demand sides. It set a target of household broadband penetration reaching 50 percent by 2010.

However, according to reports, broadband penetration today in Malaysia lags that of its neighbors. Malaysia's broadband penetration rate is at 18 percent, in Singapore it is 78

percent, Hong Kong is at 80 percent and South Korea 93 percent.

Malaysia's National Broadband Initiative has focused on two categories of broadband: Broadband for the General Population (BBGP) with speed of up to 2Mbps and High Speed Broadband (HSBB) for selected areas delivering speeds between 10Mbps and 1Gbps.

Malaysia's three broadband zones

To achieve this objective the country has been divided into three zones:
- Zone 1 will be covered by HSBB and BBGP. Within Zone 1 are major economic areas such as Kuala Lumpur, Johor Bahru and northern east of Penang.
- Zone 2 will be covered by BBGP.
- Zone 3 embraces rural areas where the digital divide needs to be addressed with financing from the Universal Service Provision (USP) fund under the Malaysian Communications and Multimedia Commission (MCMC).

The government acknowledges that funding will be crucial to implementation particularly in achieving HSBB nationwide because the cost could be as high as MYR56 billion ($15.3b).

Thus, in September 2008, a private public partnership (PPP) agreement was signed between the Malaysian Government and Telekom Malaysia (TM) for the implementation in Zone 1 under which Telekom Malaysia agreed to build a High Speed Broadband (HSBB) network at an estimated cost of MYR11.3 billion ($3.5b) with the Government providing funding of MYR2.4 billion ($740m). Phase 1 aimed to serve 1.3 million premises with FTTH (Fiber To The Home). Residential high rise buildings in the industrial areas around Kuala Lumpur were to be connected with very high bit rate digital subscriber line (VDSL2).

The first services in Phase went live in 2010 and by 2012 about 1.4 million premises in Kuala Lumpur, Inner Klang Valley and Iskandar were getting services at 10Mbps.

Coverage in the HSBB area is expected to be completed by 2018 at an estimated cost of MYR11.3 billion ($3.5b). Four major operators have signed up to resell HSBB access services. Nineteen companies have signed up to provide backhaul services in the HSBB areas.

The current strategies to provide broadband services to the general public in Zone 2 will continue. These strategies include encouraging competition between wireless technologies (3G/HSDPA, WIMAX) and fixed line. Most of the costs in the less profitable rural areas are coming from the Universal Service Provision (USP) Fund.

Zone 2 also includes projects like the Rakyat Internet Centers (Pusat Internet Rakyat) and Mini Community Broadband Centers that aim to provide Wi-Fi access for the rural population. The Pusat Internet 1 Malaysia (PI1M) serves about 5,000 to 10,000 people in rural and sub-urban areas like Felda settlements, villages and Projek Perumahan Rakyat (PPR).

Rural Internet Centers

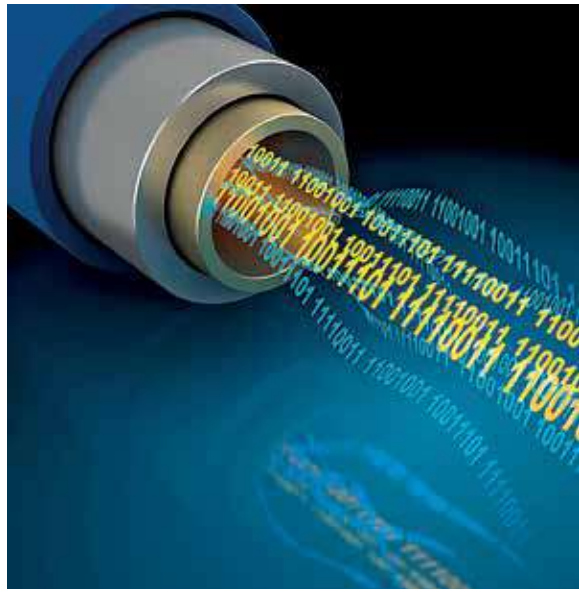
Each center is equipped with 20 computers, high-speed Internet access, surfing area and training room. They cater to everyone including people with disabilities. The centers conduct training programs and ICT-related events to promote interest in ICT. Programs are offered for children, women, adults, entrepreneurs and senior citizens.

In the same year the government started distributing netbooks, known as 1Malaysia Netbooks.

Through the USP program, eligible recipients such as secondary and university students, particularly those belonging to lower-income groups, were given netbooks to ensure that they had the opportunity to access the Internet.

Sixty five percent of 1Malaysia Netbooks were distributed to students from low-income families with priority given to secondary students of Government-funded or assisted schools and university students who did not possess broadband subscriptions. The distribution was completed by the end of 2010.

Other projects included in the USP are 121 mini Community Broadband Centers (CBC) at information departments deployed nationwide and e-Kiosks, self



service machines placed at Penghulu office community centers and public places. CBC to Home covers 246 CBC areas across the country benefiting about 615,000 people. To expand cellular coverage under the USP about 873 new telecommunication towers have been erected and are now working.

Broadband target 70 percent achieved

MCMC says that about 70 percent of the National Broadband Initiative has been achieved as part of its vision for 2020. According to deputy prime minister, Tan Sri Muhyiddin Yassin the country aims to reach household broadband penetration of about 75 percent by this year.

But much remains to be done and the country is still allotting parts of its 2015 budget. One initiative is the Research Incentive Scheme for Enterprises (RISE) wherein about MYR10 million has been set aside. The project encourages the founding of research centers in high-tech, ICT and knowledge-based industries. In addition the government has committed about MYR1.2 billion to enhance vocational and community college programs under the USP.

In a report published in November 2014, the United Nation Children's Fund (UNICEF) Malaysia noted that the overall broadband penetration in Malaysia was about 67.3 percent in the first quarter of 2014. In some areas it put penetration at 115.7 percent while in Kelantan it was at about 41.2 percent. TR

Communications secrets of Formula One

A modern Formula One racing car is not only an exceedingly fast and complex motor vehicle, it is a sensor-packed node on a state-of-the art global communications network that is key to achieving victory on the track.

When the winner of a Formula One motor race steps onto the podium and spays champagne over the crowd you may think the victory is his and his alone (there has never been a woman driver in a F1 championship race), but throughout the race dozens of specialists have monitored every aspect of his car and making decisions minute-by-minute to try and win the race.

Team members need to collaborate using voice and data in near real time in order to make real-time decisions designed to boost the chances of victory. And that requires a state-of-the art global communications network.

AT&T is the innovation partner of the Infiniti Red Bull F1 team and has been providing that network for over a decade. The two took Telecom Review Asia Pacific behind the scenes of this year's first Formula One race track in Melbourne to reveal what's involved.

For Infiniti Red Bull there are four key locations that need to be connected throughout the F1 season: the race track; its headquarters and car design and construction facility in Milton Keynes in the UK; the factory of its engine supplier, Renault, in France; and its wind tunnel, also in the UK.

A global network linking every race track

There will be 20 race tracks this year—five in Asia Pacific: Australia, Malaysia, China, Singapore and Japan—before the season wraps up in Abu Dhabi on 29 November and AT&T has built a global communication network for Infiniti Red Bull Racing to provide real time collaboration between each location and the team's fixed locations.

When the car is on the track it is sending data wirelessly from over 100 sensors to the AT&T telemetry area on the track side. According to Alan Peasland, head of technical partnerships for Red Bull Technology, this is where the AT&T story starts. "This is mission critical for us: getting the data from that area, sharing it around the different areas at the race track where the decision makers sit, getting data into the garage for the pit crew to learn from and to our 'tree house', a structure we take to every race that is a mobile office at the race track." Two years ago F1 teams were

presented with a major challenge when the rules changed requiring engines to go from naturally aspirated 2.4 liter V8s to 1.6 liter turbo-charged V6s. Also, a relatively simple system that used the car's kinetic energy during braking to charge a battery and provide an electrical power boost when needed was upgraded to a much more complex system that can generate electricity from both the turbo and the braking.

Peasland said the system gave a very significant boost to the power of the car. "We get about 160 horsepower from the hybrid technology in addition to 600 horsepower from the internal combustion engine. 2014 was the first year we had this technology and it has evolved since last year. Before that we had what was called KERS [kinetic energy recovery system]. There was no turbo and no generator on the turbo. You could have no more that six seconds of battery power during a lap. Now we have over 30 seconds of battery power available during each lap."

Rules changes impacted communications

While AT&T has been providing international communications for the Red Bull team for several years, the complexity of this technology was largely the reason it became the team's innovation partner.

Peasland explains: "This technology is managed with very sophisticated engine mapping systems to choose when we charge the batteries from the turbos or from the braking and when we use that power. It is a very complex system and has taken a lot of understanding. That is one of the reasons we expanded our partnership with AT&T.

"We knew we would need more factory support from the UK when this thing was on the track. We would need to look at more data more quickly and have more engineers on it to understand what was happening during the practice

session and during the race."

Adding to the demands placed on the communications network is the limit of 60 placed on the number of people each team can have trackside that are directly involved with the car and race performance.

"People in the UK should get the data in a way that they feel they at the trackside," Peasland said. "The data is so complex that even for people who understand it, it takes time to see what is happening to the car. It is not a 'yes' or a no'. So the quicker you can get that data to more people and to people we cannot afford to fly around the world, that's the challenge.

"The AT&T operations room in the factory is where we put extra engineers for aerodynamics, vehicle dynamics, strategy. They will be in that room for the entire duration of a race weekend, receiving data real time with a 300ms delay form Melbourne [the race venue farthest from the UK]."

Network speed more than doubled

He added: "From 2013 to 2104 the network became 2.5 times faster. During a race weekend we will shift about 200Gytes of data between the track and the factory in real time.

The wind tunnel is the new story. We had AT&T provide ten times the bandwidth we used to have and it is completely resilient. We have two pipes between the HQ and the wind tunnel and that is crucial for us.

"Being able to get 3D CAD data from the UK where it is hosted, where it is secure, and out to the track is a big improvement that helps speed of assembly. It helps quality, and that is crucial. This is a big improvement. We would not have been able to do that a few years ago because the volume of data was simply too large."TR

FOOTNOTE

The 2015 Formula One season got off to a bad start for Infiniti Red Bull. In Melbourne on 15 March Daniel Ricciardo finished sixth, a lap down on race winner Mercedes' Lewis Hamilton. Team mate Daniil Kvyat failed to make the start because he was unable to change gear on the approach to the grid. The team's chief engineer, car engineering, Paul Monaghan said the problem was due to a lack of oil pressure.

Huawei steers down new roads to serve telcos

Telecommunications network operators are facing new challenges and major disruption: the rise of over-the-top players threatens to reduce them to 'dumb pipe' providers and the emerging technologies of software defined networking and network functions virtualization will redefine their businesses. As a major supplier to these telcos, Huawei is redefining its business model.

At its global analyst summit in Shenzhen in April, Huawei unveiled a new strategy for its service provider business, which it encapsulated in two new acronyms: ROADS and STEER.

ROADS (Real-time, On-demand, All-online, DIY, and Social) is Huawei's vision for the end user experience and, it says, defines all aspects of its business. STEER (Stable evolution, Time to market, Elastic resources, Experience centric, Robust ecosystem) encapsulates what Huawei believes its service provider customers should be aiming to achieve, and it has restructured its carrier business in a way that it hopes will enable it to better help them achieve these goals.

Huawei's rotating and acting CEO Eric Xu, in his keynote speech to the summit, summed up the changes by saying: "We've redefined our carrier business strategy. Instead of prioritizing products over services, we are now attaching equal importance to both of them. We will invest more in services to provide customized commercial solutions that suit the different requirements of carriers at different development stages.

"We are committed to becoming a strategic partner that facilities carriers' transformation towards internetized operations; a primary integrator that supports carriers' ICT infrastructure transformation; and a leader in network planning, network optimization and customer experience management (CEM). We will lead the modernization of the managed service industry, shifting the industry's focus from networks to services and experiences, and from OPEX saving to value creation."

The new approach was detailed by Dr Leroy Blimegger Jr, Huawei's global manager for assurance and managed services. He said that the services component of Huawei's Carrier Network's Business Group (CNBG) was becoming the key growth engine for CNBG.

Services a key source of growth

Services revenue have been growing steadily from $5.26b in 2010 to $10.49b in 2014 when it accounted for 33 percent of CNBG revenues, the remaining 67 percent being fixed and wireless network infrastructure and software. Services revenues are expected to be about $11.40b in 2015.

However as networks become increasingly software defined and virtualized Blimegger anticipates CNBG evolving from a provider of communications technology (CT) services to a provider of information technology (IT) services. "Everyone knows Huawei as a CT service provider, and I think it would be bold for me to say that we are an IT service provider but what I will say is that we will be an ICT service provider and an IT service provider. We understand that very clearly."

He added: "In the past IT was a little island off by itself and it was very much support for the big CT network. The future is not like that. The future is a big IT organization with a bit of RAN (radio access network) that connects the endpoints. It is going to be an IT world and quite frankly it is going to upset a few CT people."

To meet these demands, Blimegger said that Huawei planned to hire at least 600 software experts and 4000 additional integration professionals over the next three years. "A major focus in coming years is not going to be network rollout: people doing outside plant work installing antennas on towers. The major work is going to be in IT and integration of systems and environments and having professionals who can very quickly create services and put them out to an end-user."

While Huawei's customer might be telcos, Blimegger made it clear that the focus of CNBG will need to be very firmly on its customers' customers—the end users of telecommunications services—if it is to be successful.

Focus on end users of comms services

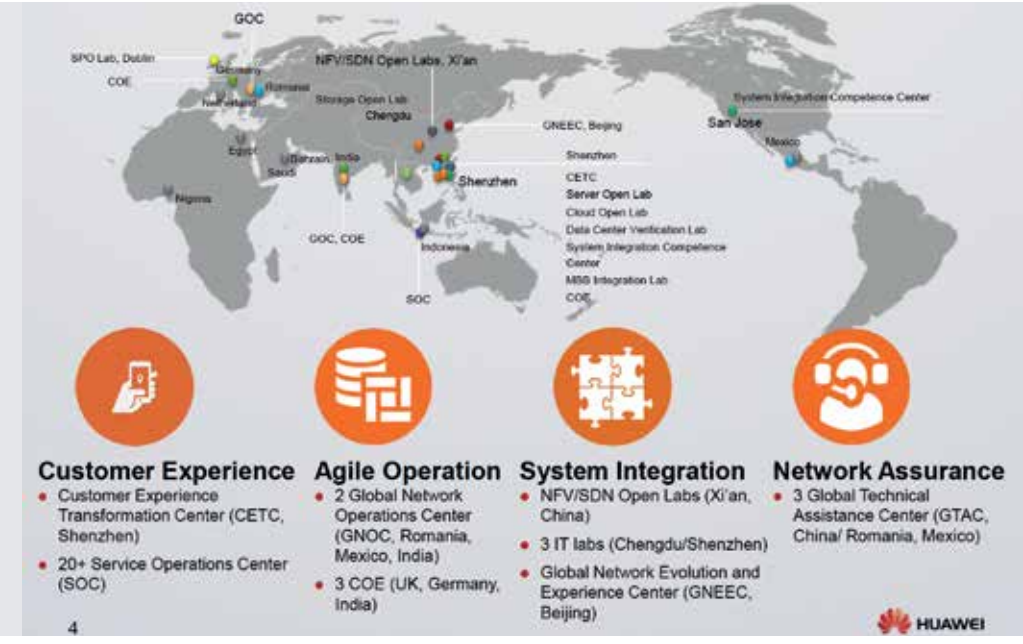
"I would like to make it clear that when we talk about ROADS we are talking about the end user expectation. This is what drives what the operators need to do, which drives what we need to do. ... Looking into the future we need have a clear understanding of what the end customer wants so we know how to better support our customers, the network operators."

Blimegger said that CNBG had invested $500 million over the past three years to prepare itself for this new era. Just under half of this ($242m) has gone into developing network planning and optimization services and customer experience management, including what Huawei claims to be the first customer experience transformation center (CETC) in the industry, at its headquarters in Shenzhen.

The other $258m has gone into integration services in the past three years, including a Global Network Evolution and Experience Center (GNEEC) in Beijing, NFV/SDN Open Labs and into planning and simulation tools. Blimegger said the move had been driven by telcos' recognition that they perform poorly in customer satisfaction measures compared to other industries. "If you look at other industries, the airline industry, the hotel industry, they have much better customer satisfaction numbers. ... So there has been a shift from focusing on network to focusing on service quality and customer experience.

"So our CETC has a place for the operators to come and sit together with us, with our partners and with other operators who are not competitors and figure out what is the right use case for me to make a change in what I do from an operational point of view, from an IT infrastructure point of view, from a service delivery point of view that will improve the customer experience and get some return, because customer experience is such a huge investment."

He added: "Right now we have one in Shenzhen but we expect to establish a second one in the UK and these will be tied together so that operators in Western Europe will be able to collaborate with operators in Asia-Pacific. I hope that we can also add one maybe in Latin America so that we can have a global presence for these customers experienced transformation centers."



Going forward, Blimegger said that Huawei planned to invest $350m over the next three years in consulting and system integration service solution development and platforms. This investment will include the creation of two centers of excellence, in Europe and North America, focusing on consulting and system integration.

"We don't want to be known as a pure consulting company but we need to have that consultative capability to make sure that our customers are very aware of what all the options are. We don't want to be PwC; we don't want to be an Accenture. What we want to do is take a bit of the best practice in consulting from them and use it to help our customers understand what their options are, to make decisions to protect their investment this year so we are not selling something that needs to be replaced in two years."

He described Huawei's relationship with the likes of PwC and Accenture as one of 'co-opetition'. "We use PWC and Accenture internally to improve our business and will go to market together, and there are areas where we compete. PwC is one of the companies we go to market with, especially in deployments with large human resources issues. We will get a local HR adviser to make sure we are not breaking any local HR rules."

STEER is no bull

Blimegger closed his presentation by explaining the components of STEER (Stable evolution, Time to market, Elastic resources, Experience centric, Robust ecosystem) as follows:

Stable evolution "This is very important: you can't be chopping and changing, there has to be very smooth migration."

Time to market "Things happen fast in our industry we need to be able to provide solutions in a reasonable time, and I didn't say fast for a reason: we have to always balance speed quality."

Elastic resources "This is related to the way we place our resources around the world. We need to be able to move people in and out quickly. We need to have people who can jump from one domain to the next domain so we are investing in a lot of cross-training so people can move across domains."

Experience centric "That is customer experience centric. It's very easy for large technology companies to fall back into the comfort zone of devices and that is something that we try every day to make sure we do not do. We have to make sure that everything we do is directed to improving the end-user experience."

Robust ecosystem "Competition is good. Competition drives innovation. Innovation drives better services to the end user and the drives low cost. So competition is mandatory for the ecosystem to survive."

The author attended Huawei's Global Analyst Summit as a guest of the company. TR

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Raising the Voice of the Network:

TIA CEO Scott Belcher on Our Changing Industry

The Telecommunications Industry Association (TIA) is the leading trade association representing the global information and communications technology (ICT). Recently appointed CEO, Scott Belcher discusses its priorities.

Remarkable new technologies promise to reshape communications, health care, transportation and more. At the same time, companies are facing new regulatory environments, a spectrum crunch, privacy and security questions, new challenges to doing business internationally, and more. In the face of all of this change, there is so much at stake for national economies, high tech businesses and consumers.

One of the things quickly learned upon taking on the CEO role at the Telecommunications Industry Association (TIA) is that the public debate frequently misses a critical element: the perspective of the companies that are actually powering modern communications networks. Understandably, consumers, mainstream media and even policymakers are often most focused on the latest gadget or on which high tech company is going public. But nearly all of the technologies and businesses that are making headlines these days are built upon one big assumption: that the network will remain fast, reliable, responsive and adaptable.

Answering important questions

But what if the FCC gets its way and takes a heavy-handed approach to regulating the Internet? The loss in private sector investment could dramatically slow innovation and progress with the network, creating the exact problems the FCC wants to address. Or what if companies and nations can't agree on consistent standards for the Internet of Things? The promise of a highly connected world could easily turn into a horror show. And given the world's insatiable demand for mobile data, what will happen if increasingly scarce spectrum becomes entirely unavailable?

These and many other critical questions have been front and center for me since I joined TIA in November. They present significant challenges and enormous opportunities for the network—and for the TIA members that develop, build and supply the equipment that makes the network possible. How they are resolved will impact the world for years to come.

In a few months, we will have an opportunity to gather as an industry to discuss, debate and plan around these critical issues. TIA 2015: Network of the Future will take place in Dallas from June 2nd to 4th, and it will bring together executives from carriers, network suppliers, government, automakers, engineering firms, and more. This highly interactive event will provide a 360-degree look at where the network stands today, and where it's headed.

Our annual conference is the flagship in a fleet of activities that TIA and our members are conducting to push the voice of the network to the forefront

of public and policy discussion. As we look at issues such as spectrum availability, M2M standards, and net neutrality, TIA members have an essential role to play in developing solutions that advance the industry and our economy.

Raising the voice of the network

Our companies are the high-tech manufacturers that build and support the network, and their work often takes place behind the scenes. They make the switches, routers, wires and towers that keep the world connected. This work is often done quietly, but our segment of the industry can and should become more vocal and influential in policy debates, industry decision-making, and even in the public conversation.

As we raise the voice of the network, TIA will be able to even more effectively deliver on the policy, technology and business needs of information and communications technology companies. And perhaps even more importantly, raising the voice of our industry will help make certain that our industry can continue to create high-tech jobs, drive economic opportunity, and be the world's innovation leader.

On my first day on the job at TIA, we were faced with a significant new challenge to our industry's ability to lead and grow. Like anyone starting a new job, I planned to spend my first day setting up my technology, getting briefed by colleagues and planning upcoming activities. Instead, I spent the day leading an industry response to President Obama's announcement that he is advocating for utility-style "Title II" regulation of the Internet.

It is simply a bad idea to put the Internet under a strict regulatory regime that was designed decades ago to address the needs of wired telephone communications. We all support the goal of making certain the Internet remains open and fast for everyone, but taking an extreme regulatory approach will backfire – leading to reduced private sector investment that will hurt our economy and limit Internet access and speeds for consumers.

Recognizing the opportunity to deliver a strong message on behalf of the network, TIA went into full swing – delivering the message through the media, conducting direct outreach to leaders on Capitol Hill and to FCC commissioners, educating industry executives, producing videos and other materials to support our case, and more. It was trial by fire—but it is a trial we have to win.

A full agenda for the future

Net Neutrality is just one of the many issues in which TIA and our members will play an active and vocal role in the year ahead. Another is the possibility of a rewrite of the Communications Act, which Congress hasn't altered since the days when just 20 million Americans had Internet access (dial up, of course) and Netscape was the hot new tech company.

Given the dramatic tech and telecom changes that have taken place since 1996 – today there are over 290 million Americans with Internet access – it is obvious to everyone that the legislation needs an overhaul – but it will be a massive and difficult effort. The last attempt to get it done, in 2006, ended in failure (thanks, in part, to a disagreement over net neutrality) and the pressure has continued to build since then.

We believe it is highly unlikely that a re-write will happen in 2015, but at the same time there is an earnest and important debate starting now, and it could very well lead to meaningful action in the next couple of years.

In addition, TIA is heavily focused on the business issues facing the network. The rise of the cloud, the explosion in data-enabled technologies, and the advent of software-defined networking have sent shockwaves through the industry. Significant revenue streams have virtually disappeared almost overnight, and enormous new opportunities are emerging almost every day.

TIA believes that this dynamic environment demands a higher level of industry intelligence that is faster and more responsive to a constantly shifting landscape. We are making this a priority, both through intensive events that address particularly important developments and by producing reports and video segments that help industry leaders understand and make sense of technology developments, emerging trends, new standards, policy debates and more.

These changes also demand a shift in how we view our relationship with consumers. While the industry once considered privacy and security just one of many necessary business considerations, we now recognize that they are essential to the future of the network. TIA is committed to working with the industry and policymakers to get security right. If we don't—if trust is fundamentally lost in the ability of companies and the network to safely carry and store private information—all of the technologies we enable will be put at risk.

Have your voice heard

In the year ahead, TIA has a packed agenda – including addressing the policy, markets and technology implications of a diverse range of issues, including sustainability, health IT, international trade, robotics, spectrum availability and smart vehicles. If you want to have your voice heard as we chart a course for the network's future, we encourage you to attend TIA 2015.

And whether or not you attend, please consider taking a look at our just-released Innovation Agenda, found on the website at TIAonline.org. The agenda outlines the many policy issues TIA believes are essential for the network to continue to live up to its promise.

In the face of so much change, the goal is for TIA to use our extraordinary expertise and intelligence to raise the voice of our members, and to make certain that the unseen network never goes unheard. I look forward to hearing from you as we take on this exciting challenge.TR

Why context is king

Patrick Allainguillaume, senior vice president, Global Market Unit at Mahindra Comviva, has had a front row seat to the IT and telecom transformation for over 20 years, having spent four years in each of Germany, Sweden, UK and the USA. He shared his views in conversation with Telecom Review at Mobile World Congress in Barcelona.

Mahindra COMVIVA

Patrick Allainguillaume, senior vice president, Global Market Unit at Mahindra Comviva, says context has become essential to appeal to the user, and says the industry has moved from focusing on devices to focusing on the consumer.

"Which services do we provide, which content will the customer prefer, how do we maintain consumer experience or enable mobile payments and make it easier?" he says. "It's all about the individual now." When asked if times have changed such that the operator is no longer king anymore, the industry veteran treads carefully.

"Despite the growth in OTTs and an increasing number of agreements between the two, mobile operators that provide the services will continue to be the gatekeeper. But what is more important is how the user has more choice now," he says.

According to Allainguillaume, because ARPU has been flattening across the world, the industry is experiencing evolution at a remarkable pace, something he feels very positive about. "If I just talk about Africa, there are innovations in healthcare, mobile payments, banking, etc. It's fascinating. The user is in focus because he or she will decide which application makes their life easiest and what level of usage suits them best."

Privacy concerns overblown

This is why he believes the whole hoopla over privacy is a little overblown. "Let's be clear about one thing," he says. "Analytics are not new. Banks and credit card companies have more information about you than anyone else, but no one seems to be complaining about them because you have more access to services.

> All our energy today is spent on bringing value to consumers

We tend to look at the dark side of analytics, but there is a very important side to analytics, which is that having information about user behavior can bring value to people. Of course we have to protect the identity of people and secure their identity.

"It's an important concern. But that concern will always exist because analytics are here to stay. It is the reality we need to accept. How do you balance between the risks and the benefits? By ensuring that the analytics can benefit the consumer. An event should be triggered by what you do and where you are. It doesn't need to know who you are."

Allainguillaume elaborated by outlining the phenomenon of contextual marketing, where relevant advertising can provide users with services they can and want to use. "For instance, when a user leaves the country, the operator has access to that information. The user should then be approached with the relevant roaming package based on their needs. That is contextual marketing, and that is what we are good at."

Allainguillaume went on to explain that, for the last 14 years, Mahindra Comviva has been developing value added services in mobile data, mobile payments and mobile commerce. "Every operator has business intelligence," he says. "But Mahindra can leverage what operators have in their networks by providing that kind of contextual, relevant information."

Bold claim of uniqueness

It's a bold claim to make, but Allainguillaume takes time to point out what makes Mahindra Comviva unique. "We do it in real-time. If you want to do that, you need to have expertise in deep packet inspections, locations, marketing, a whole set of varied knowledge, not just business intelligence.

"The fact that we are a true value added services provider in eCommerce, data and entertainment means we can do more with information in a contextual manner."

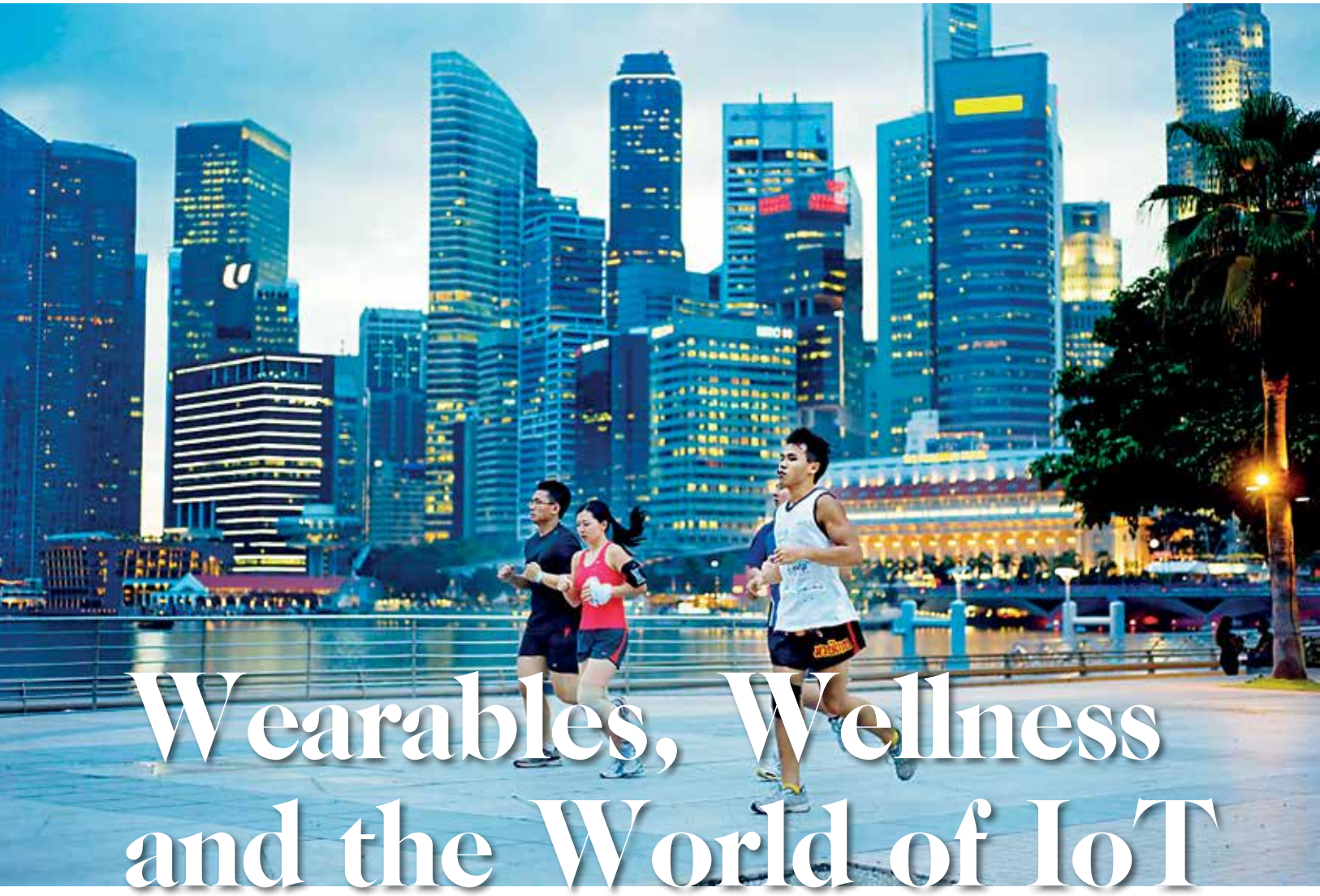
To illustrate his point, he quoted the experience of prepaid users who receive end-of-call alerts which inform them of their remaining credit amount." As of right now, most operators will use part of the 140 odd character limit to communicate products and services with their customers."

But Mahindra Comviva goes further than that, says Allainguillaume. "If I just called the US, and I call frequently, I would be interested to know about special operator packages for US bound calls. That contextual approach is what we can provide. There might be other companies doing it, but we can deliver it accurately each time and in real-time and that is what makes us unique in the world."

Allainguillaume says the move to content is providing a number of rich solutions to the user in terms of usability and diversity. "We are helping operators shift domains by showing them how to let business intelligence move away from mass marketing to marketing to individuals. It is a complete domain shift and we are working to make it a reality."

This focus is also at the heart of the company's agenda for the future – how to leverage, for instance, payment solutions to provide better services to broadband users in a contextual environment. "We would like to see mobile payment adoption on a wide scale. But the great goal would be to see unbanked populations in a place like Africa have access to any service because of our work with mobile operators."

He concludes: "All our energy today is spent on bringing value to consumers with our partnerships with operators, banks and even enterprise. And there exists great potential to see it happen." TR



Wearables, Wellness and the World of IoT

The use of technology to monitor and enhance personal wellbeing - the 'Internet of Wellness' - represents just a subset of the vast panorama of technologies that is the Internet of Things, but it has great potential to improve, and even extend the lives of its users.

In mid April what was claimed to be the first ever Health 2.0 Asia conference was held by the WiTA (Wellness IT Association) in Seoul with the support of the Korean Government and in collaboration with Korea's Jung-Ang daily newspaper and JTBC TV.

The promotional notes for the event said that personalized welfare policy and services had become a hot topic across Asia and that the need for investment in the welfare IT industry was becoming a key priority.

"The Korean government has created the first ever Happiness IT Platform in the world, based on 10 happiness criteria: social, occupational, spiritual, physical, intellectual, emotional, environmental, financial, mental and medical."

It added: "The Korean development of a functional Senior's Health & Wellness Index, taking into account seniors' mental, emotional, physical and environmental health will contribute to improving the health and wellness of the elderly globally."

There is no objective, external, measure of happiness; it is purely a personal perception. 'Wellness' can be objectively assessed on any number of physiological parameters, but subjective assessments are equally valid, and perhaps more valuable, and can produce paradoxical results.

Indians the world's 'wellest' people

How satisfied people are with their own 'wellness' seems to be almost in inverse relationship to the affluence of the country in which they live. Only one percent of people in Japan and South Korea are completely satisfied with their wellness. In the US and Canada and in major European countries—UK, France, Italy, Belgium—the figure is less than 10 percent, but in South Africa and India the figures are 36 and 29 percent respectively.

When you broaden the criteria to include both "completely satisfied with wellness" and simply "satisfied with wellness" the top four countries are India (90 percent), Indonesia (82 percent), South Africa (82 percent) and Mexico (70 percent). South Korea and Japan remain at the bottom of the scale with just under 20 percent each.

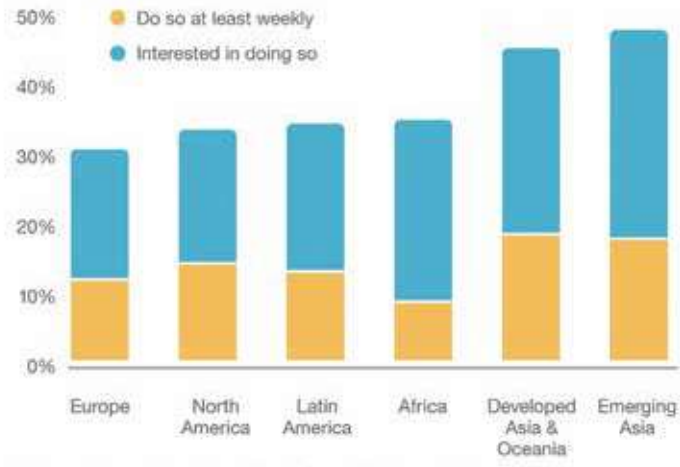
The figures come from a 49 country survey of more than 50,000 people undertaken by Ericsson ConsumerLab. You might well ask why a telecom equipment vendor wants to know how people feel about themselves. The answer is that Ericsson is trying to understand how perception of wellness relates to people's use of the Internet for health and fitness purposes.

Ericsson concludes: "Whereas wellness may easily be written off as a private concern, it is of broad popular interest. It will spur technological development with high usage that will have the potential to transform society at a quicker pace than any other area that we have studied."

And of course much of this usage will center on wearables and other health monitoring devices, just one subset of the burgeoning Internet of Things ecosystem.

The survey looked at two related aspects of using technology to aid wellness: self-quantification and wearables. Perhaps surprisingly, it found both current use of and interest in these technologies to be greater in Asia than in the West.

Ericsson report: Living Longer, Wellness and the Internet



Asian want wearables

Around 15 percent of people in Asia and Oceania said they presently quantify their behaviour and when those interested in doing so are added the figure rose to about 45 percent. The equivalent figures for Europe and North America were about 12 percent for current usage and just over 30 percent for 'using' and 'interested in using' combined. The figures for wearables were very similar.

Ericsson concludes: "With 12 percent of consumers around the world already using wearables, they are no longer just a novelty. Instead, consumers are clearly starting to use these devices as part of a project to improve their wellness, when it comes to both looks and health."

Consumers also expect communications and the Internet to improve their interactions with the external environment. "Sixty six percent said a smartphone that checks the water quality of public facilities and compares it with similar facilities nearby would be useful," Ericsson reported.

"Sixty two percent would like a city microclimate monitor on their smartphone that locates cool areas on hot days, and less polluted areas in times of smog. Wearing a bracelet to continuously monitor air quality and pollution levels appealed to 60 percent of those asked. ... Fifty five percent of consumers already want a wearable ecometer to select the most environmentally friendly commuting choice."

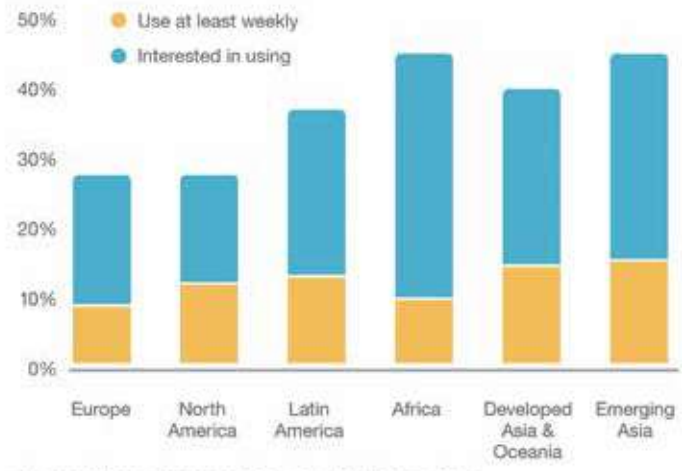
Unlike wellness perception the relationship between people's desire for such services and the environments in which they live is entirely logical. The number of people desiring water quality checkers, microclimate monitors and wearable clean air monitors were above 80 percent in the polluted cities of Delhi and Beijing and below 50 percent in cities such as London and Stockholm.

The Internet of People

Verizon in its *State of the Market The Internet Of Things 2015* report uses the concept of 'the Internet of People' to distinguish the subset of the IoT market that serves people directly (distinct, of course from use of the Internet by people for information that they consume visually or aurally).

Within this market, Verizon sees the 'Internet of Wellness' (our term) market

Ericsson report: Living Longer, Wellness and the Internet



Source: Ericsson ConsumerLab Analytical Platform, 2014
Base: 54,775 mobile phone owners in 49 countries

being much wider than consumers. "Fitness trackers are now a multi-billion dollar market, worn by people of all walks of life. And now governments and businesses are looking at how they can use wearables to increase safety and wellness, and reduce the cost of medical care and lost productivity."

Verizon points out that wellness matters to all employers. "Healthy employees are likely to take less time off work and be more productive. That's why many companies, particularly in the US, have introduced wellness programs."

In the report Verizon says that wearables can contribute to the effectiveness of these programs by making it easy for employees to monitor their progress and for organizations to incentivize participation. It quotes a prediction from ABI Research that organizations will introduce more than 13 million health and fitness tracking devices into the workplace by 2018.

According to ABI Research, vendors including FitBit, BodyMedia, FitLinxx and others are all developing products and strategies with an eye to the corporate wellness market. However, it says that adoption will be dependent on them forming the right partnerships with existing players already in the corporate healthcare management space.

Moves are already being made to facilitate such partnerships. In January the International M2M Council announced an agreement with The European Connected Health Alliance to promote the use of technology for telehealth and connected wellness. The agreement called for the two groups to communicate activities among each other's membership base, share public platforms and offer bilateral strategic direction.

Gartner, in its *Hype Cycle for The Internet of Things 2014*, says that quantified self is beginning to move into the workplace in support of wellness. "The inclusion of wearable devices and self-tracking apps as part of corporate wellness programs is becoming an aspect of employee engagement and digital workplace initiatives," Gartner says, adding: "Strategists are also looking at the potential of quantified self to improve personal and business productivity."

However Gartner doesn't rate quantified self as being a mature movement: it's five to ten years from the Hype Cycle's 'Plateau of Productivity' and yet to reach the 'Peak of Inflated Expectations'.

Wearables for longer life

The bottom line is: How much can wearable and quantified self technologies do to improve real health, wellbeing and longevity? Respondents to Ericsson's Wellness study expected wearables that monitor and regulate stress levels to increase their lifespan by, on average, 2.0 years and wearables that monitor and regulate physical activity to add 1.9 years.

The also estimated that cups and plates able to measure intake of calories, salt and harmful ingredients could add 1.8 years. In fact this might be the greatest single contribution to health and wellbeing that the 'Internet of People' could make.

The January 2015 edition of the McKinsey Quarterly has a table showing estimates of the number of person years that could be added by various initiatives to lives in the UK (population 60 million) that would otherwise have ended or been rendered economically unproductive by disease.

Workplace wellness initiatives would add some 200,000 person years of additional economically productive life. Impressive? No, not against the most effective initiative: portion control, at more than two million person years of additional productive life.

Other initiatives that would be supported by cups and plates able to measure intake of calories, salt and harmful ingredients included reformulation of food products, 1.7 million person years; reducing the availability of high-calorie foods/ beverages, 1.2 million; Healthy meals, 0.8 million.

Looking at stats like those, you can well believe the Ericsson view that widespread usage of IoT based wellness technologies "has the potential to transform society at a quicker pace than any other area that we have studied." TR

ITU to study the network standardization for 5G

The International Telecommunication Union (ITU) has established a new focus group to identify the network standardization requirements for the development of International Mobile Telecommunications (IMT) for 2020 and beyond (aka 5G). The network studies will be hosted by ITU's Standardization Sector (ITU-T) and, ITU says, will benefit from "the strength of ITU-T standardization in wireline communications."

"These IMT-2020 systems will enable wireless communication to match the speed and reliability achieved by fiber-optic infrastructure," ITU said. "The potential application fields of IMT-2020 systems, in addition to voice and video, span from healthcare to industrial automation, virtual reality, automated driving, and robotic systems controlled with an imperceptible time lag. One-millisecond end-to-end latency is necessary for technical systems to replicate natural human interaction with our environment, a goal that experts say should be within reach of future networks."

In 2012, ITU established a programme on International Mobile Telecommunications (IMT) for 2020 and beyond. This, it says, "provides the framework for IMT-2020 research and development worldwide."

ITU secretary-general, Houlin Zhao, said: "There is a need to devote more attention to the networking aspects of IMT-2020. Wireline communications will transform significantly in support of IMT-2020, and the coordination of ITU's standardization and radiocommunication arms will ensure that the wireline and wireless elements of future networks develop in unison."

The characteristics of leading mobile operators

A study from Ericsson in collaboration with Ernst and Young has identified three distinct strategies adopted by successful mobile operators, dubbed Frontrunners. Between 2010 and 2014, Frontrunners enjoyed a 9.6 percent CAGR while competitors in their markets achieved only 2.7 percent, Ericsson says, adding: "Significantly, what is good for the end user is also good for the operator."

The Frontrunner strategies are:
Quality-led progression: These Frontrunners differentiate through high-performing networks and high brand preference.
Market-led adaptation: These Frontrunners differentiate through quick adaptation to market conditions.
Offering-led transformation: These Frontrunners differentiate by being first to market with uniquely designed offerings.

The study also revealed a number of ways in which Frontrunners are similar, including their views on connectivity and services as differentiators rather than commodities, and their focus on innovating new revenue streams rather than maximizing old ones.

"Frontrunners display greater interaction between marketing and technical roles, rather than the traditional silos, and they leverage network performance by either utilizing superior network performance as a differentiator or by improving network performance to meet customer expectations," Ericsson said.

Nokia Networks claims first TD-LTE Advanced HetNet deployment

Nokia Networks is claiming a world first with the deployment of TD-LTE Advanced HetNet technology with carrier aggregation in the Shanghai network of China Mobile for an international sports event (which it did not identify).

"Nokia Networks implemented its Flexi Zone TD-LTE small cells for scaling up China Mobile's network capacity to manage the huge amount of wireless data traffic generated by 49,000 subscribers at the event, with more than half of this traffic carried by small cells," Nokia said.

"With Nokia Networks' solutions and services expertise, subscribers enjoyed an ultra-fast mobile broadband experience, complemented by superior network availability, coverage and capacity."

During the three-day event, traffic load in the network scaled a new high as many of the 145,000 visitors used multiple apps to share pictures and videos (49,000 TD-LTE users at peak), Nokia said.

"With macro software parity and Nokia Smart Scheduler, Flexi Zone TD-LTE small cells delivered excellent network availability while managing wireless data with up to 600 simultaneous active TD-LTE users per cell – supporting more simultaneous users than typical outdoor small cells."

BT launches 'Cloud Of Clouds' – global cloud integration

BT has announced what it says is a new generation of cloud services that allows large organizations around the world to connect easily and securely to the applications and the data they need, independent of where they are hosted.

These services, according to BT "will empower customers to integrate and orchestrate the IT resources hosted on their own private clouds as well as on BT's global cloud platform and on the platforms of other leading cloud providers."

The new services take advantage of BT's global network infrastructure and rely on technology developed by BT and its partners in diversified infrastructure management, service management, global network optimization, application performance acceleration and security.

Luis Alvarez, CEO, BT Global Services, said: "In the future digital age, no business will be successful unless it makes the most of the cloud. CIOs ask for choice and flexibility, trusted security and the best know-how in the industry to meet their business challenges. … We're investing with our partners to bring the widest possible range of options to connect our customers' critical applications and data, wherever those are hosted, whenever they need them, on whatever device they use."

Telstra takes Pacnet's SDN service global

Telstra has announced that it will make the Asian software defined network service of its recent acquisition, Pacnet, available to customers globally.

Darrin Webb, COO of Telstra Global Enterprise & Services, said the service was now available globally in 25 points of presence across eight countries, up from the original 16 in Asia. These countries Australia, Hong Kong, Singapore, the United States and United Kingdom – with additional connectivity options into public cloud services to bridge hybrid cloud deployments.

Pacnet launched the Pacnet Enabled Network (PEN) service in early 2014, enabling customers to 'dial up' international bandwidth on demand. In March it extended the service into the optical layer. Customers with a presence in Pacnet data centers are now able to set up optical links at 10, 40 or 100Gbps by the hour, the day, or the week via a web portal.

According to Webb: "With the PEN Platform, network provisioning is completely automated and services that traditionally take weeks can be provisioned in minutes. Customers can dynamically allocate and scale the bandwidth required to support demand for applications, enabling a more agile approach to network provisioning, while avoiding unnecessary costs too."

Construction starts on SEA-US cable system

Construction has started on the $US250m South-East Asia - United States (SEA-US) submarine cable system for which NEC Corporation and NEC Corporation of America are the system suppliers. NEC expects to complete the project in the fourth quarter of 2016.

The SEA-US system will link the five areas and territories of Manado in Indonesia with Davao in Southern Philippines and Piti in the territory of Guam as well as Honolulu and Los Angeles. The system will be approximately 15,000 kilometers in length. It will follow a route that has been designed and engineered to bypass earthquake prone areas in East Asia and will be the first submarine cable to directly connect Indonesia and the United States.

The system will provide an initial 20Tbps of capacity using 100Gbps per wavelength DWDM technology. "This capacity will help to meet the exponentially growing demand for bandwidth between Southeast Asia and North America in unparalleled performance, especially for those two ASEAN countries," NEC said.

It added: "With further connectivity using existing and planned submarine cable systems in the region, other countries such as Singapore, Malaysia, Brunei, Papua New Guinea, and Australia can enjoy the benefit of SEA-US."

The cable has been commissioned by a consortium comprising PT Telekomunikasi Indonesia International (Telin), Globe Telecom, RAM Telecom International (RTI), Hawaiian Telcom, Teleguam Holdings (GTA), GTI Corporation (a member of the Globe Telecom group of companies) and Telkom USA.

Avaya names Mike Ansley Apac leader

Avaya has appointed Mike Ansley to lead its business across the Asia Pacific. He replaces Mike Muller, who is leaving Avaya to pursue other opportunities. Ansley was most recently vice president of business markets at Cisco in Canada. He has also held senior management positions at Cisco. Before joining Cisco he was vice president and general manager for EMEA at 3Com/HC3.

Expanding Acquia appoints GM for APJ

Acquia, which describes itself as "the digital experience company," has appointed Graham Sowden as general manager for Asia Pacific and Japan, based in it regional headquarters in Sydney. Sowden joins Acquia from Informatica where he was senior vice president of Asia-Pacific Japan. The company says it is experiencing rapid growth in the region, particularly in the transportation, healthcare, and higher education sectors. It will grow its team in Australia and expand its presence in North and South Asia. Acquia says its team in India is growing, powered by its work with system integrators such as Accenture, Capgemini, Sapient, and Wipro.

ForgeRock expands into Asia Pacific

ForgeRock, the provider of an open platform for identity management, has opened new regional headquarters in Singapore and has appointed Sumal Karunanayake as senior vice president for Asia Pacific and Japan. He joins ForgeRock from CA Technologies where he led the market entry for Nimsoft (post-CA acquisition). Prior to CA, he launched NetSuite's international business operations.

Silver Peak names new VP to expand APAC WAN optimization

Silver Peak has appointed Doug Farndale as vice president Asia-Pacific to expand its WAN optimization and software-defined WAN (SD-WAN) business across the region. He will remain in Singapore where he as been based for the past 15 years, most recently working with various startups focused on public and hybrid cloud solutions. Farndale said: "According to leading analysts, the APAC region will experience the highest global growth in the WAN optimization market over the next four years. ... We will aggressively recruit competent channel partners to address the SD-WAN growth opportunity."

Webroot names Robbie Upshot Asia Pacific MD

Webroot, a provider of cloud-based, real-time Internet threat detection, has named Robbie Upcroft as managing director for the Asia Pacific region, based in Sydney. He was previously general manager at Arrow ECS and before that sales manager of SMB and distribution for Asia Pacific at McAfee. David Bennett, vice president of worldwide consumer and SMB sales at Webroot, said his appointment would "accelerate business momentum and adoption of our unique, smarter security approach in the Asia Pacific region."

FireEye appoints Eric Hoh to lead APJ

Cyber security provider FireEye, has appointed Eric Hoh to the newly-created role of president of Asia Pacific and Japan, based at the company's regional headquarters in Singapore. FireEye began Asia Pacific operations in Australia in 2010 and says it has grown its regional presence from a single employee to over 350 employees, a research and development center in Bangalore and a joint Singtel-FireEye advanced security operations center in Singapore that opened in February 2015. TR

Telecom Review Summit 'Its all about Networking' 2015

SUMMIT TELECOM Review

Following the great success of the 2014 edition, Telecom Review Summit will gather global leaders and experts of the telecom and ICT industry, for the sixth consecutive year, in a friendly environment to discuss the latest market trends.

Date: **13 December 2015**
Place: **Intercontinental Hotel, Dubai Festival City, Dubai, UAE**

May 2015

Broadband TV Connect Asia 2015

The show is the region's top networking forum bringing together 800+ senior level decision makers and buyers from the broadband and connected entertainment industry from across the Asia-Pacific region and beyond.

Date: **12th-13th May 2015**
Place: **Suntec, Singapore**

June 2015

CommunicAsia2015

The 26th International Communication and Information Technology exhibition and conference will unveil the latest innovations in technology, starting from big data, business analytics, cloud technologies, IoT, to Zigbee. During the exhibition, strategic partnerships among key players of the ICT ecosystem will be established, critical issues within Asia Pacific markets will be addressed and the future directions of the information technology sector will be determined.

Date: **2 - 5 June 2015**
Place: **Marina Bay Sands, Singapore**

July 2015

Mobile World Congress Shanghai

Mobile World Congress Shanghai will celebrate the amazing possibilities that mobile brings. Attendees will experience the future of mobile unlimited through a massive technology exhibition featuring 250+ exhibitors, a world-class thought-leadership conference with engaging keynote speakers and compelling panel sessions, in addition to C-Level networking opportunities, and specialty expo zones and pavilions devoted to mobile gaming, i-accessories, devices, apps, emerging startups and more.

Date: **15-17th July 2015**
Place: **Shanghai New International Expo Centre, China**

October 2015

LTE Asia

Celebrating its ninth year, LTE Asia is returning to Singapore with an extended conference program and new speakers from the whole ecosystem to give greater depth and breadth of discussion around the region's most pertinent mobile broadband developments.

Date: **6-8 October 2015**
Place: **Suntec, Singapore**
http://asia.lteconference.com

November 2015

COMMUNICAST MYANMAR

ommuniCast 2015 will combine a professional exhibition with additional events, which will include the second Myanmar Satellite Forum. A selection of sponsorship opportunities will be offered for the show, for the Satellite Forum and for a combination of the two. The show, that brings together professional visitors and companies, will set a new benchmark for projecting the forward development of the country's ICT industry.

Date: 17-19 November 2015
Place: Myanma Event Park(MEP), Yangon

Latest updates on:
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SUMMIT
TELECOM Review

"It's All About SMART Networking"

December 13th, 2015
Intercontinental Hotel,
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Telecom Review will host its sixth annual summit, It's All About SMART Networking, at the Intercontinental Hotel, Dubai Festival City. The Summit, which has become the must-attend event for industry leaders regionally and globally, will feature compelling keynotes and panels that will tackle the ever-evolving scene of the telecom industry.

In addition to industry veterans, the Summit will welcome government and regulatory officials who will convene to discuss the direction the telecom industry is taking through insightful and thought-provoking discussions and networking opportunities.

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