

Communications

Africa Afrique

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*L'introduction des technologies numériques au Congo
The introduction of digital technologies in the Congo*

IPTV

New technologies, convergence and media delivery methods

Satellite

Space-based connections to serve
social and economic growth

Broadband

Network, policy and regulatory
frameworks for fast mobile Internet

Diffusion

Des chaînes de télévision
numérique en Afrique

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FEATURES: ● Internet ● Mobile ● Infrastructure
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CONTENTS

Bulletin	4
Events	8
Agenda	10
Solutions	32

FEATURES

Internet	16
AA The rise in mobile broadband penetration across the continent; and AB the ways in which the Internet of Things transforms business models and commercial operations	
Satellite	20
CA The satellite sector's deepening service to society and economy; CB industrial innovation with mobile satellite communications; SingTel Singtel's commitment to satellite connectivity; and EB technological trends for tomorrow's space-based networks	
Power	25
F G Wilson's expanded range of diesel generators, which are designed specifically to serve telecommunications network operators in multiple applications and diverse geographies	
Capacity	26
EA The current debate over issues affecting the infrastructure of OTT service delivery	
Broadcast	28
FA How technological and operational developments have advanced the case for localised IP media services; and FB future-ready modular solutions for digital migration, available now	

A note from the Editor

THIS ISSUE OF Communications Africa/Afrique is centred around space-based infrastructure and the digital economy. Following the most recent industry news, this issue begins with analyses of broadband penetration and technologies, and moves on to satellite connectivity in relation to socio-economic dynamics. This issue addresses, also, solutions to solve power and capacity problems, before approaching the advancement of technologies and business models for digital television and content delivery.

Main Cover Image: SES

Inset: World Bank

Contents Page Image: PerceptionTV



Une note du rédacteur

CETTE ÉDITION DE Communications Africa/Afrique représente l'Internet, l'infrastructure, et la Diffusion. Il y a un article sur le travail d'un nouveau groupe d'experts spécialisés dans l'Internet des objets et ses applications. Il y a un autre article concernant un réseau de fibre optique et la modernisation des technologies au Congo. De plus, il y a un rapport sur le sujet ses chaînes de télévision numérique en Afrique.

ARTICLES

Internet	19
BA FR Des normes de l'UIT comme un nouveau groupe d'experts spécialisés dans l'Internet des objets et ses applications	
Infrastructure	27
DA FR La pose de la première pierre des travaux de raccordement au réseau de fibre optique lance la modernisation des technologies au Congo	
Diffusion	31
FA FR Des chaînes de télévision numérique en Afrique, et le lancement de My TV Smart, Ma TELE et Shashatee sur le satellite Eutelsat 16A	

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BICS reports explosion in LTE roaming with month-on-month double digit growth

WHOLESALE SERVICES CARRIER **BICS** has revealed a rapid increase in LTE roaming traffic over its IPX network through 2014, and into the first quarter of 2015, during which time the company experienced a 25 per cent month-on-month growth in traffic, with capacity usage on the BICS GRX network growing 45 per cent and IPX transport (comprising of next generation data traffic) growing by 400 per cent; "LTE roaming continues to go from strength to strength and now boasts an extensive footprint covering over 100 countries and over 235 operators supported by the full value IPX can offer," said Mikael Schachne, VP mobile data business at BICS.

MTN & Mobisol partner in school electrification Campaign

SOLAR ENERGY ENTERPRISE **Mobisol** joined mobile network operator **MTN** to electrify eight rural Rwandan schools with no prior access to electricity in the districts of Gicumbi, Ngoma, Kamonyi, Nyagatare, Gakenke, Nyaruguru, Nyabihu and Nyamashoke, as part of the 2015 Y'ello Care programme to benefit communities that are disadvantaged by focusing on sustainable ICT initiatives through the provision of relevant educational equipment and skills mentoring, with eight high-quality and sustainably managed and maintained Mobisol Solar School Systems installed during the first two weeks of June; Yvonne Mubiligi, MTN's corporate affairs manager, said, "In partnering with Mobisol to provide solar systems to schools, we believe that this will produce productive citizens able to compete in the already hi-tech global market."

How WFP uses technology to keep tabs on food security in Rwanda

WORLD FOOD PROGRAMME (**WFP**) is using advanced technologies to support the **Rwandan Government** in its efforts towards building the capacity to develop, design and manage programmes to improve the food security in the country, by providing 150 computer tablets worth US\$89,000 to assist the **Rwandan Ministry of Agriculture and Animal Resources (MINAGRI)** to collect timely and accurate information that will

help assess the food security situation across the country; "These tablets will allow the government to collect real time data on how people are eating, how much they pay for food and where potential pockets of hunger are developing," said Jean-Pierre de Margerie, WFP country director.

Millicom makes good on commitment to acquire Zanzibar Telecom from Etisalat

TELECOMMUNICATIONS AND MEDIA company **Millicom** has signed a share purchase agreement to acquire an 85 per cent stake in **Zanzibar Telecom (Zantel)** from **Etisalat Group**; Zantel delivered 2014 gross revenues of US\$82mn and 1.7mn subscribers across Zanzibar and mainland Tanzania, operating 2G and 3G services over 545 network sites, with 57MHz of spectrum, ownership rights to undersea fibre optic cable capacity, and approximately five per cent of the Tanzanian mobile market.

Kenyan Cabinet Secretary launches 2015 report on State of Blogging & Social Media

THE BLOGGERS ASSOCIATION of Kenya (**BAKE**) has released 'The State of Blogging & Social Media in Kenya 2015 Report'. It was launched by the **Kenyan Government** Cabinet Secretary for ICT Fred Matiangi at the **Nailab**, one of Kenya's top innovation hubs located at Bishop Magua Centre in Nairobi.

Mr Matiangi noted that media trends are changing and that the Internet is becoming the new media of choice, even for the government. He emphasised that the Kenyan Government respects the blogging space, fundamental rights and the freedom of expression guaranteed in the new Kenyan Constitution. "It is not the intention of this government to harass anyone online," he said.

Mr Matiangi called on Kenyan bloggers to apply ethical conduct in their engagements on social media in order to strengthen the democratic space. He said, "We are not that autocratic regime that will wake up one morning and shut down the Internet. Let us bring a sense of culture that will create a value system and shape morals in the social media space."

Matiangi confirmed that social media have become a security challenge for countries all over the world. He called on **BAKE** to organise a framework where his office can meet with bloggers on a regular basis to interact on various issues facing the online content creator community of bloggers and Social media users.

Mr Matiangi was joined by **BAKE** chairman Kennedy Kachwanya and the report's project lead Njeri Wangari in launching the report which is part of **BAKE's iFreedoms Project**.

The report highlights the significant gains made by bloggers in the promotion of free speech as well as in the creation of quality and diverse content about Kenya on the Internet.

The event was attended by Kenyan Government officials from the **Ministry of ICT, the Kenya ICT Authority, Kenya Media Council**, dignitaries from the Norwegian, US and Dutch embassies in Kenya, civil society, activists, bloggers and social media influencers.

Michael Greenwald, public affairs officer at the US Embassy in Nairobi, remarked, "Bloggers play a huge and important role in democracy, the US Embassy is happy with our continued partnership with **BAKE**."

Award-winning Kenyan photojournalist Boniface Mwangi joined Kenyan advocate Mugambi Laibuta, ICT Authority CEO Victor Kyallo, **Ushahidi** director Daudi Were and Njeri Wangari for a panel discussion on the report during the launch ceremony. The panel discussion was moderated by the event MC, Robert Mwirigi Kunga.



BAKE's blogging & social media report was launched at the **Nailab**

TTCL contracts with Avanti Communications for national deployment in Tanzania

SATELLITE OPERATOR **AVANTI Communications** has signed a new contract with **Tanzania Telecommunications Company Ltd (TTCL)**, Tanzania's incumbent national telecoms operator, to expand TTCL's high-speed broadband network to customers beyond the bounds of fibre infrastructure. Deployed via Avanti's **HYLAS 2** satellite with 100 per cent coverage of Tanzania, TTCL will supply a new satellite broadband offering to its consumer, enterprise and government customer base imminently.



Avanti's **HYLAS 2** satellite

Dr Kamugisha Kazaura, chief executive of **TTCL**, commented, "Avanti's proven Ka band satellite technology will deliver high-speed broadband to our national customer base, which demands the highest levels of service quality. We look forward to addressing Tanzania's immediate digital divide challenges via this growing partnership."

David Williams, chief executive at **Avanti Communications**, commented, "This is a significant contract with one of the most important telecoms operators in East Africa. The quality and flexibility built in to Avanti's network from its design ensures we deliver to the most demanding customers' needs. Our Ka band satellite technology has a huge role to play in supporting **TTCL** to bridge Tanzania's digital divide, today."

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Un prix pour l'éducation dans les pays émergents

L'AGENCE UNIVERSITAIRE DE LA Francophonie et l'Université de Mons ont remis le prix Louis d'Hainaut 2015 de la meilleure thèse en technologie éducative; le prix Louis d'Hainaut, qui récompense la meilleure thèse de doctorat en technologie éducative, a été remis le 3 juin 2015 à Mme Faouzia Messaoudi du Maroc dans le cadre du colloque **Environnements Informatiques pour l'Apprentissage Humain (EIAH)** qui s'est tenu à Agadir.

SAP présente la transformation numérique dans le secteur de l'aviation

LEADER DES APPLICATIONS d'entreprise SAP et plus de 80 de ses clients sont présentés au Salon du Bourget en France pour présenter leurs innovations destinées à l'industrie aéronautique et de la défense (A&D); Torsten Welte, directeur mondial des secteurs de l'aéronautique et de la défense (l'A&D) chez SAP SE, « Ces solutions permettent à plusieurs centaines d'entreprises du secteur de l'A&D d'optimiser les procédés, d'affiner la différenciation concurrentielle et d'innover pour parfaire l'expérience client », a déclaré.

Tap'Touche sur iPad et Chromebook, de Druides informatique

DRUIDE INFORMATIQUE A annoncé que Tap'Touche en ligne, son application Web d'apprentissage de la frappe au clavier, est compatible avec les iPad et les ordinateurs portables Chromebook; toute personne souhaitant améliorer sa maîtrise du clavier peut s'abonner à Tap'Touche en ligne via www.taptouche.com.

Orange Business Services et Gemalto offrent un accès hautement sécurisé aux applications cloud

GEMALTO, LEADER MONDIAL de la sécurité numérique, et Orange Business Services, opérateur et intégrateur mondial de solutions de communication pour les entreprises, ont annoncé l'intégration de SafeNet Authentication Service de Gemalto au sein de Business VPN Galerie, la galerie de services cloud sécurisée d'Orange Business Services; « En proposant les solutions d'authentification de Gemalto, nous élargissons l'écosystème des applications accessibles via la Business VPN Galerie et renforçons la sécurité des accès à ces applications via notre réseau cloud mondial » affirme Pierre-Louis Biaggi, vice-président en charge des réseaux au sein d'Orange Business Services.



Le nouveau groupe d'experts spécialisés dans l'Internet des objets et ses applications

LES MEMBRES DE L'UIT ont créé une nouvelle Commission d'études de l'UIT-T qui sera chargée d'examiner les besoins de normalisation des technologies de l'Internet des objets (IoT) tout en privilégiant, dans un premier temps, les applications de l'IoT dans les villes intelligentes.

Cette nouvelle Commission est la "Commission d'études 20 de l'UIT-T : l'Internet des objets et ses applications, y compris les villes et les communautés intelligentes". Elle sera chargée des normes internationales qui garantiront un développement coordonné des technologies de l'IoT, y compris les communications de machine à machine et les réseaux de capteurs ubiquitaires. Elle élaborera des normes qui permettront d'utiliser le potentiel des technologies de l'IoT pour trouver une solution aux problèmes liés à l'urbanisation. La

normalisation des architectures de bout en bout pour l'IoT et les mécanismes pour assurer l'interopérabilité des applications et ensembles de données IoT utilisées par divers secteurs verticaux de l'industrie constitueront une partie essentielle de son travail.

Le déploiement des technologies de l'IoT devrait permettre de connecter, selon les estimations, 50 milliards de dispositifs au réseau à l'horizon 2020, ce qui aura des incidences sur pratiquement tous les aspects de notre vie quotidienne. L'Internet des objets contribue à la convergence des secteurs de l'industrie, en particulier les secteurs des services collectifs, des soins de santé ou des transports faisant partie des nombreux secteurs qui ont un intérêt dans l'avenir des technologies de l'IoT. La nouvelle Commission d'études de l'UIT-T est la

nouvelle plate-forme spécialisée dans la normalisation de l'IoT nécessaire pour que cette convergence s'appuie sur un ensemble cohérent de normes internationales.

Les technologies de l'IoT donnent aux pays développés comme aux pays en développement la possibilité de transformer les infrastructures urbaines en tirant parti des gains d'efficacité inhérents aux bâtiments et systèmes de transport intelligents ainsi qu'aux réseaux d'alimentation électrique et de distribution d'eau intelligents. L'UIT est bien placée pour aider les pouvoirs publics et le secteur privé à mettre à profit cette opportunité.

"Construire des villes intelligentes et durables nécessitera une collaboration efficace entre le secteur public et le secteur privé," a déclaré le Secrétaire général de l'UIT M Houlin Zhao. Et d'ajouter : " Cette nouvelle Commission d'études de l'UIT-T rassemblera en son sein des acteurs venant d'horizons divers qui mettront les compétences techniques de l'UIT au service d'autres secteurs de l'industrie et des administrations nationales et métropolitaines responsables des questions d'urbanisation."

"Les cinq années à venir seront déterminantes pour exploiter tout le potentiel des technologies de l'IoT," a déclaré M Chaesub Lee, Directeur du Bureau de la normalisation des télécommunications de l'UIT. "L'UIT-T s'emploie activement à élaborer des normes pour l'IoT et nous cherchons à aider les villes dans le monde entier à créer les conditions nécessaires pour démontrer l'utilité des technologies de l'IoT dans la solution des problèmes d'urbanisation."



M Chaesub Lee, Directeur du Bureau de la normalisation des télécommunications de l'UIT

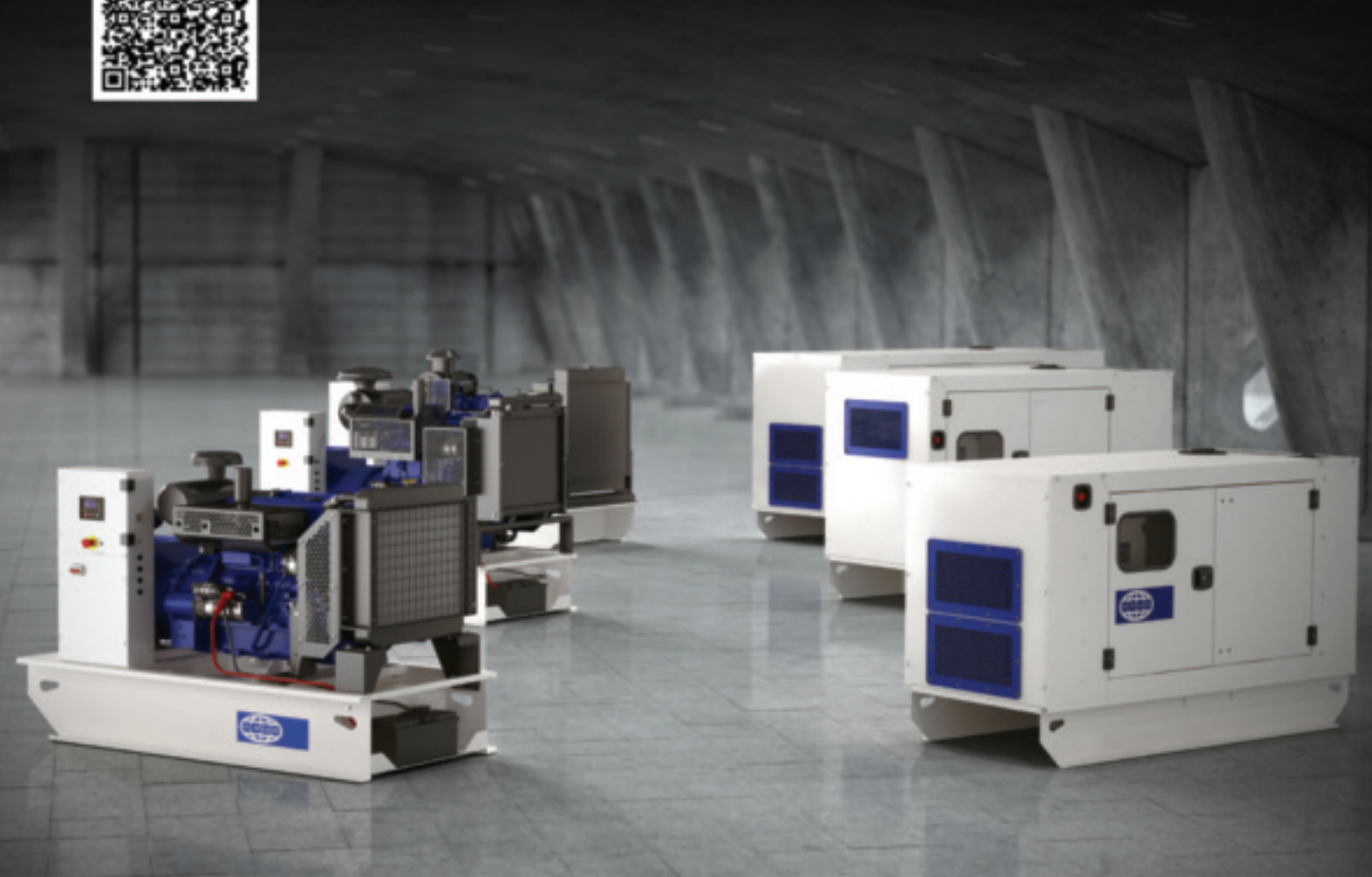


le Secrétaire général de l'UIT
M Houlin Zhao

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Events / Événements 2015

JULY/JUILLET

30 Jun-1 Jul	VAS Africa	Johannesburg, South Africa	vasafrica.comworldseries.com
5-7	HR4ICT	Maputo, Mozambique	www.cto.int
6-8	PACT	Kampala, Uganda	ib2com.org/PACT
15-17	Mediatech Africa	Johannesburg, South Africa	mediatech.co.za
28-29	Banking & Mobile Money Lagos	Lagos, Nigeria	aitecafrica.com

AUGUST/AOÛT

10-11	Broadcast, Film & Music Africa	Nairobi, Kenya	aitecafrica.com
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SEPTEMBER/SEPTEMBRE

8-9	Capacity Africa	Dar es Salaam	www.capacityconferences.com
9-10	Banking & Mobile Money COMESA	Nairobi, Kenya	aitecafrica.com
10-15	IBC	Amsterdam, The Netherlands	www.ibc.org
14-16	Commonwealth Telecommunications Organisation Forum	Nairobi, Kenya	www.cto.int
15-16	Cards & Payments East Africa	Nairobi, Kenya	www.terrapinn.com
15-16	Ecommerce Show East Africa	Nairobi, Kenya	www.terrapinn.com
22-23	Internet of Things Security	Boston, USA	iotsecurityevent.com
22-23	Nigeria Com	Lagos, Nigeria	nigeria.comworldseries.com
29-30	Middle East Com	Dubai, UAE	me.comworldseries.com

OCTOBER/OCTOBRE

12-15	ITU Telecom World	Budapest, Hungary	telecomworld.itu.int
14-16	ICDE	Sun City, South Africa	www.unisa.ac.za
18-22	GITEX	Dubai, UAE	www.gitex.com
21-22	Banking & Mobile Money Accra	Accra, Ghana	aitecafrica.com
26-27	CN4IoT	Rome, Italy	cloudniot.org
26-29	SecureComm	Dallas, USA	securecomm.org

ABS selects Boeing to build ABS-8, its third all-electric propulsion hybrid satellite

GLOBAL SATELLITE OPERATOR **ABS** has selected **Boeing Satellite International, Inc (Boeing)** to manufacture the ABS-8 satellite, which will replace ABS-7 at 116.1 degree East orbital location, delivering significant expansion capacity for Asia, Russia and the Middle East. The satellite is expected to launch in 2017.

ABS-8 will be the third innovative all-electric propulsion 702SP satellite ordered from Boeing that minimises the spacecraft's mass and maximises available payload. The spacecraft will have over 9kW of payload power and it will be equipped with 50 active transponders. ABS-8 will incorporate traditional wide beam coverage beams in C and Ku bands, a high-power ultra-throughput multi-spot Ku-band and a steerable high-power Ka-band beam payload configuration to deliver both performance and flexibility. This satellite will expand broadcast, data and enterprise services to multiple markets: the Middle East, Russia, Southeast Asia, South Asia and the South Pacific region. "The procurement of ABS-8 shows our confidence and trust with Boeing



on the all-electric propulsion 702SP platform technology. The prescribed satellite payload of C, Ku and Ka beams with wide beams and high throughput capacity would serve the government, mobility, telecoms, DTH and Rural broadband sectors," said Tom Choi, CEO of ABS. "ABS is committed to continually innovate and improve the competitiveness of the FSS industry for the betterment of our customers".

"The decision by ABS to order a third Boeing 702SP satellite is a testament to our customer's confidence in the capabilities of this satellite," said Mark Spiwak, president of Boeing Satellite Systems International, Inc. "With the innovative all-electric propulsion design, Boeing is able to maximize payload while decreasing overall satellite mass and cost."

ABS-8 will follow the launch of ABS-2A which is scheduled to launch in the fourth quarter of this year.

This is part of ABS' expansion plans to add more satellites and the associated capable and flexible capacity to its growing fleet.



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Capacity for new investment in African telecommunications

THE TELECOMS INDUSTRY represents a critical component of economic growth, affecting all aspects of the business and social sphere. The continent has seen a dramatic expansion in its telecoms sector over the past five years. Mobile subscription expansion in Africa is currently the fastest worldwide (72 per cent penetration on average across the continent).

Consequently, a huge amount of investment is happening to improve Africa's infrastructure to cope with higher levels of data usage and the need for better connectivity, particularly in rural areas. For example, **Algérie Télécom**, in northern Africa announced plans to deploy 20,000km of additional fibre by the end of 2015.

The international telecoms community also recognises Africa as an area of high value for new business. Gagun Gahir, director of carrier services for EMEA for the American telecommunications company **IDT Corporation**, said Africa "is a massive investment opportunity" with US\$25bn needed "to build the next generation of internet-ready networks".

Due to the size and scale of investment opportunities in African telecoms, wholesale telecoms carriers from across the globe meet annually at Capacity Africa, the largest pan-African wholesale conference to network, develop business

and hear industry leaders deliver future commercial strategy. Taking place on 8 & 9 September in Dar es Salaam, 400+ senior telecoms executives from over 65 countries will take advantage of the entire African telecoms ecosystem being represented, all looking to secure new deals in the region's lucrative telecoms market.

Mike Last, director of marketing and international business development at **WIOCC**, said, "Capacity Africa is without a doubt the best networking event for the African wholesale telecoms industry," adding it attracts "a very strong set of African and international carriers and creating a great environment for doing business".

Expanding networks means increased demand for infrastructure and competition amongst operators. Regulators are playing a key role in providing stability to these operators active in the region ensuring a market driven industry. Capacity Africa recognises this, offering an agenda which brings together both the C-level executives of major telecoms organisations such as **Seacom**, **Liquid Telecom**, **WIOCC** as well as the regulators such as the **Nigeria Communications Commission** to discuss the latest growth opportunities in front of an audience made up of the key decision makers in African telecoms.

www.capacityconferences.com/Capacity-Africa

Calls over WiFi in SA

WIFI PROVIDER ALWAYSON has launched its Croid devices in South Africa, enabling users to make calls over WiFi or a data package, offering a cheaper way of calling than using a network. All users have to do is register on the **AlwaysOn Website**; after receiving an SMS, they just need to follow the instructions. Once installed, the user's phone will automatically choose WiFi or other data networks to make calls.

"AlwaysOn provides its services to close to a million monthly users, and the company is committed to ensuring that anyone who wants to be connected gets the best possible deal," said AlwaysOn MD Hayden Lamberti at the service launch.

"For South Africans wanting to get the best deal and maximise their time online, this is the perfect answer."

Seacom and DE-CIX connects Africa and Europe

PAN-AFRICAN TELECOM ENABLER and network provider **Seacom** has added the **Deutscher Commercial Internet Exchange (DE-CIX)** in Frankfurt, Germany, to the growing list of European Internet exchange points at which it peers. This new peering agreement will mean that Seacom clients will enjoy better performance and less latency when they connect to Web services in central Europe.

DE-CIX provides premium IX services to all kinds of networks and operates several carrier neutral and independent Internet exchanges (IXs) in the world, including DE-CIX Frankfurt. Founded in 1995, DE-CIX provides the infrastructure for direct and settlement-free IP interconnection, called peering, and serves 700+ carriers, ISPs and content networks from 60+ countries in Frankfurt (Germany), New York (USA), Dubai (UAE), Palermo (Italy), Marseille (France), Istanbul (Turkey), Hamburg (Germany) and Munich (Germany).

DE-CIX operates the industry's most robust and advanced peering platform DE-CIX Apollon. All types of ISPs including broadband providers, content delivery networks, web

hosters, and incumbent operators use DE-CIX services to improve their IP performance and lower their IP transit costs.

DE-CIX Frankfurt is a leading Internet exchange point in the heart of Europe. The carrier-neutral exchange has the world's largest and most advanced Ethernet-based platform, DE-CIX Apollon, delivering high-availability peering with full 100Gbps Ethernet capabilities.

Seacom head of engineering Mark Tinka said, "Our peering arrangement at DE-CIX means that African carriers and service providers will be able to efficiently and securely exchange Internet traffic with many major providers in central and Western Europe. Since we have a full-service IP/MPLS point of presence in Frankfurt and control the experience from end to end, Seacom can offer its customers high levels of service availability and quality at an affordable cost. With the strong growth in Internet traffic between Africa and Europe, we want to help African Internet users reach the services they want to access with as few hops as possible."

A digital key to open the hotel door

SOUTH AFRICA'S LEADING hotels are expected to digitally change the way in which guests can check in to hotels in the near future. New programmes and technologies will help speed up and may even do away with the check-in process, according to the 2015 **PwC Hospitality & Gaming Industry** report.

"Hotel business models are increasingly undergoing change in the advent of the digital era. Consumers are choosing when, where and how they want to interact with hotels, using an array of technological devices," said Nikki Forster, PwC leader of hospitality & gaming industry for Southern Africa.

Technology is making it easier and more efficient for guests to access hotels whenever and wherever they want. This is done by way of technological devices that usually involve strategically designed and free smartphone apps and Bluetooth technologies, said Veneta Eftychis, PwC senior manager, hospitality & gaming industry. On installation of an app, guests can do an array of things such as selecting their hotel rooms, as well as making reservations and payment. They can also check in online and have direct access to their rooms on arrival. Ultimately, with apps and Bluetooth technologies, guests' phones become their room keys for the duration of their stay.

"They need not stop at the reception," Eftychis said.

In addition, apps allow guests control in-room electronics, such as air conditioners, TV sets, curtains and blinds. They can even order room service and make reservations for restaurants and spa treatments. Once guests have checked out of hotels, the apps delete the NFC (Near Field Communications) or Bluetooth code for the room.

Eftychis said that research carried out in the hotel industry indicates that hoteliers believe the technology will make their guests much happier. "It also makes for more streamlined and efficient running operations," she added. In addition, the technology will provide hoteliers with more marketing and branding opportunities.



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Liquid Telecom invests in EXFO's iOLM technology

DATA, VOICE AND IP provider **Liquid Telecom** has followed its recent purchase of a bundle of **EXFO** optical time-domain reflectometers (OTDRs) with upgrades to intelligent Optical Link Mapper (iOLM) licenses after realising the added value and cost savings offered by this innovative solution in terms of training, support and repetitive truck rolls.

The Liquid Telecom Group has been building and deploying the largest single-fibre network across the continent. This FTTH network using GPON architecture spans Africa's fastest-growing economies, stretching in excess of 18,000km across Uganda, Kenya, Rwanda, Zambia, Zimbabwe, Botswana, DRC, Lesotho and South Africa. This important project is underscored by its own specific set of challenges, mainly arising from the African continents geography, remote locations and the introduction of new and continuously developing skills.

In an effort to bridge this gap, Liquid Telecom recently turned to EXFO's iOLM solution offering a first-time-right, no-training-required approach to OTDR testing. The iOLM is an OTDR-based application designed to simplify OTDR testing by eliminating the need to configure parameters, and/or analyse and interpret multiple complex OTDR traces. The iOLM's advanced algorithms dynamically define the testing parameters, as well as the number of acquisitions that best fit the network under test. By correlating multipulse widths on multiple wavelengths, the iOLM

locates and identifies faults with maximum resolution - all at the push of a single button.

"The iOLM's advanced automation enables a wider choice of frontline technicians with a variety of fibre optics engineering skill levels to characterise end to end fibre links in the same way that our expert OTDR technicians would, thereby providing expert-level analysis even out in remote and challenging regions," said Liquid Telecom's Keith Rowley, chief of infrastructure architecture, planning & deployment. "Not only are the comprehensive link view and fault diagnosis enabling us to lower training and support costs, they are also freeing up our more experienced technicians to concentrate on added-value, expert-level tasks. In addition, the ability to integrate the iOLM's automatically generated schematic reports with our network records inventory system allows for a more detailed view of our tested operational environments."

"Liquid Telecom's decision to employ the iOLM solution to cope with its training and remote support issues confirms the key benefits of this tool: optimal performance and easy-to-understand, first-time-right results," said Stéphane Chabot, Vice-President of EXFO's physical-layer test division. "Various fibre deployments around the world are facing similar skill-level challenges, with a need for expert-level solutions to reduce OPEX while ensuring fast and effective network delivery."

Creova and Carrefour act together in Tunisia

MOBILE MONEY SOLUTIONS provider **Creova** has formed a partnership with **Carrefour Tunisia** for its mobile money initiative in the Tunisian market. The new partnership with Carrefour, one of the largest retailers in the world, will help boost adoption of mobile payment services. Creova's technology allows Carrefour retail outlets to offer mobile transactions that include recharge (also known as top-up) services and other services to be added gradually.

"The mobile services market is growing and being the leader is important. Carrefour Tunisia is offering 'electronic mobile top-up' solutions at its cashiers, thanks to the Creova technology, and will gradually add new services," said Cherif Karoui, GM of Carrefour Tunisia.

Africare and Phase One form alliance

INFORMATION AND COMMUNICATION technology (ICT) solutions provider **Phase One** has entered into a groundbreaking alliance with **Africare**, a non-governmental organisation (NGO) committed to addressing African development and policy issues.

The new alliance, called **Africare ICT**, builds upon and enhances Africa's existing ICT systems to accelerate development at the community level in agriculture, education, governance, and healthcare.

Working with Africa's public and private sectors - ranging from African government agencies to entrepreneurial information technology start-up companies - the Africare and Phase One alliance provides knowledge and tools to refine the processes for gathering, sharing, and accessing data that will advance health and economic opportunities for Africans.

"Africare recognises the pressing need to improve communications in the rural and urban communities we serve. Africare ICT solves this challenge and gives our staff and community leaders access to real-time information to make informed decisions on urgent matters involving health, nutrition, agriculture and other vital disciplines across the continent. This partnership brings technology to improve the lives of Africans in some of the world's most fragile communities," said Kendra Davenport, chief of staff and chief development & communications officer at Africare.

Africare has successfully addressed challenges on the continent from Ebola to food security by working with African leaders, individuals, and organisations at the community level. Africare ICT will employ this proven model to quickly discern specific community needs and rapidly make recommendations to address the needs with ICT solutions.

"Technology will be the key enabler of Africa's future. As a technology firm, Phase One is passionate about rising to the occasion to support Africare and join with other global companies to help Africans leverage technologies for modern governance and services to their citizens," remarked Jerad Speigel, chief executive office at Phase One.

Etisalat Misr fights fraud with IBM analytics

EGYPTIAN MOBILE SERVICE provider **Etisalat Misr** has chosen an **IBM FlashSystem**, a sophisticated storage solution, to protect against fraud. This will help enable Etisalat Misr to speed up real-time analytics significantly, to identify fraudulent activity in areas such as calls and unauthorised Internet use.

Etisalat Misr provides a full range of voice and data services to more than 22mn subscribers in Egypt, which includes telecom services to the largest Egyptian enterprises. With increasing competition, the company faced challenges in delivering enhanced performance, availability, analytics and security to its growing customer base.

Etisalat's fraud management system depends on data received from network switches to detect fraud. However it often took as long as three days to capture and analyse fraud data.

To resolve delays in its fraud management system, Etisalat Misr decided to use IBM FlashSystem V840 to improve the efficiency of its fraud management application, reducing the time spent on processing call records by a factor of 15 times and improving the speed of fraud detection by a factor of 37 times.

"We are growing very fast and as a result, we are continuously looking for innovative IT solutions that can help deliver seamless security and end-to-end management of our clients' devices, content and transactions," said Khalid AlKaf, director of operations & infrastructure at Etisalat Misr. "Modernising our storage is key to compete in an interconnected world and supports our growth."

Ahmed Bourham, systems group manager at IBM Egypt, added, "In today's environment, risk and fraud management must be pervasive throughout an organisation's culture and operating model. IBM's flash and software defined storage technologies can help organisations bring together fragmented data from segregated systems and a variety of sources to deliver enhanced insights to mitigate risk and better manage fraud."

GIT's solution on show at MediaTech

GRAPHIC IMAGE TECHNOLOGIES (GIT), which distributes broadcast solutions, has showcased its broadcast technology at MediaTech 2015. The company launched the latest Harmonic ZiXi software, TVU and Actus solutions:

- Harmonic ZiXi software enables the delivery of broadcast-quality high definition (HD) video over the Internet and mobile networks to any device.
- TVU solutions assist with the transformation of broadcaster's SDI-based operations including acquisition, transmission, routing, distribution and management to an IP-based infrastructure.
- Actus provides a user-friendly video monitoring and logging solution that records, stores and indexes broadcast content from any input, any number of channels while offering simultaneous 24/7 access to content.

Today's tier-1 broadcasters see how to shape tomorrow's live video

AT MEDIATECH AFRICA 2015, video hybrid contribution systems provider **Aviwest** demonstrated new enhancements to its digital mobile news gathering (DMNG) system, which has been widely deployed by tier-1 broadcasters in Africa.

Aviwest's advanced live video contribution platform enables broadcasters to capture and broadcast live HD or SD video over multiple networks, including bonded 3G/4G cellular wireless, Wi-Fi, Ethernet, and satellite, making it the ideal solution for use in African markets, where cellular networks continue to grow.

Offering seamless integration into existing workflows and headends, extremely low power consumption, high MTBF, and unparalleled mobility, the DMNG system offers broadcasters a fully integrated and cloud-based solution for breaking news and live events coverage.

Aviwest showcased a new version of its DMNG Studio server, which is capable of receiving incoming streams from DMNG video uplink systems as well as third-party products, such as IP cameras, through a variety of protocols such as RTP, RTSP, TS over UDP, HLS, and RTMP. Aviwest also demonstrated the DMNG App, which turns any smartphone



Aviwest showcased a new version of its DMNG Studio server at Mediatech Africa 2015

into a live broadcast video camera. Designed with ease of use in mind, the DMNG APP allows any Android or iOS-based smartphone user to transmit video content in just seconds.

Aviwest recently launched a specially designed backpack for the DMNG Pro video uplink system, which was on display at Mediatech Africa 2015, which is ideal for broadcasters utilising the DMNG Pro with a handheld camera.

The latest DMNG Pro now comes standard with a new integration with Cobham's Explorer 710 BGAN

terminal, an ultra-portable satellite antenna. When used during satellite transmission, the Cobham antenna provides real-time information about the satellite's available bit rate, enabling the DMNG PRO to compress video content accordingly to ensure superior video quality.

Moreover, Aviwest demonstrated new cloud-based capabilities for the DMNG Manager at Mediatech Africa 2015. The DMNG Manager is an innovative server application that enables broadcasters and video professionals to monitor and manage an entire fleet of DMNG equipment including DMNG transmitters, smartphones using the DMNG APP, and DMNG Studio receivers.

ACE connects Benin and Canary Islands

TELECOMMUNICATIONS OPERATOR **ORANGE**, together with the ACE consortium, has launched the ACE cable in Cotonou, Benin and Tenerife, Canary Islands, Spain. The connection of these two stations is part of the second phase of deployment of the ACE submarine cable, which now serves 18 countries: France, Portugal, the Canary Islands (Spain), Mauritania, Senegal, Gambia, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Benin, Ghana, Nigeria, Equatorial Guinea, Gabon, and São Tomé and Príncipe. Two landlocked countries, Mali and Niger, are connected via a terrestrial extension.



The ACE cable will cover 17,000 kilometres and will be extended to South Africa

Beyond the connectivity between Africa and Europe, thanks to interconnections with other submarine cables, ACE constitutes another route to the Americas and Asia for Africa. Moreover, ACE is an alternative for network traffic between Europe and Asia going through Africa. The cable also diversifies transmission arteries between Portugal and France.

La connexion ACE du Bénin et des Iles Canaries

ORANGE, AINSI QUE tous les membres du consortium ont annoncé la mise en service du câble ACE à Cotonou (Bénin) et à Ténériffe (Iles Canaries, Espagne). La connexion de ces deux stations s'inscrit dans la seconde phase de déploiement du câble sous-marin ACE qui dessert aujourd'hui 18 pays : la France, le Portugal, les Iles Canaries (Espagne), la Mauritanie, le Sénégal, la Gambie, la Guinée, la Sierra Leone, le Libéria, la Côte d'Ivoire, le Bénin, le Ghana, le Nigéria, la Guinée Equatoriale, le Gabon et Sao Tomé & Príncipe. Deux pays sans façade maritime, le Mali et le Niger, sont connectés grâce à un prolongement terrestre. Le câble ACE qui étend l'accès à l'internet haut-débit en Afrique et apporte de la capacité supplémentaire aux réseaux internationaux existants, parcourra 17 000 km et sera prolongé jusqu'en Afrique du Sud au terme de la seconde phase. Des branches sont prévues pour relier le Cameroun, qui vient de signer l'accord formalisant son entrée dans le consortium ACE, la République Démocratique du Congo, l'Angola et la Namibie.

Depuis la mise en service de la première phase, en décembre 2012, sept des pays connectés – la Gambie, la Guinée, la Guinée Equatoriale, le Libéria, la Mauritanie, Sao Tomé & Príncipe et la Sierra Leone – ont bénéficié pour la première fois d'une connexion directe à un câble sous-marin, leur permettant d'accéder de manière optimale au réseau haut débit international.

Pour accomplir cet ambitieux projet, Orange, accompagné de ses filiales Côte d'Ivoire Telecom, Orange Cameroun, Orange Mali, Orange Niger et Sonatel, s'est entouré de partenaires majeurs au sein d'un consortium international. Au-delà de la connectivité Afrique – Europe, et grâce aux interconnexions avec d'autres câbles sous-marins, ACE constitue pour l'Afrique une route supplémentaire vers l'Amérique et l'Asie. De plus, ACE constitue une alternative pour acheminer le trafic entre l'Europe et l'Asie en passant par l'Afrique. Enfin, ce câble diversifie les artères de transmission entre le Portugal et la France.

L'accès des femmes africaines aux technologies de l'information promeut la croissance

SELON LES EXPERTS, non seulement l'accès des femmes africaines aux technologies de l'information (TI), comme les téléphones intelligents, contribue à combler le fossé entre les hommes et les femmes en matière d'utilisation des TI, mais c'est aussi un moteur majeur de croissance économique pour l'ensemble du continent. C'était le thème principal d'une discussion de groupe sur les femmes et les TI, qui a été organisée dans le cadre des 50e Assemblées annuelles du Groupe de la Banque africaine de développement (BAD), à Abidjan.

Le secteur des TI à l'échelle mondiale est extrêmement profitable, a déclaré Shireen Shantosham du **Programme de Connexion des Femmes du Groupe Spéciale Mobile Association** :

« 170 milliards sur cinq ans », a-t-elle indiqué, « dont 30 milliards sont représentés par l'Afrique subsaharienne ».

Shantosham, les représentants de Google, d'Intel et d'OXFAM, et le **Ministre de la Poste et des Technologies de l'Information et de la Communication en Côte d'Ivoire**, Bruno Koné, ont tous indiqué que leurs organisations œuvrent en faveur de l'inclusion, tout en convenant que certains obstacles majeurs



Le groupe sur les femmes et les TI a été organisée dans le cadre des 50e Assemblées annuelles du Groupe de la Banque africaine de développement (BAD), à Abidjan

compromettent l'accès des femmes aux TI. Shantosham a déclaré que son organisation avait mené l'une des quelques études sur ce problème. Selon elle, le coût, la qualité de réseau, la sécurité individuelle, les connaissances techniques et la confiance sont les principaux aspects qui retiennent les femmes.

« Les femmes sont harcelées par des inconnus au téléphone » a indiqué Shantosham. C'est ce qui se passe quand des hommes composent un numéro au hasard, trouvent une femme, et l'appellent de façon répétée. « Ce phénomène peut susciter une certaine méfiance au sein du foyer » et même

amener l'un des hommes de la famille à restreindre, voire à interdire l'accès aux IT, a-t-elle ajouté.

La Côte d'Ivoire ouvre la voie dans l'élimination de certains de ces obstacles. Bruno Koné a déclaré que le pays compte 22 millions d'abonnés à des services mobiles et que le rapport entre les hommes et les femmes est à peu près équitable, ce qui représente un accomplissement majeur par rapport à d'autres nations sur le continent. Il a ajouté que le gouvernement dispose d'un plan en cinq points qui vise à s'assurer qu'un public vaste accède aux technologies et qui implique des réglementations, une connectivité et un accès aux équipements, au contenu et à des formations. Par ailleurs, Koné a indiqué que son pays a formulé des lois relatives à la cyberprotection et qu'il lance actuellement des programmes d'accès et procède à la connexion des zones rurales aux TI. Il a également déclaré que 3 000 communautés rurales disposent aujourd'hui de cybercentres.

Selon Assiatou Sow d'Intel, « tous les gouvernements devraient suivre l'exemple de la Côte d'Ivoire ». Elle a indiqué que l'accès à l'Internet a eu un impact énorme dans le succès de lutte contre la pauvreté dans les pays.

Des spécialistes des TIC réunis au Gabon

QUELQUE 400 ÉMINENTS décideurs venant d'organismes de réglementation des technologies de l'information et de la communication (TIC) et d'entreprises de premier plan du secteur de haute technologie du monde entier réunis au Gabon pour débattre des meilleures stratégies pour promouvoir l'inclusion numérique et exploiter l'énorme potentiel de croissance des économies émergentes et des marchés des pays en développement.

Accueillie par l'**Autorité de Régulation des Communications Electroniques et des Postes (ARCEP)** du Gabon, sous le haut patronage du Président Ali Bongo Ondimba, la manifestation était le plus grand rassemblement au monde de spécialistes des politiques des TIC venus du secteur public et du secteur privé, le colloque mondial des régulateurs (GSR) organisé par l'**UIT** vise à stimuler un débat approfondi entre experts, le partage de connaissances et l'échange de bonnes pratiques entre régulateurs, hauts responsables de la réglementation d'entreprises privées, analystes des politiques publiques et autres parties

prenantes de premier plan du secteur des TIC. Le thème retenu pour l'édition de cette année est "Attention à la fracture numérique! Mesures d'incitation réglementaires visant à concrétiser le potentiel du numérique". Les principaux sujets abordés pendant ce programme ont été, entre autres, les paiements sur mobile, les modèles de partage de réseaux, la fiscalité et l'économie numérique, le tout Internet, la réglementation et l'adoption du large bande et la façon dont la réglementation peut contribuer à l'accessibilité pour tous.

L'ARCEP et l'UIT ont accueilli le Colloque qui était présidé par le Président de l'ARCEP M Lin Mombo. La cérémonie d'ouverture, tenue ce matin, s'est déroulée en présence d'un certain nombre d'hôtes prestigieux dont M Séraphin Moundounga, **Ministre de la Justice du Gabon**, M Pastor Ngoua Nneme, Ministre de l'économie numérique et des postes; M Jean-François Ndongou, président du **Conseil National de la Communication**; et M Abdoukarim Soumaila, secrétaire général de l'**Union africaine des Télécommunications**.

SES améliore l'accès à des soins de santé au Bénin

LA PLATEFORME NOVATRICE de télésanté, **SATMED**, a été déployée à la maternité d'Ahozonoude, au Bénin, afin d'améliorer les soins. Grâce à la connectivité Internet par satellite de **SES**, la plateforme SATMED sert comme outil de consultation et de suivi médical à distance et permet des communications efficaces entre la maternité d'Ahozonoude, l'hôpital de Cotonou, la capitale, et un troisième établissement hospitalier situé à Allada. Le personnel médical et de soutien des hôpitaux a reçu une formation sur l'utilisation et l'entretien du matériel SATMED et le personnel sur le terrain recevra un soutien continu.

Au Bénin, le système de télésanté est le seul moyen d'assurer des communications efficaces entre les trois établissements hospitaliers étant donné que les routes sont souvent inaccessibles pour cause d'inondations durant la saison des pluies. Une formation à distance supplémentaire doit être offerte en ligne, ce qui permettra à un médecin désigné de surveiller et d'évaluer la performance des sages-femmes et des soignants en formation, améliorant ainsi les soins de santé à l'échelle locale, régionale et nationale.

Réalisée conjointement avec la **Fondation Follereau Luxembourg (FFL)**, l'installation vise à améliorer la santé de la mère et de l'enfant durant et après l'accouchement en plus de contribuer à l'amélioration des connaissances médicales au moyen des installations de consultation et de suivi à distance.

Gerhard Bethscheider, directeur général de SES Techcom Services, a affirmé : « Nous sommes très heureux de constater que SATMED permet de surmonter les obstacles au déploiement des services de santé en Afrique, où les infrastructures terrestres sont parfois défaillantes, voire absentes. Grâce à la technologie satellitaire, nous sommes désormais en mesure de contribuer à l'amélioration de la qualité des services de santé et de la rapidité avec laquelle les soins sont prodigués dans les régions rurales et isolées, contribuant ainsi à l'avancement à une bien plus grande échelle.



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Network-ready for rapid connections

Evidence indicates that Africa's mobile broadband penetration and adoption is soaring - albeit from a low base

THE CURRENT STATE of Africa's mobile broadband endowment can perhaps best be likened to the fabled curate's egg - good in parts. Looked at from the standpoint of the rest of the world, Africa's mobile broadband subscriptions of 17.4 per cent - as reported by the International Telecommunications Union (ITU) in its most recent 'ICT Facts & Figures' report - gives it a low ranking on the global broadband index.

Indeed, the continent is the only region where mobile broadband access is less than 20 per cent. A report by the Pew Research Center released earlier this year revealed that even South Africa - which at 34 per cent has the highest smartphone (those that can access the Internet and applications) usage in Africa - has less than half the smartphone penetration of the west.

In Europe and the Americas, the report estimates a mobile-broadband penetration level of 78 active subscriptions per 100 inhabitants. Another report - published for the 2015 World Economic Forum in Cape Town, South Africa - makes equally sombre reading. The Global Information Technology Report featured a Networked Readiness Index (NRI) of 143 countries on the basis of their ICT environment, readiness, usage and impact.

Only six of Africa's countries Mauritius, Seychelles, South Africa, Rwanda, Kenya and Cape Verde, made the top 100, with some like South Africa even dropping in the rankings this year to 75th.

Rising from recent lows

However, looked at from another perspective, the outlook - given Africa's extremely low starting point - is very promising. A recent forecast shows mobile broadband growth in Africa doubling each year to 2020. The forecast, from Market Research International, says that the African region is witnessing "one of the strongest increases in mobile data use in the world".

Mobile broadband already accounts for up to 90 per cent of all broadband connections in several African markets with international fibre optic cables and national backbone networks supporting broadband growth. And mobile Internet traffic across Africa can be expected to double between 2014 and the end of 2015 and by the end of the decade will see a 20-fold increase. Services based on 3G networks will be dominant within three years, replacing older and more limited 2G technology. According to the report, "By 2020, about three-quarters of all mobile connections will be on 3G or 4G, and thereafter the focus for operators will be on making use of released spectrum to expand the reach of LTE networks beyond the major cities."

It says that the growth in traffic is being spurred on "by the maturing social media sector, data-rich applications and mobile video". There is also a new wave of locally built cheap smartphones, which is making such devices more readily available to a larger proportion of the population. Another key facilitator identified by the report is mobile banking and m-commerce. Sub-Saharan Africa - particularly Kenya, Nigeria, South Africa, Rwanda and Tanzania - is rapidly developing an m-commerce sector that involves a growing number of participating banks in mobile-based transactions, remittances and payments. Increasingly, these facilities also include cross border money transactions. In Kenya alone a Market Research

International report indicates that M-Pesa mobile banking "carries about 20 per cent of the country's entire GDP".

The future of connectivity for many markets in the region - particularly in rural and semi-urban areas - increasingly lies in mobile broadband. This is because in Africa broadband, based on digital subscriber line (DSL) technology on fixed-line networks is generally underdeveloped.

Mobile broadband costs, which traditionally far exceed the limited fixed-line alternatives, are being driven down by the combination of network upgrades and the pressure of market competition. To cope with all this growth in Internet traffic, improvements are being made in national backbone networks, as well as international connectivity. At the same time as more bandwidth is being provided, the cost of services is plummeting.

Communications frameworks

Africa's governments and regulators are laying the groundwork for the expected unprecedented growth spurt in mobile broadband services. Sub-Saharan Africa already performs better in terms of liberalisation than emerging and developing Asia or regions within the Middle East and North Africa. Indeed, many sub-Saharan African countries - including Kenya and Tanzania - have fully liberalised their ICT markets.

Now, the various regulators on the continent are working to address the remaining shortfall in available spectrum by enabling spectrum re-farming and releasing digital dividend spectrum for mobile broadband.

In May 2015, the Tanzania Communication Regulatory Authority (TCRA) announced proposals requiring telecom companies to share infrastructure and bid for bandwidth.

TCRA Director General Prof John Nkoma said the adoption of the new system is inevitable due to the increase in demand, especially the use of the Internet. The new system will come into effect during 2016 after thorough consultations with all major players.

So, with the legislative and infrastructural framework being put in place, there is plenty of scope for optimism about the prospect for Africa's future broadband connectivity. An example of the sort of benefits that this new wave of mobile broadband will bring is in Kenya where since May its citizens have been able to pay their taxes through their mobile phone via Airtel.

Airtel Money customers in Kenya need no longer have to walk into Kenyan Revenue Authority (KRA) banking halls and queue to pay their taxes. Instead using a KRA payment reference number, which can either be acquired on their website or on their mobile phone, they can pay their taxes using their mobile phones.

Customers can also make driving licence applications and renewal payments; vehicle transfer logbook payments and motor vehicle inspection payments.

In May, Ericsson and Kenya's largest mobile operator Safaricom announced a multi-year partnership agreement to support further upgrades and expansions to its network. Robert Rudin, country manager of Ericsson Kenya confirmed recently that the agreement will see Ericsson deploy Wi-Fi technology on the Safaricom network. It will

also expand and enhance the Mini-Link microwave transmission network. He said, "Deployment of the Wi-Fi solution will enable Safaricom to optimise its use of spectrum resources while enhancing 3G services and boosting broadband app coverage for customers in selected densely populated areas."

In early June, Safaricom and Kenya's Ministry of Agriculture, Livestock and Fisheries also embarked on the pilot of a joint initiative that aims at empowering farmers with access to a technology-based solution for the distribution of fertiliser and other key inputs. The solution, named 'E-fertiliser Subsidy Management System', is an electronic vouchering solution that allows farmers to access vouchers via their mobile phones. Sicily Kariuki, Principal Secretary, Kenya's State Department of Agriculture, said, "Traditionally, the process of getting subsidies to farmers has been time intensive and inefficient as there was no single way to reach them all effectively. Our solution, should the pilot be successful, will allow us to increase transparency in the allocation of fertiliser to over 3.5mn small-holder farmers across the country using mobile phones."

A dry system run will be done in Uasin Gishu, Trans Nzoia and Bungoma counties in preparation for next season subsidy fertiliser distribution.

Meanwhile, and also in June, Ericsson signed a three-year memorandum of understanding (MoU) with the Communications Regulators Association of Southern Africa (CRASA) to support the accelerated development of ICT policies in the Southern African Development Community (SADC) region. The two parties will organise and facilitate capacity building workshops geared towards the development of national broadband plans (NBPs) focussing on specific concerns related to ICT in the 15 member countries of the

SADC who are planning, developing or revising and amending their broadband policies.

Evidence of improvement

As delegates at the World Economic Forum in Cape Town heard, evidence from the last two decades demonstrates that ICTs, particularly broadband Internet, are income multipliers. And there is a clear link between mobile telephony and broadband use to gross domestic product (GDP) growth. However, the picture is more mixed when looking at ICTs' impact on income inequality. At the global level, the latest available data from the World Bank shows income inequality (the distribution of income across all people in the world) declining. But 'within country' income inequality appears to be rising in many countries - in both the developed and developing world.

The reason for this paradox is that while ICT adoption improves the standard of living for those who adopt, those who do not adopt and use ICT do not improve their standard of living as fast or as much.

The challenge for Africa's leaders, says the Global Information Technology Report, is to iron out the various disparities and ensure that public resources are focussed on: building broadband Internet access out to rural and underserved communities; connecting schools and libraries to broadband Internet service; removing excessive taxation on devices and access; developing robust ICT training curricula and programmes - and last but not least, closing the gender gap in ICTs.

Only when these inequities are successfully dealt with can Africa be truly have said to have entered the 'mobile broadband age' ☺

Nnamdi Anyadike

Infinera's Cloud Xpress offers superior datacentre interconnect

INTELLIGENT TRANSPORT NETWORKS provider Infinera has expanded its Cloud Xpress family of metro Cloud platforms with a new platform enabling 100 gigabit Ethernet (GbE) client services in the same compact form factor along with enhanced functionality. The Cloud Xpress family is designed specifically to address the needs of Cloud service providers, Internet content providers, Internet Exchange service providers, large enterprises and other large-scale datacentre operators.

The Cloud Xpress family utilises the oPIC-500 optical engine, Infinera's unique metro-optimized photonic integrated circuit, to deliver DWDM datacentre interconnect services

up to 500 gigabits per second (Gb/s) in a compact two rack unit chassis. The new Cloud Xpress with 100 GbE extends the hyper-scale density, simplified operations and low power of the existing Cloud Xpress family that operators can use to easily deploy and scale their networks. With the addition of the new platform, the Cloud Xpress family now supports 10 GbE, 40 GbE and 100 GbE client-side interfaces to match customer specific requirements. Along with the introduction of the new Cloud Xpress with 100 GbE, Infinera has introduced important enhancements to the Cloud Xpress family, including MACsec encryption for improved security, NETCONF & YANG support for

software defined networking (SDN) and ease of use, and LLDLP discovery protocols enabling datacentre automation.

"100 GbE is finally becoming available on datacentre switches and achieving cost-effective pricing on routers - creating an emerging demand for 100 GbE client-side interfaces on optical equipment designed for metro datacentre interconnect," said Andrew Schmitt, research director, carrier transport networking at IHS.

"Infinera is shipping 10 GbE and 40 GbE; adding 100 GbE is a well-timed extension to the Cloud Xpress family, and helps it retain a leadership position in this emerging product category."

"The Cloud Xpress platforms are purpose-built for the datacentre interconnect market," said Stu Elby, senior vice president, Cloud network strategy and technology, Infinera. "Based on Infinera's unique PIC and super-channel technology, the Cloud Xpress provides scale and simplicity while utilising little power."



Infinera Cloud Xpress is a metro cloud platform that allows operators to support up to 500Gb/s of line-side capacity in just 3.5" or two rack units (RU) with a mix of 10 GbE, 40GbE and 100 GbE client side interfaces

Intelsat and OneWeb set for new sat network

SATELLITE SERVICES PROVIDER

Intelsat has entered into a commercial agreement with OneWeb, the venture planning to build, deploy and operate a low earth orbit (LEO) Ku-band satellite constellation. Under the agreement, Intelsat will partner with OneWeb to use OneWeb's LEO platform, once established, to complement Intelsat's geostationary orbit (GEO) satellite services, resulting in the first and only fully global, pole-to-pole high throughput satellite system.

The companies will also collaborate to develop hybrid LEO/GEO end-user access terminals.

"Through this partnership with OneWeb, we will further differentiate our own GEO infrastructure, including our next generation Intelsat EpicNG high-performance satellites that will begin to launch in the first quarter of 2016," said Intelsat CEO Stephen Spengler.

Connected commerce through the IoT ecosystem

How to transform business through engagement in the Internet of Things can facilitate connected business transformation

TECHNOLOGY IS BECOMING increasingly sophisticated, and the world is more connected than ever before. The way we shop, work, play and interact has become intrinsically linked with this connected technology. With the advent of the new digital age, we are also witnessing a new era of consumerism, which has fundamentally changed the way organisations need to do business. Enterprises must try to keep pace with rapidly changing trends, understand their customers better, develop sales cycles with a more personal touch, and find new, innovative ways of engaging with customers in order to remain competitive. The Internet of Things (IoT) brings interconnected intelligence to technology, with the vision of providing seamless integration between the physical and digital worlds. In an age where business success hinges on an enterprise's ability to innovate, IoT has the potential to offer significant competitive advantage. Furthermore, it also assists greatly to improve services in a number of areas, delivering connected business transformation for a digital world.

Business interactions with IoT

With the digital revolution and the shift in the way people communicate and interact, consumers expect a great deal from business. They are no longer satisfied with generic solutions – they demand greater levels of customisation, direct and personalised feedback, and excellent user experiences. Organisations need to be able to cater to this demand in order to remain competitive, and central to this ability is the IoT.

While the IoT is not a new phenomenon, referring to the increased connectedness of many devices and technology, it is gaining traction with the recent advances in mobile technology and connectivity. The heart of the IoT is the ability to bring interconnected intelligence to physical items such as machinery, appliances and more. Central to this concept are four key components: the increasing availability of low cost sensors, the ever-decreasing cost of computing, the availability of ubiquitous and low cost data

networks, and the fast and advanced data analytics techniques. The combination of these factors has resulted in the IoT finally becoming a reality, and one that can help to add value for organisations across all areas and sectors of business.

The new data dynamic

Gartner has forecast that 4.9bn 'connected things' will be in use by the end of 2015, representing a 30 per cent increase on 2014, and this number is expected to reach 25bn by 2020. This sudden expansion will boost the economic impact of the IoT as consumers, businesses, city authorities, hospitals and many other entities find new ways in which to exploit the technology. Consumer applications will drive the increase in number of connected things, however it is the enterprise that will account for most of the revenue, making leveraging the value of the IoT essential for business success.

The IoT is a disruptive technology that is set to shape the future, possibly in ways that nobody could predict; staying on top of disruption has fast become the key to business success

Data is key to the value of the IoT. As more and more connected items emerge, increasing amounts of data are available. New ways of obtaining data, more easily than in the past, will enable data to be available when you need it, in the way you need it. Data generated by sensors, combined with other available data, will enable organisations, and even the devices or things themselves, to make intelligent decisions and learn from past data extrapolation. Devices will be able to adapt based on the data, improving both efficiency and the user experience with minimal or even zero human intervention. This begins to usher in an age where devices and machines can become self-sufficient and

autonomous. This in turn will enable organisations to leverage better operational efficiencies and improved productivity coupled with far more enriched user experiences. Furthermore, as with any new and disruptive technology, the IoT will also create new opportunities and business models that did not exist in the past.

The applications of the IoT are practically limitless. Smart networks can deliver predictive analytics, intelligent decision support, remote monitoring and more for organisations across all industries. Specialised offerings can then be developed specific to the needs and requirements of that sector. Healthcare is one sector that can benefit enormously, for example, remote patient monitoring, in-hospital device management, intelligent medical devices, wearable devices that can provide remote diagnostics with cloud-based clinical decision support, and more. This has the potential to dramatically improve healthcare for millions around the world.

The advantages of the IoT will become increasingly clear as this technology becomes further embedded in our everyday lives. In order to leverage these, however, organisations will need to ensure that their engineering teams work closely, since there are many variations of hybrid IT and IoT integration, and the IoT will enable many more layers in terms of digital security architecture and dozens of platform options.

A core IoT platform is central to the entire process, as it sits between the sensors that provide data and the analytics that facilitate enhanced decision-making, and enables the processing of data that is being shared by the connected devices. Such a platform should, for maximum benefit, be able to easily integrate with existing legacy systems and enable seamless integration. In addition, an experienced IT partner with a strong background in integration, analytics and understanding of product engineering can be instrumental in unlocking the value of the IoT for business. ©

Shailendra Singh, business director, Africa Region, and Siby Abraham, chief technologist and vice president, CTO office, at Wipro Ltd

Les objets dans les villes intelligentes

Des normes de l'UIT comme un nouveau groupe d'experts spécialisés dans l'Internet des objets et ses applications

LES MEMBRES DE l'UIT ont créé une nouvelle Commission d'études de l'UIT-T qui sera chargée d'examiner les besoins de normalisation des technologies de l'Internet des objets (IoT) tout en privilégiant, dans un premier temps, les applications de l'IoT dans les villes intelligentes.

Cette nouvelle Commission est la "Commission d'études 20 de l'UIT-T : l'Internet des objets et ses applications, y compris les villes et les communautés intelligentes". Elle sera chargée des normes internationales qui garantiront un développement coordonné des technologies de l'IoT, y compris les communications de machine à machine et les réseaux de capteurs ubiquitaires. Elle élaborera des normes qui permettront d'utiliser le potentiel des technologies de l'IoT pour trouver une solution aux problèmes liés à l'urbanisation. La normalisation des architectures de bout en bout pour l'IoT et les mécanismes pour assurer l'interopérabilité des applications et ensembles de données IoT utilisées par divers secteurs verticaux de l'industrie constitueront une partie essentielle de son travail.

La convergence des secteurs de l'industrie

Le déploiement des technologies de l'IoT devrait permettre de connecter, selon les estimations, 50 milliards de dispositifs au réseau à l'horizon 2020, ce qui aura des incidences sur pratiquement tous les aspects de notre vie quotidienne. L'Internet des objets contribue à la convergence des secteurs de l'industrie, en particulier les secteurs des services collectifs, des soins de santé ou des transports faisant partie des nombreux secteurs qui ont un intérêt dans l'avenir des technologies de l'IoT. La nouvelle Commission d'études de l'UIT-T est la nouvelle plate-forme spécialisée dans la normalisation de l'IoT nécessaire pour que cette convergence s'appuie sur un ensemble cohérent de normes internationales.

Les technologies de l'IoT donnent aux pays développés comme aux pays en développement la possibilité de transformer les infrastructures urbaines en tirant parti des gains d'efficacité inhérents aux bâtiments et systèmes de transport

intelligents ainsi qu'aux réseaux d'alimentation électrique et de distribution d'eau intelligents. L'UIT est bien placée pour aider les pouvoirs publics et le secteur privé à mettre à profit cette opportunité.

"Construire des villes intelligentes et durables nécessitera une collaboration efficace entre le secteur public et le secteur privé," a déclaré le Secrétaire général de l'UIT M Houlin Zhao. Et d'ajouter : " Cette nouvelle Commission d'études de l'UIT-T rassemblera en son sein des acteurs venant d'horizons divers qui mettront les compétences techniques de l'UIT au service d'autres secteurs de l'industrie et des administrations nationales et métropolitaines responsables des questions d'urbanisation."

"Les cinq années à venir seront déterminantes pour exploiter tout le potentiel des technologies de l'IoT," a déclaré M. Chaesub Lee, Directeur du Bureau de la normalisation des télécommunications de l'UIT. "L'UIT-T s'emploie activement à élaborer des normes pour l'IoT et nous cherchons à aider les villes dans le monde entier à créer les conditions nécessaires pour démontrer l'utilité des technologies de l'IoT dans la solution des problèmes d'urbanisation."

Autour de l'efficacité et de la viabilité

En mai 2015, Dubaï a été la première ville au monde à évaluer l'efficacité et la viabilité de ses activités et de son fonctionnement en utilisant les indicateurs fondamentaux de performance élaborés par le Groupe spécialisé de l'UIT-T sur les villes intelligentes et durables (FG-SSC). Le projet pilote, d'une durée de deux ans, permettra

d'évaluer l'utilisation pratique de ces indicateurs en vue de leur normalisation internationale.

"Les réseaux des technologies IoT nous permettront de mieux comprendre comment fonctionnent les villes car ils apporteront des gains d'efficacité considérables," a déclaré M. Nasser Almarzouqi de l'Autorité de régulation des télécommunications des Émirats arabes unis, le Président de la nouvelle Commission d'études de l'UIT-T. "Cette Commission d'études, composée des nombreux acteurs du secteur des technologies de l'information et de la communication, jouera un rôle déterminant pour promouvoir le développement de « systèmes de systèmes » efficaces qui contribueront à réduire la fracture numérique et à créer un monde plus connecté."

Singapour a proposé d'accueillir la réunion inaugurale de cette Commission d'études.

L'UIT a exposé son projet concernant l'IoT dans un rapport qui fera date, le "Rapport sur l'Internet des objets publié en 2005 dans le cadre d'une série de rapports de l'UIT sur l'Internet. La création de cette nouvelle Commission d'études résulte, d'une part, de l'expérience acquise par l'UIT-T en ce qui concerne l'élaboration de normes sur l'IoT et, d'autre part, des conclusions du Groupe spécialisé FG-SSC, qui vient d'achever ses travaux avec la publication de 21 rapports techniques et spécifications

La décision de créer une nouvelle Commission d'études de l'UIT-T a été prise à la réunion du Groupe consultatif de la normalisation des télécommunications (GCNT) qui s'est tenue au siège de l'UIT, à Genève du 2 au 5 juin. Le GCNT est habilité à modifier la structure et le programme de travail de l'UIT-T dans l'intervalle de quatre ans qui sépare deux Assemblées mondiales de normalisation des télécommunications, ce qui donne à l'UIT-T la souplesse nécessaire pour réagir à l'évolution des priorités de ses membres.

Les Commissions d'études de l'UIT-T élaborent des normes internationales (Recommandations de l'UIT-T) qui sont à la base de l'interconnexion et de l'interopérabilité des réseaux et dispositifs TIC. ©

"Construire des villes intelligentes et durables nécessitera une collaboration efficace entre le secteur public et le secteur privé." - le Secrétaire général de l'UIT M Houlin Zhao

As satcoms evolves, so the continent grows

Being able to communicate across the widest expanses of Africa is crucial to enabling social and economic growth

WITHOUT THE MEANS for domestic and business populations to interact between urban, semi-urban and extreme remote locations, will mean that progress will remain slow and the majority of markets and regions on this huge continent will continue to be referred to as 'developing'. Satellite communications are improving the picture.

Profitable delivery

Satcoms infrastructure and technology have evolved in recent years and now offer mobile operators in Africa more viable ways of delivering profitable services to user segments and communities, which would previously have been neglected.

One company, using a vendor and operator-neutral business model to further satcoms underpinning of communications advances across Africa is iDirect. The company partners with operators at all levels, whether multinational mobile firms or single-country operators, as well as local integrators working across Africa. *Communications Africa/Afrique* spoke to the company, whose director of market development, Richard Deasington, concurred that satcoms infrastructure had, indeed, made 'steady progress in the past years'. He cited achievements such as iDirect's DVB-S2 - designed to improve bandwidth efficiency and service quality - and the company's efforts to reduce roll-off down to five per cent [to avoid adjacent channel interference, signals transmitted to a satellite are run through a filter and roll-off determines 'how gradually or abruptly the transmitted signal drops off after being filtered. The higher the roll-off factor the more gradual the drop off, and by improving the roll-off factor from 20 per cent to five per cent, service providers are able to either transmit more Mbps over the same amount of leased bandwidth, or lease less MHz from a satellite operator while still offering the same Mbps to their customers']. As another recent advance, Deasington also mentioned iDirect's 2D 16-State inbound coding, which provides greater efficiency due to its average 1dB gain and payload size choices. He then went on to say that, "The introduction of high throughput satellites (HTS), which offer the promise of higher throughputs and lowers



iDirect's SatHaul optimisation software enables more efficient connections and better user experience (Photo: iDirect)

costs, will likely lead to the biggest economic change. However, key changes have also happened in the cellular mobile industry with the introduction of lower cost, less power-hungry small cells. When combined with HTS carrier-class satellite backhaul, these changes help bring down the point of entry for communities sized from 50–300 people."

This last point has always been a bugbear from African operators, whether to spend vast

amounts of money to deliver unprofitable services to just a few hundred people with very low ARPUs, or to wait until technology will make such efforts more viable. Well, the technology has arrived so such obstacles are being removed.

Technical challenges

As for Deasington's views on the technical challenges, which remain for satcoms infrastructure providers if they are to support African mobile operators better, he told *Communications Africa/Afrique*, "The key challenge is power efficiency. You want to be in a position where the satellite terminal and the cell base station are both efficient enough to be powered from small solar/wind plus battery solutions. This goes hand-in-hand with solar charging stations for local devices, such as mobile phones.

"We've seen some interesting work from companies like Ericsson to combine the solar requirements of a base station with that of a village shop, or even a solar-powered water pump."

"The introduction of high throughput satellites, which offer the promise of higher throughputs and lowers costs, will likely lead to the biggest economic change" - Richard Deasington, director of market development, iDirect

From challenges to solutions, he added that with 'most people in this context will not have laptop or desktop computers and as the data-centric world makes its way to the most remote parts of the continent, the low-cost smart phone will be the key enabler for the digital revolution'. With this in mind, iDirect's Deasington had this advice for new mobile entrants in Africa, "This means that the best option for most new networks will be a leap straight to 4G LTE, leapfrogging 3G. It provides higher speeds, better efficiency and wider coverage for the same power budget. Until recently, the cost of handsets has been a handicap, but this concern is being reduced due to the fact that newer phones are now built with multi-standard chips."

As to how increasing demand for high-bandwidth services in rural regions has impacted satcoms providers, he said that 'the arrival of higher bandwidth demands, driven by the move to 4G and the data revolution, has coincided with the deployment of new generation HTS satellites that can deliver an order of magnitude more bandwidth for essentially the same costs as older broad-beam satellites'. The point here, he said, is, "This means that the costs to service each user will stay close to the same, despite the capacity needed per person being projected to rise rapidly."

When it comes to the geo-political and business challenges that face companies trying to conduct business in regions of Africa in need of satellite-based telecoms services, Richard Deasington said that, "Many of the most economical HTS services are provided by satellites that land their traffic in a different country, or even continent, from the originating country and then return it via fibre. At times, regulators have demonstrated a reluctance to permit this topology for 'security reasons'. This type of set-up is common in Europe and, in any case, end-to-end encryption can be applied to the traffic."

He added that it is, however, now time for regulators to take a new look at this situation.

Playing its part in Africa

As for iDirect's involvement in delivering satcoms-based communications in Africa, Deasington said this is one of his company's fastest growing markets, with 'many

"The combination of small cells and satellite means that a single satellite link can be shared by hundreds of users, each with their own access device" - Richard Deasington, director of market development, iDirect

established networks deployed - some of which have been quietly operating for many years providing GSM communications in countries such as Cameroon and Senegal'. The company is also currently working with newer networks being deployed in South Africa, Benin and DRC.

"We are involved in just about every country in Africa, delivering services to enterprises and carriers through a range of different operators and service providers. These services range from Internet cafes to bank branches and ATM machines, and remote oil and gas installations. The company also provides connectivity to remote and rural cellular sites, which range from high-bandwidth 3G systems, installed in South Africa, to voice-only GSM systems in Ghana.

"We have a fairly large number of 3G base stations from Huawei installed across South Africa; originally, customers in this region tried to deploy base stations using a consumer Internet satellite system, only to find that this didn't work. Once we persuaded them to try our system they found that a carrier-class 3G system works fine - and that it wasn't a problem intrinsic to satellite that had stopped their original trial."

As for some of the technological differentiators that come into play, Deasington said, "The iDirect system provides carrier-class services and allows operators to meet their service level agreements (SLAs) for various technical parameters. This can make the difference between a service working well, or not at all. Our systems are built to work in a telco environment; for example, the X1 Outdoor remote is commonly used for cell backhaul. The fact that it is outdoor-mounted (IP67 rated, -40 to +60 degrees operation) and also available with -48v DC and +24v DC (as well as AC) power supplies makes it an ideal choice for these environments.

"This makes it easy to integrate with modern cellular equipment, and with either telco or solar power supplies."

Last year, the company absorbed some of

the pioneering technology from former remote community communications specialist, Altobridge, into its portfolio. Until now, little of how this 'acquisition' has gone has been revealed. With several deployments and users in Africa, understanding the future for those stakeholders is important and Deasington decided to reveal to CA what exactly is being done with the technology and IP acquired.

"Altobridge had the most efficient 2G and 3G base stations on the market, as well as other suitable technology for optimising all kinds of backhaul - not just cellular. However, iDirect didn't acquire the hardware aspects of their business, preferring to maintain a vendor-neutral position in the market. We're now ready to release the first fruits of this integration work called iDirect SatHaul. Initial focus will be on making the 4G experience more economic, as well as providing a better user experience over satellite. Due to the fact that 4G typically uses larger links, this is where the biggest savings are to be made in the short term. This will be followed with software to optimise 3G small cells. The 2G and 3G optimisation that was previously sold bundled with the Altobridge proprietary base stations has now been licensed to other firms. This will enable previous users of Altobridge equipment to move forward and grow their networks or to build new networks where ultra-high bandwidth efficiency and low power consumption are key."

The future

As to what's next for Africa in terms of satcoms delivering personal communications to remote regions, Deasington said, "the combination of small cells and satellite means that a single satellite link can be shared by hundreds of users, each with their own access device. When you couple this with HTS capacity and the new iDirect SatHaul optimisation software being released, the economics and the user experience are greatly enhanced." ©

Tim Guest

Hermes Datacomms and O3b serve the oil & gas Sector in West Africa

WIDE AREA COMMUNICATIONS specialist Hermes Datacommunications has partnered with O3b Networks, a global satellite operator offering next generation satellite networks, to deliver communications to a global oil company, with major operations in the world's most important oil and gas regions. Under the contract, Hermes will deliver critical communications for the company's operations in West Africa and a connection back to their regional headquarters in Europe.

The use of O3b satellites, which are closer to the earth than conventional geostationary satellites, reduces latency, increases data rates and improves voice and video quality for the end user. The high throughput O3b satellites also offer greater capacity, with the ability to support up to 1.6 Gigabits in a single beam.

"Access to the O3b network gives us the ability to open up new services where it would be difficult to obtain access to fibre," said Barry Bouwmeester, business development manager for Africa at Hermes Datacomms.

Innovating industry with the “Internet of Everywhere”

Inmarsat’s sophisticated satellite technologies enable a plural ecosystem, serving multiple sectors in new ways with mobile satellite communications

MOBILE COMMUNICATIONS SATELLITE services provider Inmarsat presently offers a range of technologies and services specifically to enable the ‘Internet of Everywhere’, the new Internet age in which things can be found in any region and in any vertical.

“The way we use technology to work, live, play and learn is evolving. No matter where we are, or where our devices are located, we require and demand high-speed internet access,” said Michele Franci, CTO of Inmarsat.

“With two of our three Global Xpress satellites successfully launched, we are close

Inmarsat has been opening up its platform to third party developers; encouraging new ideas that will change the way satellite communications are implemented

to the completion of our fifth generation constellation. It will push the boundaries of satellite communications and deliver seamless, high-speed broadband communications anywhere in the globe – creating opportunities for everything to be connected anywhere, anytime.”

Satellite solutions and end-users

Inmarsat has been busy enhancing its portfolio of satellite solutions for end-users in government, maritime, aviation and enterprise sectors.

As part of the development of the next generation of global mobile satellite technology and applications, Inmarsat has been opening up its platform to third party developers; encouraging new ideas that will change the way satellite communications are implemented on land, at sea and in the air.

Spanning the world with GX

Inmarsat’s Global Xpress (GX) will be the first high-speed broadband network to span the world, delivering seamless, globally available connectivity on land, at sea and in

the air, and will bring to life the prospect of the ‘Internet of Everywhere’.

Pushing the boundaries of satellite communications, GX will deliver a high-speed broadband service that will offer seamless global coverage from a single operator, with speeds up to 100 times faster than the company’s fourth generation (I-4) constellation.

The launch of the third Global Xpress satellite was preceded by Type Approval of Cobham Satcom’s Explorer 7100GX Global Xpress terminal. However, there is also a wide range of products and services to take Inmarsat’s customers forward, including:

Machine-to-machine (M2M) services, which provide affordable two-way data connectivity for messaging, tracking and monitoring of fixed or mobile assets anywhere in the world.

BGAN HDR, which provides broadcasters and media organisations with high definition video quality and a streaming rate of around 650kbps with its full channel options, making it the fastest streaming rate service in the world of mobile satellite communications. It also offers access to BGAN features such as Standard IP, voice and text messaging.

IsatHub, which has been designed specifically for use in remote locations, the IsatHub service will connect smart devices when beyond the reach of terrestrial mobile and fixed networks. Users will be able to talk, text, access the internet and their apps using their own smart device, wherever they go.

L-TAC, which delivers robust, low-cost beyond-line-of-sight (BLOS) mobile communications to a broad range of new government users. L-TAC offers a ‘UHF-like’ tactical satellite capability for use with existing military radios by approved government customers.

Low Profile BGAN, consists of a rapidly deployable lay-flat antenna and a robust, remotely operable BGAN terminal which will work even when buried under sand. Low Profile BGAN is the only solution which allows unmanned, concealed surveillance in real-time.

Fleet One, which provides affordable satellite voice and data specially packaged for small leisure and fishing boats.

Fleet Media, an on-demand video solution, which brings the latest movies, TV, sport and news to ships at sea. ☎



Inmarsat’s Global Xpress satellites are being launched on Proton rockets (Photo: International Launch Services)

Singtel's vital role in satellite services

Lim Kian Soon, Head of Satellite at Singapore Telecommunications Limited, explains the company's commitment to African connectivity

SINGAPORE TELECOMMUNICATIONS (SINGTEL) is amongst Asia's prime satellite operators, with over 35 years experience in connecting communities and commercial entities. It is an award-winning provider of fixed and mobile satellite services with a fleet of two satellites and access to another 30 satellites around the world. Its three satellite earth stations provide direct transmission (from Singapore) to over 80 countries.

Singtel's Head of Satellite, Mr Lim Kian Soon, spoke to Communications Africa/Afrique recently of the company's ongoing commitment to African service provision and content delivery through sophisticated satellite architectures. He discussed single channel per carrier (SCPC) coverage using very small aperture terminal (VSAT) services over ST-3 transponder technology. He spoke of the support provided through an extensive deployment of points of presence (PoPs) to serve the continent as it connects between nations and across the globe. Mr Lim spoke also of the economic potential represented by the high prospective compound annual growth rate (CAGR) of the African communications marketplace, taken as a whole. Lastly, Mr Lim addressed the opportunities for telecommunications companies, with respect to new revenue generation through enhanced service channels.

Communications Africa/Afrique: Which technologies and services does Singtel offer African operators and industries?

Lim Kian Soon: We have expanded into the African market last year with our ST-3 West Hemi C-Band transponders and while there is still strong demand in the region, the competition is equally intense.

To extend our services beyond just transponder leases, we have also established teleport facility to provide iDirect Hub and SCPC VSAT services for ST-3 coverage in Africa.

Our comprehensive satellite footprint covers Asia, the Middle East and Africa with three teleports pointing to more than 30 satellites; are supported by our own extensive terrestrial network of more than 200 PoPs in over 160 global cities.

This unique position of being a leading telco as well as Satellite operator and service provider in Asia-Pac region enables Singtel to



Singtel's teleports serve Asia, the Middle East and Africa through more than 30 satellites

offer end-to-end connectivity to our customers thus saving them the hassle of working with multiple parties.

CA: What is the level of demand for VSAT services in African markets?

LKS: The level of demand for VSAT services in African markets has high potential despite economic uncertainties. According to a survey carried out by Euroconsult (Satcomms & Broadcasting Markets Survey to 2023), the

growth in Sub-Saharan African is 11 per cent CAGR. Nigeria, Congo and Kenya are some of the larger satcom markets for Banking, Mining, O&G, Retail and Government.

One of our customers is one of Asia's fastest growing carriers, for which we deployed our strong C band satellite covering Europe to Africa for a VSAT project. We carefully recommended highly reliable and most advanced SCPC modem in the market using Carrier-in-Carrier technology to maximise bandwidth with total availability of 99.98 per cent.

CA: What are the key market drivers for satellite services over the next 12-18 months?

LKS: Africa has enormous and dispersed land area, most if not all has under-developed telecom markets in terms of connectivity due to limited transport, telecoms infrastructure, and socio-economic conditions.

Satellite still plays a vital role in delivering the critical communications to many parts of Africa that are unconnected and underserved.

Key drivers for satellite services will be cellular backhaul and Internet trunking in Africa and the Middle East as cellular deployment increases in the region. Telcos in Africa and the Middle East are looking at satellite to help them to provide services to their customers in rural areas as investments continues to pour into the regions. ☺



Lim Kian Soon, Head of Satellite at Singtel

A greater voice for satcom ventures

Satellite operators are increasing their commitment to a stronger role for satellite in future communications ecosystems

CHIEF EXECUTIVES OF the world's leading satellite operators met in Washington, in the USA, at the Satellite 2015 Conference to announce that ESOA, the world's only CEO-driven satellite organisation, is expanding to include satellite operators from the ITU's region 1, namely Europe, the Middle East, Africa and the Commonwealth of Independent States (CIS). The move highlights the importance the sector's executives attach to leading a coordinated and impactful response to the global challenges and opportunities it faces.

Adapting to new trends

ESOA Board members are conscious of two important trends in telecommunications: increased demand for rich media video content and increased take-up of mobile data services. Both trends are heading towards unmanageable congestion for networks that

will result in massive user delays, poor quality content and a more critical digital divide than exists today. These developments are also happening against a backdrop of increased vulnerability of terrestrial fixed infrastructure.

Playing a vital role in tomorrow's digital infrastructure

Satellite operators transmit thousands of HDTV channels, are pioneering Ultra High Definition broadcasting and facilitating backhaul and mobility services across hundreds of countries. Though often invisible, satellite technology is an essential enabler, with unique qualities of reach, resilience and capacity that must play its role in future digital infrastructure. Only then will users truly benefit from the choice and quality they demand, and policymakers truly achieve an inclusive society that can rely on always-on technology that is immediately available. The emerging debate on 5G presents an important opportunity for policymakers to get it right: control costs, add reach and create truly converged ecosystems.

Though often invisible, satellite technology is an essential enabler, with unique qualities of reach, resilience and capacity

Leading the charge to protect spectrum

The geographic expansion of ESOA is also in response to the overwhelming push on satellite operators to combine their efforts and lead the charge to protect highly sought-after spectrum and retain their place as high value contributors to digital markets.

Michel de Rosen, ESOA Chairman, and CEO of Eutelsat, said: "The issues our industry faces matter for the hundreds of millions of people who benefit from our services. We will better secure the future of our sector in the connected world by coming together in a broader forum to define a shared vision and work together to make it a reality. Preserving access to our spectrum at WRC15 is currently our number one priority and a goal shared by all satellite operators. We will have a louder voice by joining forces to ensure our users don't lose out and our massive investments are not in vain."

The EMEA Satellite Operators Association now counts among its members: Airbus CIS, Amos Spacecom, Arabsat, Avanti, Azercosmos, Es'hailSat, Eutelsat, HellasSat, Hispasat, Inmarsat, Intelsat, Nigcomsat, Nilesat, O3B, SES, Telenor, Telespazio, Thuraya, Turksat, and Yahsat as well as representatives of the broader space industry including Airbus Space Systems, Asitel, ASIC, Brit, Bulsatcom, Hiscox, Mansat, Marsh, Munich Re, Newtec, Solaris, Swiss re and Thales Alenia Space. ©

Policymakers can use satellite technology to achieve an inclusive society. (Photo: Satoshi Kaya/Flickr)



FG Wilson expands F Model range

Less than a year since FG Wilson launched its hugely-successful F Model range, the leading global manufacturer of diesel and gas generator sets will be expanding the range further throughout the next 18 months

LESS THAN A year since FG Wilson launched its hugely-successful F Model range, the leading global manufacturer of diesel and gas generator sets will be expanding the range further throughout the next 18 months.

The 32–125 kVA range of generator sets, which complements the existing suite of FG Wilson product ranges, has proved extremely popular with customers across the world. Its design provides a more diverse and competitive product offering across multiple customer segments such as domestic, retail and industrial.

Uncompromising on quality, availability and expert local support, these models deliver uncomplicated power assurance with the quality excellence which the world has come to expect from FG Wilson. Until recently the 32–125 kVA range had only been available in 50 Hz but customers are now able to purchase this range in 60 Hz also.

Plans are also advanced for the launch of the F Model range in a number of different sizes – both smaller and larger – to meet the rising demand for the product in countries such as China, Brazil, Russia and Africa. Over the next 18 months the range will become available in 9.5–22 kVA, 150–165 kVA, 200–220 kVA, 275 kVA and 340–390 kVA.

An exclusive feature of the F Model range, which has been an important factor in its success during the first year on the market is the introduction of the FG Wilson engines to the proven and trusted FG Wilson generator set core design. Coupled with robust, world-renowned components, the F models deliver a high quality, ready-to-run product that meets industry standards for the value-utility market.

Running in tandem with the successful launch of the F Model range has been the growth of FG Wilson's official Dealer network across China. During 2014 FG Wilson expanded its Dealer network in China with the recruitment of five high-quality companies which has improved its reach across four key provinces – Shandong, Jiangsu, Hunan and Sichuan.

These new Dealers will work alongside one of the most long-standing Dealers in the region, FG Wilson Hong Kong, who have been providing high-quality diesel and gas generator sets as well as expert advice and specialist technical support to Hong Kong, China, Macau and Taiwan since 1991.



The F Model product range provides exceptional performance, serviceability and durability

The 32-125 kVA range of generator sets, which complements the existing suite of FG Wilson product ranges, has proved popular with customers across the world

Our Dealer recruitment is ongoing and we are engaging with a number of firms with a proven pedigree to establish new Dealers in areas including Jiangsu, Anhui, Fujian, Jiangxi, Hubei, Henan, Hainan, Guizhou, Yunnan, Gansu, Shanxi, Inner Mongolia, Jilin, Heliangjiang, and Ningxia.

Neil McDougall, Retail Global sales director, commented, "FG Wilson is continually searching for opportunities to consolidate our position as the leading global manufacturer of diesel and gas generator sets. The expansion of our Dealer network in China and the upcoming launches of our ever-popular F

model range in a number of new sizes are very tangible examples of FG Wilson ensuring all of our customers' needs are fully met.

"The F Model product range has delivered on our promise of providing performance, serviceability and durability with a FG Wilson engine and a simplified choice of options. The forthcoming introductions of the new F model sizes will allow us to compete in even more new markets and broaden our customer base further.

"Such new product introductions are part of Caterpillar's strategic plans to position FG Wilson as the volume brand within its Electric Power Division for all diesel and gas generator sets from 6.8 – 750 kVA.

"The expansion of our Dealer network in China comes just six years after the relocation of FG Wilson's Asia Power Systems (APS) to a 28,000m² world class facility in Tianjin, purpose built to fulfil increasing demand. Highlighting our policy of continued investment in our world-class manufacturing facilities across the globe, the APS plant in China is one of the main source plants for the recently-opened Product Distribution Centre (PDC), located at Antwerp, Belgium." ©

The OTT service delivery debate

The core challenges facing operators seeking to remain relevant in the communications market

OVER-THE-TOP (OTT) services delivered via the Internet have become part and parcel of the lives of consumers today. From converged multimedia services such as high definition (HD) audio and video to social platforms, screen sharing and other bandwidth-intensive, high data volume services, OTT has revolutionised data consumption. However, while OTT providers reap the benefits of insatiable consumer demand, infrastructure service providers and operators are suffering as a result of the very same demand. OTTs essentially create virtual communities and virtual networks, connecting millions of people, generating huge data volumes, and making significant profit, without the need to invest in infrastructure. Network providers, on the other hand, must cater to increasing demand for bandwidth and infrastructure while continually reducing prices to cater to the needs of their customers. This unsustainable situation has created a number of debates within the ICT industry about disruptive services and the need for new services and revenue models. Operators are challenged to remain relevant in the market, and must come up with new strategies to become more competitive in a consumer-driven world.

Investing in the revenue base

While OTTs have without doubt driven greater network traffic, the main challenge comes as a result of their operating model. They run their services over the plethora of existing networks and create large commercial value for themselves without investment into the network that carries the traffic. OTT service providers largely capitalise on user-generated content and turn such content into a foundation for their own value proposition. Networks, in contrast, are faced with rising investment costs, increased customer churn and faster technology refresh cycles, not to mention the effect that OTT consumption has on their infrastructure. OTT players offer their services directly to the consumer, which erodes the traditional revenue base of the networks and drives the requirement for further investment into network expansion and network capacity. This creates a double negative effect for operators of lower revenues



Eckart Zollner, head of business development, Jasco Group

Network providers must cater to increasing demand for bandwidth and infrastructure while continually reducing prices

and higher investment requirements, and this situation is in somewhat of a downward spiral.

In order to curb the negative effects on operators, some networks have resisted OTTs with the introduction of data caps, or have tried to recover revenue from OTT service providers themselves. However, this strategy failed to achieve the desired result and in fact alienated operators further from their customers, creating additional churn. Some operators have, as a result, embraced OTTs and have made the use of OTT networks free, without really understanding how this loss in revenue will be replaced. Ultimately, OTT must become a key strategic focal point if networks want to remain relevant and profitable, and new models and revenue streams need to be generated.

Controlling content

The adoption of OTT illustrates that the balance of power has now shifted solidly toward the consumer. While OTT providers may believe that they are controlling this balance, it has been demonstrated before that the market

does not harbour much loyalty toward any particular OTT service. The moment an OTT service loses relevance, or new innovation emerges, the market switches to another provider, taking the money and the profits with them. Fundamentally successful OTTs are well-designed applications with multimedia content that demonstrates mass-market appeal.

Operators should take cognisance of this model for success and apply this strategy to their own business. In order to stay relevant and reach the biggest possible subscriber base, networks have to move up the value chain, by not just providing the pure transport layer but also to participate in the benefits from the application layer. In this way, they will be better enabled to participate in a market that has experienced such a fundamental shift brought about by OTT services.

In order to survive, networks need to embrace the OTT concept and build their own value added services into or on top of it. The reality is that expecting revenues from OTT service providers is unrealistic, as is the expectation that large revenues can be gained from the users of OTT services. However, creating their own OTT services within the communities of their subscriber base is one area where there may be money to be made. In addition, operators should look toward the creation of value-added solutions for the OTT service that can be turned into a combined new revenue source. Service bundling should become a key focus with, for example, the management and security of customer data bringing additional value to the customer experience and revenue to the mobile operator.

Operators need to think outside of the box of their current models in order to remain relevant. Whatever new services and solutions are developed and become successful, the reality is that the playing field has changed substantially in favour of the market. The only sure thing is that staying the same and stagnating with regard to services will only lead to further eroding of profit margins. In-depth knowledge and understanding of market demand and market dynamics have become indispensable tools for any mobile operator in order to remain relevant and profitable. ©

Eckart Zollner, head of business development, Jasco Group

La révolution du numérique est en marche

La pose de la première pierre des travaux de raccordement au réseau de fibre optique lance la modernisation des technologies au Congo

CONSCIENTS DE LA faiblesse de leurs infrastructures numériques, le Congo et le Gabon construisent ensemble un réseau moderne de connectivité internet haut débit. Deux projets cofinancés par la Banque mondiale vont les raccorder au câble sous-marin (African Backbone) de fibre optique qui relie le continent africain à l'Europe et développer un réseau terrestre entre leur deux pays.

De l'accès aux services

Contrairement à la téléphonie mobile qui s'est beaucoup développée ces dernières années au Congo avec 44% d'abonnés en 2013, l'accès aux services Internet demeure inégal, très cher et lent. Ces nouveaux chantiers permettront de couvrir une plus large partie du territoire et d'offrir des services plus abordables et de meilleure qualité à la population.

Les entreprises et l'administration publique tireront aussi parti de cette modernisation. Le développement commun des TIC favorisera en effet les échanges et l'intégration économique régionale. Cela offrira par ailleurs de nouvelles opportunités économiques et sociales qui permettront de lutter contre la pauvreté. Le projet modernisera le Chemin de Fer Congo-Océan (CFCO) et développera les technologies de la communication dans les villes, ainsi que les services publics et administratifs. Il générera aussi des emplois, en particulier auprès des jeunes qui seront employés sur ces chantiers.

« Le haut débit est un levier majeur pour la compétitivité des entreprises et pour l'attractivité du Congo en matière d'investissements directs, en raison de la forte relation existant entre la pénétration du haut débit et la croissance du PIB », a souligné le représentant-résident de la Banque mondiale par intérim Clément Tukéba, à l'occasion de la cérémonie de pose de la première pierre en décembre dernier.

Le réseau gabonais

Les ministres de tutelle gabonais et congolais ont signé un marché public pour la construction du réseau de fibre optique qui concrétise la mise en œuvre de ces deux projets de « colonne vertébrale de l'Internet » pour l'Afrique Centrale (CAB3-Congo et CAB4-Gabon). L'objectif est de réaliser à terme un maillage total de la sous-région. Les travaux mis en



Thierry Mougalla, ministre congolais des Postes et Télécommunications et Pastor Ngoua N'Neme, ministre gabonais de l'Economie numérique, de la Communication et de la Poste, posent la première pierre des travaux

œuvre par le ministère de l'Aménagement du Territoire et la Délégation Générale des Grands Travaux du Congo comportent l'aménagement d'un câble de fibre optique qui traversera le pays d'Ouest en Est en reliant la ville côtière de Pointe-Noire à Brazzaville par voie terrestre. S'ajoutent à cela les travaux de raccordement au câble sous-marin Afrique-Europe via le réseau gabonais, qui commenceront à la station d'atterrissage des câbles sous-marins de Matoumbi et parcourront le territoire du Nord au Sud, de Mbinda à Pointe-Noire sur le même tracé que les 520km du chemin de fer Congo-Océan.

Les deux infrastructures doteront le pays d'une très bonne capacité Internet. Ce nouveau réseau national sera public, mais sa gestion et sa commercialisation seront déléguées à un fournisseur d'accès privé.

En attendant, un comité de 16 membres a été créé pour assurer le suivi des travaux de construction. Il définira aussi la réglementation, la régulation et les modalités de gestion et de sécurisation du futur réseau. Ces réunions périodiques organisées dans les deux pays informeront aussi la population sur ces deux chantiers et sur les bénéfices qu'elle pourra en tirer. ©

Un New Deal numérique pour le climat

BLES TECHNOLOGIES DE l'information et de la communication (TIC) sont elles un problème pour le climat ? C'est en tout cas le scénario retenu lors d'un récent colloque à la London's Royal Society, qui alertait simultanément sur l'effondrement d'ici 2023 des réseaux et sur le caractère énergivore des centres de données et d'Internet. Un scénario anxiogène, bien sûr. Mais un scénario reposant sur une hypothèse de laissez-faire qui n'a déjà plus cours et contre laquelle les acteurs se sont mobilisés. Ainsi, chez Alcatel-Lucent nous avons investi massivement pour trouver les solutions aux enjeux énergétiques des réseaux. Nos Bell Labs ont en effet clairement établi les données du défi numérique-énergétique : plus de 3,9 milliards d'internautes connectés en 2017, générant une augmentation de 440% du trafic données et 720% de la vidéo. Le tsunami numérique transforme la question de l'efficacité énergétique des TIC en priorité.

Là encore, l'approche d'Alcatel-Lucent, au-delà des efforts de réduction faits pour réduire notre propre empreinte carbone, me semble pouvoir servir d'exemple par la complémentarité et l'exhaustivité des deux axes qui la structurent : l'adoption d'une stratégie volontariste d'amélioration de l'empreinte énergétique et climatique de chaque nouvelle génération technologique que nous mettons sur le marché, combinée à des programmes de R&D disruptifs de long terme.

Le rôle du numérique va bien au-delà de ses propres défis sectoriels : via la dématérialisation, la data, l'intégration des systèmes informatiques et l'optimisation des procédés industriels, le numérique se place au cœur de la transition énergétique et de l'optimisation du bilan écologique de tous les secteurs économiques.

Systems and technologies for content and commerce

The convergence of delivery methods and the increased influence of enterprise markets mean continued development of localised IP media delivery

THE MARKET FOR Internet protocol television (IPTV) is characterised by low investment and high returns on investment. Content can be delivered over the Internet in the same way as high-quality programming is delivered through television. Television integrated with IP offers continuous television content to sustain a varied customer base. Content delivery networks (CDNs) and telecommunications companies (telcos) can take advantage of a normalised approach to Internet access and aggregation networks for high quality distribution of content.

The most commercially viable content for service development may be found in music and video - and so these are key focal points for CDNs and for telcos. Music is particularly well-served by IP radio, which can be integrated with music streaming services and within fixed and mobile telecommunications multi-play packages. IP video streaming can be both dedicated and localised for multi-channel, multi-play revenue models.

Amongst operators serving Africa, Orange has been instrumental in delivering both streaming video and radio in collaboration with its affiliates in Ivory Coast, Senegal,

Madagascar, Maurice, and Réunion Island. Key to Orange's success IP media is localisation, which is a key driver in consumer service adoption. At present, the strongest markets for Orange are South Africa and Algeria, but all its territories may see strong growth as provision of high-quality IP services requires gains ground in tandem with significant bandwidth increases enabled by submarine cables and high-speed fibre terrestrial network deployments. As important to adoption are the utilisation of datacentres and local content production. On the last point, Nigeria, Egypt and South Africa have led the way, with significant volumes of local content already created, and well-established media industries.

The most commercially viable content for service development may be found in music and video - and so these are key focal points for CDNs and for telcos

Equipment for enterprises

Increasingly, broadcasters and other media organisations require efficient solutions to distribute TV content internally. Demand is met in the market with technologies such as TV gateways offering capacity and support for digital video broadcast (DVB) inputs from terrestrial and satellite sources. For critical IP video services, there are TV gateways on the market providing significant Ethernet capabilities, supporting automatic Ethernet switching on loss of network connection. It is interesting to note, too, that such technologies serve not only consumer-facing content delivery, but all shapes and sizes of businesses, across a wide set of industries, seeking to using their existing IP network investment to distribute video content to affiliated organisations and individuals - including to employees operating from remote locations. Colin Farquhar, CEO of Exterity, explained the trend toward enterprise IPTV recently, saying that robust and flexible TV gateways can "give companies access to live TV content to support their core business activity", adding that benefits to enterprises include "greater mobility through real-time communication, greater accessibility and

Delivering a differentiated media platform with PerceptionTV

FOUNDED IN 2014, PerceptionTV is a high-growth media technology company providing innovative and compelling products and services to the IP broadcast industry. Its solutions serve telecommunications companies, broadcasters, content owners and ISPs. Its core offering, Perception, is a white label on-net and OTT platform that delivers live streaming TV, catch up TV, video on demand and network PVR.

PerceptionTV allows both established broadcasters and start-up media businesses to launch a branded service within a few months, delivering the service rapidly and cost effectively. Perception also provides the capability to deliver video entertainment services across vertical industries, on a global scale, utilising its regionalisation and multi-node functionality. Designed for operators, broadcasters and content aggregators, Perception represents a cost-effective and rapidly deployable solution,

enabling multiple viewing modes to be combined into a single user interface across multiple screens. It is scalable, and delivers content to any connected device - regardless of location, at any time.

Headquartered in London, in the UK, PerceptionTV maintains development offices in Europe, the Middle East and North Africa, and Latin America. John Mills, the company's CEO, recently explained the

vision behind the development of the company's platform. Service providers must be empowered to grow with a differentiated, value-added package. This key commercial message underpins PerceptionTV's core aim: to enable a professional, personalised, operational experience to new markets and customers. Mr Mills commented, "The Perception platform delivers TV as it should be - intuitive, personalised and with all your viewing in a single user experience, whether you're watching on your TV, mobile or tablet."



enhanced productivity". Exterity's own portfolio serves enterprise IP video by enabling organisations to stream content including live broadcast, internal TV channels and over-the-top (OTT) content. Its 'Beyond the LAN' product line facilitates the distribution of high quality video content to a number of screens across a wide range of networks - including corporate wired LAN, WAN, Wi-Fi and the Internet. Notably, this capability is critical for organisations that look to integrate bring your own device (BYOD) benefits with their enterprise IP video solutions.

Solutions such as those supplied by Exterity can be combined to build systems that cater for streams originating from all types of sources - including cable, digital terrestrial television (DTTV), IP, and satellite.

Service from the sky

Satellite itself represents an interesting proposition. Eutelsat 9A offers an example of an established platform, particularly popular with channel start-ups looking for delivery into North Africa and the Middle East. The benefits it offers to such enterprises include adjacency to Eutelsat's Hotbird position, so reception of channels from both locations is possible with dual fee dishes. There are also direct to home (DTH) platforms and strong cable head-end communities receiving from its orbital location. Moreover, established backroom companies such as Arqiva work with Eutelsat 9A, collect SD and HD channel output, providing encoding if required, adding conditional access, multiplexing and channel modulation and uplinking to its own Eutelsat 9A capacity, so that channels can then be downlinked by DTH

platforms and cable or IP head-ends.

In fact, mature media companies such as Arqiva can deliver full monitoring, technical support and a dedicated account manager as part of the package. They will also work to standardised contracts, and maintain a product portfolio that guarantees smooth transmission and offers disaster recovery capabilities. To emerging and established IP media entities, such features can be very useful additions to operational models.

Many argue that media convergence - by which IP services are used seamlessly in line with traditional linear television viewing - will improve viewer experience. Moreover, connected devices are becoming more and more ubiquitous, and satellite - as a linear broadcast technology providing a simple and reliable service - may be expected to play a major role in increasingly converged markets. The convergence of broadcast, IPTV and broadband delivery through smart TVs and set-top boxes is becoming more established in Africa and the Middle East, but this sits alongside the provision of satellite-delivered content. The end-user experience need not differentiate between the delivery method.

As everywhere in an increasingly connected world, audiences in Africa and the Middle East are hungry for content, recorded and live. There is increasing demand and so increasing revenue opportunities in news, sports and reality TV. And increased and more varied forms of access to near-line, off-line and archive programming means greater reach as audiences can fit more content around social activities. Satellite's service to live content delivery is particularly strong, as the agility of

satellite news gathering (SNG) vehicles to attend live events and distribute content quickly and efficiently is particularly valuable. Missing a top variety show, the latest breaking news or goals scored at a top match as they happen can leave people feeling left out - especially when there is the possibility of sharing views with other viewers, or using that 'red button' to vote or interact with a show.

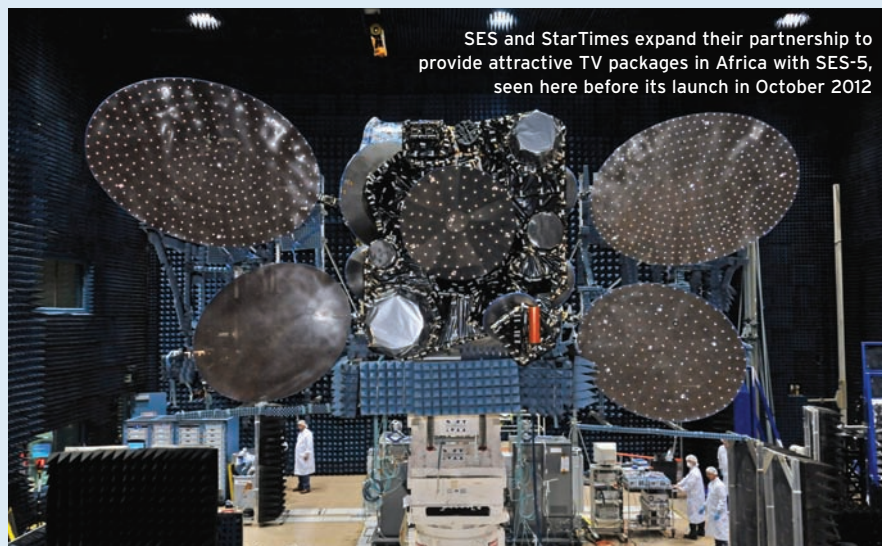
A diversity of opportunity

But the money need not be made from viewers at home or workers out in the field. Another interesting example of IPTV at work in Africa and the Middle East is the emergence of managed digital entertainment and connectivity services. In this regard, a prime example is offered by Quadriga Worldwide, which has recently marked a break-out year in Africa not only in IPTV but in WiFi sales. What's interesting here is that much of its business has come from hospitality. In the year to April 2015, Quadriga secured a 600 per cent increase in sales across North, West and East Africa. Its major wins including being selected as Accor's exclusive WiFi provider for its entire 20,000 room African estate and Starwood's WiFi provider in Egypt. Quadriga has also strengthened existing relationships with strategically important clients such as Mövenpick, Mandarin Oriental, Marriott, Hyatt, Hilton and Rezidor Hotel Group. Its next steps include installing IP and network solutions as the essential backbone of hotel infrastructure and a multimedia platform (called Sensiq) with streaming technology in strategic cities like Malabo, Nairobi, Kinshasa, N'Djamena and Accra. ☺

SES and StarTimes team up for TV across Africa

CHINA'S LEADING SYSTEMS integrator, technology provider and network operator, StarTimes has extended its partnership with satellite operator SES SA, utilising the SES-5 satellite. StarTimes has

contracted additional capacity to provide an enhanced TV viewing experience for its subscribers in Africa by providing better picture quality content and more TV channels on its DTH package.



SES and StarTimes expand their partnership to provide attractive TV packages in Africa with SES-5, seen here before its launch in October 2012

StarTimes currently provides English-language direct-to-home (DTH) content to viewers across the region, via the SES-5 satellite located at 5 degrees East, and is today the fastest-growing digital TV operator in Africa, with more than 5 million DTT and DTH subscribers across 26 countries in Africa.

StarTimes group chairman and president Pang Xinxing said, "We see unprecedented growth opportunities for StarTimes in the region. We are extending our presence and reach in the DTH market to deliver on our promise to provide affordable, world class Pay TV services across Africa. SES is the leader in providing satellite services and well regarded for its reliable and comprehensive networks, and we are confident of realising our mission, together with SES, of enabling every household in Africa to have the chance to experience digital TV."

Ferdinand Kayser, chief commercial officer of SES, said, "Both SES and StarTimes have continued to invest in the African market over the past few years. We are proud to be a part of the growth of StarTimes as it ventures into new markets and we look forward to supporting their development in the region."

Coverging on new network technologies

Convergence Africa World featured future-ready modular solutions enabling secure digital migration and low-risk entry into multiscreen content delivery

CONAX, PART OF the Kudelski Group and a specialist in total service protection for digital television and entertainment services via broadcast, broadband and connected devices, was amongst the most prominent participants at Convergence Africa World 2015, held recently in Nairobi, Kenya.

Amongst other innovations, Conax featured its Contego unified security hub including targeted solutions for secure digital migration, future-ready for adding exciting new services, such as the Conax GO Live entry-level and fast-to-market solution for providing secure streaming of live channels to iOS and Android devices.

The Conax Contego unified security hub supports all major distribution technologies and formats including UHD/4K, seamlessly supporting smart cards, cardless, IPTV and advanced multi-DRM and OTT services from a single unified back-end, covering all types of networks and end-user devices.

Conax also introduced visitors at the show to its benchmark, modular 'Pay-as-you-Grow' business model empowering operators to establish or upgrade an operation with limited initial investment and incrementally add support for higher subscriber volumes and new content service offerings such as network PVR, catch-up, VOD, multiscreen and more – as their platform grows.

The evolution of African TV

There was much else to discuss at the event itself, alongside key product showcases and solutions from the 130 exhibitors including Conax. For example, a feature session at Convergence Africa World facilitated discussion on The Evolution of Television in

Africa. The core focus of debate was digitisation, and the session was moderated by Joe Frans, CEO of NGB Ghana. There was, moreover, a feature presentation by Saad Mouneimne, director of business development for the Middle East & Africa at Conax. Mr Mouneimne shared insights with delegates in a presentation on 'How to Succeed with Pay TV in post digitised Africa'.

Convergence Africa World facilitated discussion on the evolution of television in Africa, during which a core focus of debate was digitisation, and there were insights from delegates into successful pay TV models in a post-digitised Africa

On the matter of digital migration, and the part that Conax plays in the evolution of African TV, Thomas Blichfeldt, SVP EMEA at Conax, said, "Already securing 32 DTH and DTT operators across the continent, Conax is a leading driver for Africa's pay-TV expansion. With a strong regional track record in secure digital migration and innovations for a robust operator roadmap, Conax is continuing its strong commitment to the African market by providing pay-TV operators with future-ready solutions, expertise and the guidance to build their business into the future for next generation consumers."

Connections and convergence

Set to take place in June 2016, and again in Nairobi, The second edition of Convergence Africa World is themed as "Connecting Africa". Growth in Africa's technology space is rapidly changing the continent's macroeconomic landscape. Most African governments are embracing wide-ranging communication solutions for voice, data & video, increasing internet access, and making IT a crucial plank of their development plans.

Africa is amidst digital migration and Smartphone penetration is witnessing a phenomenal upward trajectory across the continent. As digitization unfolds across the African nations, it brings forth a need to enhance perspective, innovate and collaborate in a multifaceted manner. The Convergence Africa World will provide a platform to deliberate on convergence of these services and will focus on new-age technologies and merging business solutions that harness the young population to create a wave of technological transformation in the continent.

The second edition of the expo will showcase innovation and merger of technologies not only in broadcast but also in telecommunications, IT, broadcast, security & surveillance, mobile money, smart/digital cities and many more. The expo will bring together the leaders from around the world on one common platform and will serve as a great stage for international companies who are looking forward to enter the African market. Focused business matching will provide the perfect opportunity to network with industry bellwethers and establish new relationships. ☺

Technicolor creates HDR and SDR compatibility solution

DIGITAL MEDIA AND entertainment technologist Technicolor has launched a high dynamic range (HDR) single-layer solution for testing by key ecosystem partners. The solution, which is compatible with MPEG HEVC standards, creates a video which benefits from improved compression efficiency over unprocessed HDR files. It is also backwards compatible with legacy standard dynamic range (SDR) displays.

With a focus on collaboration and open platforms to foster innovation for the future of digital storytelling, Technicolor's HDR single-

stream solution will ease the burden on the ecosystem until adoption of next-generation TVs is complete.

The Technicolor HDR single-layer solution enables the coding and delivery of HDR content in a single stream to accurately display the content regardless of the display type. Designed for broadcasters, pay-tv operators and OTT streaming services looking to migrate to HDR video, it allows for the storage and delivery of one video file, which plays back on legacy SDR TVs and new HDR TVs coming to market.

Les bouquets de télévision ivoirien et congolais

Des chaînes de télévision numérique en Afrique, et le lancement de My TV Smart, Ma TELE et Shashatee sur le satellite Eutelsat 16A



Le position à 16° Est se développe rapidement et devient une référence pour les télédiffuseurs africains et internationaux

UN BOUQUET DE télévision francophone Ma TELE a lancé récemment en Côte d'Ivoire et en République démocratique du Congo. Ceci fait suite à un accord significatif entre deux importantes entreprises, travaillant en Afrique pour développer la radiodiffusion. Au printemps de cette année, Strong Media SAL-Off-Shore (SMO) a signé avec Eutelsat Communications un contrat pluriannuel qui va lui permettre de franchir une nouvelle étape dans le développement de ses activités de télévision payante en Afrique. A travers des ressources de diffusion louées sur le satellite Eutelsat 16A, et tout en s'appuyant sur son réseau de distribution dans la région, il y a en Afrique subsaharienne des services de télévision payante en anglais, français et arabe.

Créé en 1977, Eutelsat Communications est l'un des premiers opérateurs mondiaux de satellites de télécommunications et bénéficie de l'une des plus longues expériences dans ce domaine. Avec une flotte de 34 satellites, le Groupe commercialise de la capacité auprès d'un portefeuille de clients constitué notamment de télédiffuseurs, d'associations de télédiffusion, d'opérateurs de bouquets de télévision, de fournisseurs de services vidéo, de données et d'accès Internet, d'entreprises et d'administrations. Les satellites d'Eutelsat offrent une couverture de l'Europe, du Moyen-

Orient, de l'Afrique, de l'Asie-Pacifique et du continent américain, permettant d'établir des communications en n'importe quel point du territoire, utilisées pour des applications vidéo, des services de données et de haut débit ou des services gouvernementaux.

Strong est un leader dans la production et la distribution d'équipement permettant la réception de télévision numérique via satellite et terrestre. Il offre des produits innovants, fiables et robustes à travers l'Afrique et le reste du monde.

Des nouveaux bouquets

Appelés « Ma TELE » et « Shashatee », les nouveaux bouquets francophone et arabophone de SMO ont lancés en avril. Ils prennent parti de la forte puissance du faisceau du satellite Eutelsat 16A qui couvre l'Afrique et ils ont rejoint sur ce même satellite le bouquet « My TV », qui a évolué vers une nouvelle version baptisée « My TV Smart ». « Ma TELE » s'adresse dans un premier temps de potentiels abonnés en Côte d'Ivoire et en République Démocratique du Congo à travers une offre de 30 chaînes comprenant les grandes chaînes de Ma TELE pour le marché africain, le service BIS Africa d'AB Sat, ainsi que plusieurs chaînes non-cryptées (diffusées en clair).

Strong est à la fois l'un des principaux et l'un des plus anciens fournisseurs de matériel

grand public de réception de télévision numérique par satellite. L'entreprise réunit des activités centrées autour de la distribution, du support technique et de l'après-vente de ce type de matériel, réparties dans un certain nombre de pays d'Afrique subsaharienne. Les nouvelles offres de télévision payante vont s'appuyer sur l'expérience de Strong dans la distribution et vont venir compléter son catalogue complet de matériel destiné à équiper le domicile du grand public.

Une position considérable

Samer Mourad, directeur général de SMO, a déclaré : « Nous avons sélectionné Eutelsat 16A compte-tenu de l'attractivité de sa position orbitale et de son poids considérable en termes d'audience dans les marchés que nous ciblons. »

Michel Azibert, directeur commercial en charge du développement d'Eutelsat, a ajouté : « Notre position à 16° Est se développe rapidement et devient une référence pour les télédiffuseurs africains et internationaux. Le talent de Strong qui sait réunir des contenus numériques de premier plan, associé à sa capacité à s'assurer que les téléspectateurs bénéficient d'équipements de qualité et à prix compétitifs, jettent les bases pour de futures perspectives de croissance. L'accès aux contenus numériques en Afrique s'accélère grâce à notre travail aux côtés de Strong. » ©

Infinera expands cloud platform for better user experience

INTELLIGENT TRANSPORT NETWORKS provider **Infinera** has announced the expansion of the Cloud Xpress family of metro cloud platforms. A new Cloud Xpress with 100 gigabit Ethernet (Ebe) client services in the same compact form factor along with enhanced functionality has been added, and will address the needs of cloud service providers, Internet content providers, Internet Exchange Providers, large enterprises and other large-scale data centre operators.

Andrew Schmitt, research director at Carrier Transport Networking at **IHS**, said, "100 GbE is finally becoming available on data centre switches and achieving cost effective pricing on routers by creating demand for 100 GbE client-side interfaces on optical equipment." The Cloud Xpress family leverages the oPIC 500 optical engine, which is Infinera's metro-optimised photonic integrated circuit, to deliver DWDM data centre interconnect services up to 500 Gbs in a compact two-rack unit chassis. The new Cloud Xpress, with 100 GbE, extends the hyper-scale density, simplified operations and low power of the existing Cloud Xpress family that operators can use to easily deploy and scale their networks. With the addition of the new platform, the Cloud Xpress family now supports 10 GbE, 40 GbE and 100 GbE client-side interfaces to match customer specific requirements.

In addition to the Cloud Xpress with 100 GbE, Infinera announced important enhancements to the Cloud Xpress family including MACsec encryption for improved security, NETCONF and YANG support for Software Defined Networking (SDN) and ease of use, and LLDP discovery protocols enabling datacenter automation.

Award-winning VoIP switches for Nigeria

WORLD TELECOM LABS (WTL) has revealed that **Interconnect Nigeria (ICN)**, an interconnect exchange carrier, is now using its award-winning second generation VoIP switches to transfer voice traffic between the country's cellular networks and ICN's VoIP network.

Through the 2nd generation VoIP switches to build new inter-city routes that can transfer very high volumes of calls with total reliability. The company's VoIP links are a cost-efficient way to link Nigeria's cities – traditionally a very costly exercise. Earlier, it was more expensive to transport traffic between Lagos and Abuja than from Lagos to London. With the new VoIP, more than three billion minutes have passed through the new VoIP links and Nigeria's experience provides a blueprint for other countries in Africa, which are looking for ways to increase capacity and speeds, and reduce traffic on congested inter-city links.

In 2014, WTL received the *Most Innovative Product* at the 10th Nigeria Telecoms Awards, and was honoured at the 2014 AfricaCom awards and Global Carrier awards for its efforts to improve Nigeria's connectivity. WTL's second-gen VoIP switches have also been deployed at ICN's network operating centre in Abuja. The price which Nigeria's interconnect carriers can charge for their services is fixed by the Nigerian Communications Commission. Therefore, the interconnect carriers compete on customer service and network reliability. Leigh Smith, managing director of WTL, said, "Operators across the world are now looking to VoIP as a cost-effective way of increasing voice capacity and improving service reliability. We have carved a real niche for ourselves as an innovative company with award-winning VoIP switches."

Phase II of ACE launched, to connect more West African countries to the world

THE **ACE (AFRICA COAST TO EUROPE)** submarine cable system has launched the second phase of the cable, which extends from Sao Tome et Principe to Cape Town.

ACE signed a construction and maintenance agreement (CMA), and supply contract with French telecom company **Alcatel-Lucent** in 2010. Nineteen signatories from 23 countries launched the first phase of the cable in December 2012, in Banjul. They include **Benin ACE GIE, Cable Consortium of Liberia, Canalink, Côte d'Ivoire Telecom, Dolphin Telecom, Guineenne de la Large Bande, Gambia Submarine Cable Company, International Mauritania Telecom, Orange Cameroun, Orange France, Orange Mali, Orange Niger, MEO Cameroon, Equatorial Guinea, Sierra Leone Cable Limited (SALCAB), Sonatel, SPIN (Gabon) and STP Cabo.**

Phase I now extends to 17 countries, stretching from Penmarch, France to Sao Tome et Principe.

Now, ACE members have reinforced their commitment to address the connectivity challenges facing Africa by embarking on Phase II of the project extending to South Africa. In a bid to address connectivity of the west coast of Africa, ACE has added three more countries to its network - Benin, Canary Islands (Spain) and Nigeria. As a result, the population connected by ACE has increased by 200mn people or it has gone up by 53 per cent.

In addition to adding three nations, the consortium has also taken onboard Cameroon as the new



Delegates at the launch of the second phase of ACE submarine cable system

member after signing the CMA on 11 June 2015.

Once the second phase is completed, the 17,000 km-long ACE submarine cable system will provide the most extensive access to countries along the Atlantic coast of Africa including connectivity to two (or "several") landlocked countries, said officials.

The system will include a sophisticated submarine cable equipped with latest 100G technology and with an upgradable design capacity of up to 12.8Tbps. Simultaneously, the nations are keen on upgrading their existing technologies. Recently, the consortium in collaboration with Alcatel Lucent tested the 300G technology on its system, which it plans to deploy in the near future.

In addition to the existing set of submarine cables like **SAT-3/WASC/SAFE, SEA-ME-WE.3, ATLANTIS**

2 among others, ACE hopes to amp up the connectivity between West Africa and Europe, USA and Asia.

ACE management committee chairman Yves Ruggeri has reiterated the consortium's desire to fulfill its dream of connecting all countries on the Atlantic Coast of Africa according to the initial system design from Europe to South Africa.

"The coming of Cameroon into the ACE family will not only a great achievement but will extend and add value to our submarine cable system. This development continues to improve direct connectivity within Africa and to the world at large. It will also contribute to the overall objective of ACE to reduce communication costs and drive social and economic growth in Africa," said Ruggeri.

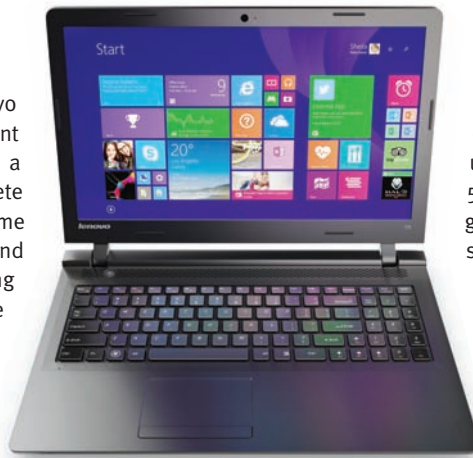
Lenovo's new laptops offer functionality and simplicity

LENOVO HAS LAUNCHED three new consumer laptops - the Z41, Z51 and ideapad 100. Whether users just need to create and edit content or want a fully-equipped multimedia experience to enjoy music and videos, the new Lenovo Z41, Lenovo Z51 and ideapad 100 laptops are ideal for users who value simple and functional design.

"We've created the new Lenovo Z41, Z51 and ideapad 100 laptops specifically for customers who want simple and functional design," said Bai Peng, vice president and general manager, Lenovo Notebook Business Unit, PC Group. "But because our customers are diverse, so our products are not 'one size fits all' either. Our three new laptops offer customers the choice to select the one that's right for them – two specialised for multimedia and one all-rounder."

Lenovo Z41 and Lenovo Z51 - multimedia workstations

The new 14-inch Lenovo Z41 and 15-inch Lenovo Z51 laptops are equal parts home-entertainment center and powerful workstation. Featuring a stunning FHD display, optional AMD discrete graphics and immersive Dolby DS 1.0 Home Theater Surround Sound for crisp sound and sharp visuals, they are ideal for streaming videos, downloading music and gaming. The new Lenovo Z41 and Lenovo Z51 come with advanced 802.11 a/c WiFi technology for up to three times the Internet speed of regular laptops for faster web surfing, streaming and downloading content. Engineered for



productivity, the new laptops are powered by up to the latest Intel Core i7 processor with up to 1TB of storage.

Revolutionary RealSense 3D camera

The Z51 also features an optional Intel RealSense 3D camera, which brings the world to life in 3D. Featuring full 1080p color and a depth sensor, the revolutionary 3D camera allows the new Lenovo Z51 to sense and capture depth like the human eye. Users can 3D scan objects to 3D print, play 3D games or use gestures to control the laptop. Customers can also create a more lifelike video chat experience by changing the background and sharing content.

Essential features from the ideapad 100

Lenovo created the entry-level ideapad 100 laptop for customers who need only the most essential features, such as surfing the web, creating content and managing lists. It features up to Intel BayTrail-M N3540 processor, up to 500GB HDD storage and integrated Intel Graphics giving users a fast processor, ample storage and solid display. The new ideapad 100 runs up to 4 hours without plugging in - so users can work, browse online, watch videos and more with minimal interruption. Measuring at just 20.2mm for the 14-inch and 22.6mm for the 15-inch laptop, the thin and sleek ideapad 100 looks anything but entry level with its classic ebony black finish.

Mahindra Comviva enhances payPLUS for Omni-channel payment acceptance

MOBILITY SOLUTIONS PROVIDER

Mahindra Comviva now offers an enhanced version of payPLUS, with a full blown omni-channel offering by enabling in app and Web-based payment acceptance capability to its product suite. This will allow acquirers and banks to offer multiple acceptance channels to their merchants. One-time integration will offer flexibility so that additional channels and payment methods can be added as the market evolves.

An integrated payment solution, payPLUS converts the ubiquitous mobile into a point-of-sale (POS) device and helps small and large merchants to extend anytime anywhere commerce. By serving consumers who prefer the convenience of cards, businesses not only win back lost sales opportunities, but also enhance customer loyalty. It enables merchant acquirers to equip businesses of any size with card acceptance - whether a large enterprise needing mobility or a small business that needs to serve customers at home or on the road. Mahindra Comviva's expertise in **Europay, MasterCard, and Visa (EMV)**



One-time integration offers flexibility so additional channels and payment methods can be added as markets evolve

solutions and mobility ecosystems, along with its dongle hardware agnostic solution, translates into a unique opportunity to help acquirers realise their EMV mPOS dream. Commenting on the upgraded payPLUS solution, Srinivas Nidugondi, senior vice-president and head, Mahindra Comviva said, "Today, consumers are digitally empowered

and expect to be served at any time and place of their choice. We believe that businesses need to be where the consumer is and accept any payment instrument on any channel that the consumer prefers. In regions like U.S and Europe, the need of omni-channel payment acceptance is thus imperative for merchants to experience excessive growth opportunities."

Mahindra Comviva has introduced an easy to integrate SDK for merchants to accept multiple payments instruments within their mobile apps including propriety wallets like Apple Pay. This will enable merchants to accept Apple Pay in their iOS apps allowing the end-consumers to seamlessly make one touch payment using a stored credit card. The SDK allows merchant app to focus on its core business processes by freeing it from any complexity of reading token-ised card data from Apple as well as transaction processing. It further reduces the implications of Payment Card Industry Data Security Standard (PCI DSS) certification enabling faster time to market for the merchant.

Mahindra Comviva has also introduced an iframe based solution for payment acceptance for online businesses and merchants. This allows online merchant to load and embed an offsite secure payment page thereby providing customers with a seamless experience of making payments. At the same time, this provides freedom to the merchants from any PCI compliance aspects as the pages where card data is entered is handled and processed by payPLUS.

Une tablette intégrée et connectée par Renault

RENAULT R-LINK TRANSPOSE l'univers des smartphones vers un usage automobile avec son grand écran tactile intégré, ses interfaces modernes et un graphisme travaillé sur l'ensemble de ses contenus. Son grand écran tactile à portée de main, sa commande au volant et sa reconnaissance vocale font de R-LINK un système pensé pour le monde automobile.

Grâce à la reconnaissance vocale, dictez une adresse, appelez un contact, téléphonez ou lancez une application en gardant les yeux sur la route et les mains sur le volant.

R-LINK est adapté à vos besoins et vous simplifie la vie : page d'accueil personnalisable, connexion Bluetooth avec un smartphone. Avec R-LINK, écoutez la radio, mais retrouvez aussi vos musiques préférées, visionnez vos photos et vidéos (à l'arrêt) grâce au Bluetooth et aux prises Jack et USB. Et quand vous entrez dans votre véhicule, Renault R-LINK synchronise votre répertoire et affiche la liste de vos contacts et leur photo (selon téléphone).

Téléphonez devient facile.

À l'arrêt, vous pouvez composer un numéro ou rechercher un contact sur l'écran tactile de R-LINK. En roulant, vous pouvez utiliser les commandes au volant ou la reconnaissance vocale.

Diminuez votre consommation de carburant grâce au coaching ludique de "Driving Eco+[®]". Aussi, avec Driving Eco, consultez le bilan de vos trajets et des conseils malins personnalisés. Soyez informé de la qualité de l'air de l'air dans votre habitacle grâce au capteur de toxicité et améliorez la grâce au ioniseur : le mode "clean" qui aide à réduire le niveau de bactéries, de particules allergènes et de microbes en suspension pour un air plus sain ; le mode "relax" qui gère un meilleur équilibre entre les ions positifs et négatifs pour plus de sérénité.

Les TIC enrichissent les communautés

À TRAVERS L'OBJECTIF » d'eLearning Africa est retourné pour la sixième fois, sous l'égide de la conférence eLearning Africa 2015.

Sous le thème « Afrique numérique : les TIC enrichissent les communautés », les photographes en herbe ont été invités à soumettre des clichés montrant l'effet positif que les TIC ont pu avoir sur les relations entre les membres d'une famille, d'un groupe ou d'un pays africain. L'occasion a été offerte aux mordus d'eLearning et de photographie du continent et d'ailleurs d'afficher leur vision des TIC en Afrique.

Les contributions de tous les secteurs et de tous les horizons sont les bienvenues. Les photos ont été soumises via l'application Facebook « À travers votre objectif » d'eLearning Africa, accompagnées d'une brève description de ce qui a inspiré leur réalisation.

Trois gagnants ont été désignés par les votes du public et un par un panel d'experts. Parmi les prix du concours figurent notamment une tablette, un smartphone et un appareil photo numérique. La participation a été gratuite et les meilleures photos envoyées (y compris les photos lauréates) a fait l'objet d'une exposition lors de la conférence eLearning Africa.

Ce concours a été organisé par eLearning Africa, le plus important et le plus complet des événements dédiés à l'intégration des TIC dans l'éducation et la formation en Afrique, une manifestation qui permet aux participants de nouer des liens et des partenariats internationaux et interindustriels, et d'approfondir leurs connaissances, expertises et capacités d'action.

La 10e édition d'eLearning Africa s'est déroulé au siège de l'Union africaine à Addis-Abeba en Éthiopie.

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