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counterfeit cabling

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How to handle jailbroken
devices in the enterprise

Numérique

Des outils pour réduire la
fracture entre les sexes



Broadcasting innovations on show at IBC

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A note from the Editor

THIS ISSUE OF Communications Africa/Afrique looks at innovative services and solutions on show at AfricaCom in Cape Town, South Africa. This issue, includes, also, assessments of business models and technical considerations that support extended and enhanced connectivity, mobility and security. With respect to broadcast transmission and reception, there has been plenty to report on from the enterprises at IBC, held recently in Amsterdam, The Netherlands.

Une note du rédacteur

CE NUMÉRO DE ce magazine comprend des analyses de l'évolution des économies, les réseaux, et de la recherche. Plus précisément, ces articles sont concernés par la fracture numérique entre les sexes, la connectivité à large bande et la connectivité dans les pays arabes.

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Siemon makes more of its IcePack portfolio

NETWORK INFRASTRUCTURE SPECIALIST **Siemon** has extended its range of IcePack cooling doors in Africa to match its expanding range of data centre cabinets, to fit Siemon's VersaPOD, V800 and V600 cabinets in both 45 and 42U heights; the IcePack system works by close-coupling a specialised fin-and-tube coil array that absorbs and cools equipment heat exhaust, thus cooling the most challenging hotspots and providing protection against future heat build-up.

SkyVision ensures connectivity at Unity Bank in Nigeria

COMMUNICATIONS PROVIDER **SKYVISION Global Networks** has formed a partnership with **Unity Bank**, a Nigerian retail financial institution; SkyVision provided satellite-based virtual private network (VPN) services via its local Nigerian hub to support Unity Bank's local area network (LAN), connecting the bank's headquarters in Lagos to its numerous branch offices nationwide.

Vizocom enhances the Internet with Eutelsat

INTEGRATED SATELLITE BROADBAND solutions provider **Vizocom** has selected the **Eutelsat's 21B** satellite to implement a reliable and flexible connectivity service in countries with harsh and challenging environments and limited terrestrial infrastructure; Vizocom's new subsidiary **AfricAsia Satellite Services** will take advantage of two high-power service areas of the Eutelsat 21B satellite to offer connectivity with speeds ranging from 6Mbps to 10 Mbps in the Middle East and Africa.

New network order for Comtech

COMTECH EF DATA Corp has received a US\$1.6mn order for satellite infrastructure equipment and professional services, to be utilised by a telecommunications service provider to roll-out a new pan-African satellite-based mobile backhaul and international trunking network; the network hub will be based in the United Arab Emirates, and this first phase of deployment will be to remote sites in Chad and South Sudan.

Tangoe and Torch offer mobility and fixed solutions

A PROVIDER OF connection lifecycle management (CLM) software and related services, **Tangoe** has entered into a strategic partnership agreement with a South African telecom estate management and administration company, **Torch**, to extend Tangoe's Matrix solution suite into Africa; Tangoe will provide clients with comprehensive software and service solutions to optimise visibility and control of their complete fixed and mobile communications.

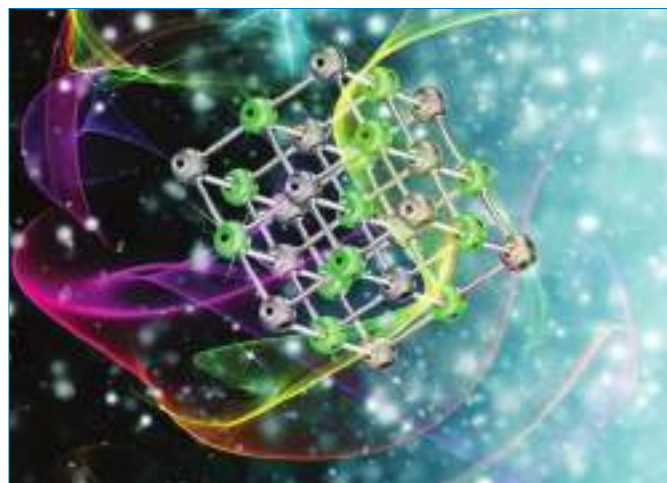
INWI migrates to Openet's management solution

MOROCCAN OPERATOR **INWI** has deployed **Openet's** Policy Manager to successfully provide convergent policy control and advanced allowance management; INWI has integrated the solution with Openet's advanced Balance Manager and Offer Catalog products to monetise and shorten time-to-market for innovative new use cases.

"Increased global mobile broadband usage is not only impacting traditional post-paid billing systems but also intelligent network (IN) pre-paid charging systems. This is even more prevalent in Africa given the large number of subscribers on pre-paid mobile plans...If operators are to evolve they must implement real-time or online charging systems." - Corine Suscens, senior marketing manager, Openet

The solution for low throughput connectivity

ETSI'S STANDARDISATION GROUP dedicated to Low Throughput Networks technology has released the first three specifications of an Internet of Things (IoT) network dedicated to low throughput communications; these new requirements provide a breakthrough in the machine to machine business, allowing low-cost object connection, with a few milliwatts for transmission and a cheap modem



Low Throughput Network (LTN) technology is a wide area bidirectional wireless network with key differentiators compared to existing networks. It enables long-range data transmission (distances around 40 km in open field) and/or communication with buried underground equipment and operates with minimal power consumption allowing several years of operation even with standard batteries.

PCCW Global and Paratus Telecom work in Namibia

HKT'S INTERNATIONAL OPERATING division, **PCCW Global** has recently signed an international MPLS and IPX interconnection agreement with **Paratus Telecom** of Namibia to enhance high definition voice and MPLS network coverage in Namibia and neighbouring countries; the collaboration will also provide PCCW Global additional access to the strong developing economies of Angola and Zambia, while extending Paratus Telecom's Ethernet, voice and IP VPN coverage via PCCW Global's resilient MPLS/IPX network, which reaches over 3,000 cities in more than 130 countries, and enabling Paratus to benefit from PCCW Global's direct ownership in the major undersea **West African Cable System (WACS)**.

Liquid telecom reveals East Africa's lead on Internet

ACCORDING TO **LIQUID Telecom Kenya** CEO Ben Roberts, Kenya currently leads in African connectivity with the highest bandwidth per person on the continent, the fastest speeds, and some of the lowest internet costs; describing the connection of the continent's most concentrated cluster of undersea cables, the development of the Kenyan Internet Exchange Point, the creation of thousands of points of presence by international and national service and content providers, Mr Roberts said, "Kenya has achieved a confluence of infrastructure and provision that has positioned it with the highest growth in Internet take-up compared to income per capita in Africa."

Bentley Walker to use Gazprom capacity

GAZPROM SPACE SYSTEMS director general Dmitry Sevastiyarov and **Bentley Walker** CEO Anthony Walker have signed a contract at IBC 2014, by which Bentley Walker will use Yamal-402 satellite capacity for broadband service delivery in Africa; Bentley Walker has deployed an iDirect Evolution 9m antenna located at the Aflenz Teleport run by **Telekom Austria**, which will be applied to uplink signal to Yamal-402 satellite.

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Un firewall du marché centré sur la menace

AVEC L'INTRODUCTION DU premier Next-Generation Firewall (NGFW) du marché centré sur la menace, Cisco change la manière dont les entreprises peuvent se protéger contre les menaces ciblées; Cisco ASA avec la technologie FirePOWER offre une connaissance du contexte complète et les contrôles dynamiques nécessaires pour détecter les menaces en continu, corréler les informations obtenues et optimiser les défenses pour protéger les réseaux.

Vizocom et Eutelsat s'associent pour la première fois

LE SERVICE DE connectivité par satellite de Vizocom, spécialiste de l'intégration de solutions Internet haut débit par satellite, baptisé « **AfricAsia Satellite Services** » va bénéficier de la forte puissance de deux faisceaux du satellite Eutelsat 21B, pour offrir des débits allant de 6 Mbps à 10 Mbps au Moyen-Orient et en Afrique; ce service a été déployé depuis avril 2014 sur plusieurs bases militaires au Mali.

Orange et BOA élargissent leur partenariat

LES CLIENTS DE **Bank of Africa (BOA)** et d'**Orange Money** pourront dans les mois à venir alimenter directement avec leur téléphone mobile leur compte Orange Money depuis leur compte BOA, et vice versa; « La complémentarité de nos activités avec BOA apportera à nos clients communs plus de confort en leur permettant d'effectuer des opérations financières depuis leur mobile, où qu'ils soient dans le pays et à n'importe quel moment de la journée, sans avoir besoin de se déplacer, » a déclaré Marc Rennard, Directeur Exécutif AMEA chez Orange.

Nilesat et Eutelsat renforcent leur coopération

EUTELSAT COMMUNICATIONS ET **Nilesat** ont signé un contrat de location de capacité à porteur sur plusieurs répéteurs du satellite Eutelsat 8 West B; ce satellite, dont le lancement est prévu pour mi-2015, est destiné à la diffusion de contenus vidéo sur le Moyen-Orient et l'Afrique du Nord.

La science, la technologie et l'innovation en Afrique

LA **BANQUE AFRICAINE de développement (BAD)** et ses partenaires sont organisés la deuxième édition du Forum ministériel sur la science, la technologie et l'innovation (STI) en Afrique, à Rabat, au Maroc, au sein de l'Académie Hassan II des Sciences et Techniques; le forum a placé sous l'égide du gouvernement marocain et co-organisé par la BAD et le gouvernement finlandais.

iSAT a lancé un bouquet pour le Kenya

EUTELSAT ET **iSAT Africa** s'associent pour accélérer l'accès aux chaînes numériques au Kenya et en Afrique de l'Est; sur la zone de couverture africaine du satellite Eutelsat 70B, iSAT et Eutelsat diffuseront un bouquet de chaînes qui servira à alimenter les têtes des réseaux numériques et les foyers équipés pour la réception directe par satellite..

Des extensions de données volumineuses

COUCHBASE A ANNONCÉ le lancement de Couchbase Server 3.0; « Couchbase érige la norme en matière de technologie de base de données distribuée évolutive et hautes performances », a déclaré Bob Wiederhold, président-directeur général de Couchbase.

ZTE s'apprête à renforcer sa part de marché dans le secteur des téléphones intelligents au Moyen-Orient

EN VUE D'AUGMENTER sa part de marché dans le secteur des téléphones intelligents au Moyen-Orient, ZTE présente pour la première fois ses produits phares - Grand SII LTE, Nubia Z5S Mini et Blade Vec 4G - dans la région. Prévu révolutionner le segment des téléphones intelligents dans la région, le lancement de ces produits fait partie de l'initiative stratégique de la société internationale de télécommunications visant à renforcer sa présence sur le marché au Moyen-Orient.

« Les É.A.U., qui font partie des leaders dans le secteur des télécommunications internationales avec une croissance considérable sur le marché des réseaux 4G, sont l'un de nos marchés les plus intéressants. Afin de renforcer la position de pionnier de ZTE sur le marché des CCG, Dubaï nous ouvrira les portes pour intégrer l'ensemble de la région du Moyen-Orient et de l'Afrique du Nord (MENA). Nous lancerons nos produits haut de gamme dans cette région à travers un canal ouvert et un canal d'opérateurs », a déclaré Ning Tian, directeur pour la région MENA chez ZTE Mobile Device.

Les téléphones intelligents 4G révolutionnaires phares de ZTE lancés lors du salon Gitex Shopper sont innovants et dotés de fonctions haut de gamme. Le Grand SII LTE, réputé pour sa vitesse de traitement exceptionnelle, est l'un des téléphones intelligents 4G les plus rapides au monde. Il contient le nouveau processeur Qualcomm Snapdragon 801 et possède un écran de 5,5 pouces à résolution HD complète de 1 080 pixels, assurant ainsi un affichage d'une clarté cristalline.

Fonctionnant sous Android 4.3 OS, le Grand SII LTE est doté d'une option de sécurité unique qui permet aux



Grand SII LTE, Nubia Z5S Mini et Blade Vec 4G

utilisateurs de déverrouiller leur combiné avec leur voix, à l'aide d'une phrase de leur choix. Il offre également des fonctions audio améliorées pour des appels plus clairs, ainsi qu'un appareil photo de 13 mégapixels et un appareil photo frontal de 2 mégapixels pour des photos de meilleure qualité.

Le Nubia Z5S Mini comble les besoins des consommateurs en matière de valeur esthétique avec son allure stylée, conçue par l'artiste italien Stefano Giovannoni. Il est également doté d'un système sur puces 4G MSM8926 quadri-cœur de 1,2 Ghz, ainsi que d'un écran tactile de 4,7 pouces et 720 pixels, l'un des excellents panneaux IGZO de Sharp. Il offre une connectivité 4G LTE et une fente pour carte MicroSD, permettant d'augmenter la mémoire interne de 16 Go. Le Nubia Z5S Mini compte 13 mégapixels à l'arrière, et il est équipé d'un capteur illuminé au dos avec une ouverture F2.2, le tout dissimulé derrière une lentille en cristal de saphir, ainsi qu'un flash à DEL et un appareil photo frontal de 5 mégapixels. Permettant de choisir entre trois modes, y compris un mode automatique et un mode professionnel pour un contrôle amélioré, ce téléphone intelligent ZTE répondre aux besoins des

amateurs d'autoportraits individuels et de groupe.

En parallèle, avec son processeur quadri-cœur Qualcomm et son affichage ultra-net FFT de 5 pouces, le Blade Vec 4G de ZTE ne fait que 7,8 mm d'épaisseur. Le dos de l'appareil est en fibre de verre, avec une conception spéciale à rayures, ce qui le rend à la fois élégant et résistant aux rayures. Ce téléphone intelligent 4G est doté d'un écran d'une résolution de 1 280 x 720 et d'un appareil photo 8MP, et il fonctionne sous Android 4.4 KitKat.

« Le secteur des téléphones intelligents a connu une croissance phénoménale dans le monde entier, particulièrement dans les pays du Moyen-Orient comme les É.A.U. et l'Arabie saoudite. Cette région - qui devrait représenter le deuxième plus vaste groupe de consommateurs de téléphones intelligents au monde selon l'étude Quarterly Mobile Phone Tracker de l'International Data Corporation (IDC) - est indubitablement l'un des principaux marchés cibles pour ZTE et nous sommes déterminés à établir notre marque sur le marché des téléphones intelligents en fournissant des produits qui sont adaptés aux besoins des consommateurs », a indiqué Tian.

Tao Jiang, vice-président pour la région EMEA (Europe, Moyen-Orient et Afrique) chez ZTE Mobile Device, a ajouté : « Bien que ZTE jouisse déjà d'une position de premier plan dans beaucoup de pays si l'on considère nos terminaux qui permettent de développer et de soutenir les infrastructures, nous sommes également optimistes sur l'expansion de la présence de nos nouveaux téléphones intelligents et innovants et de leur part de marché dans les secteurs des téléphones intelligents et des produits mobiles au cours des prochaines années dans les É.A.U. »

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* Frost & Sullivan (2013)

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Events/Événements 2014

NOVEMBER/NOVEMBRE

3-4	RAN World	Berlin, Germany	www.ranworldevent.com
4-5	TV Connect Middle East & North Africa	Dubai, UAE	mena.tvconnectevent.com
4-6	Global MilSatCom	London, UK	www.globalmilsatcom.com
5-7	OilComm	Texas, USA	www.oilcomm.com
11-13	Africa Com	Cape Town, South Africa	africa.comworldseries.com
12-13	Global Broadband Traffic Management	Barcelona, Spain	www.broadbandtrafficevent.com
12-13	SatCon	New York, USA	ccwexpo.com
18	TMT World Congress	London, UK	www.tmtfinance.com
18-20	SATIS	Paris, France	www.satis-expo.com

DECEMBER/DÉCEMBRE

7-11	ITU Telecom World	Doha, Qatar	www.itu.int
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NovelSat awarded at IBC

AS THE IBC 2014 show closed in Amsterdam, The Netherlands, recently, all the pieces appeared to be falling into place for satellite industry technology specialists NovelSat. Winning a prestigious CSI Award, booking orders for the new NS300 modem and dozens of successful meetings with industry executives were all part of the good news.

The CSI Award for Best Satellite Contribution/Distribution/Transmission Solution, which NovelSat won, recognises the value of the company's FreeBand solution, which gives DSNB and other remote satellite users free satellite bandwidth for contribution using existing distribution bandwidth.

While overtaking the satellite industry competition at the awards ceremony, NovelSat also introduced its new NS300 Professional Satellite Modem at IBC. The NS300 was designed for cost-effective data transmission applications requiring up to 30Mbps. In addition to generating a lot of interest, the company has already received orders for the new NS300.

NovelSat finished up 2013 marking triple digit growth, more than doubling



Joining the NovelSat Professional Modem Series, the NS300 is an ideal platform for low data rate applications

revenue year over year, with thousands of deployments in over 100 countries. In addition to successful satellite modems, modulators and demodulators, the company continues to develop new technologies to make satellite transmission easier and more cost-effective. This development effort will continue to pay off with new technology announcements in the coming months.

"I want to thank the people at CSI for the industry award that recognizes the hard work of the entire NovelSat team," remarked Itzik Wulkan, NovelSat CEO. "We have an exciting year ahead with new technologies, new markets and new opportunities for growth around the globe."

NovelSat plans to announce a new line of satellite transmission products currently in development. The company has not yet publicly disclosed details.

African audiovisuals at SATIS

AS A PART of SATIS' outreach efforts towards French-speaking communities throughout the world, the event's schedule will place emphasis on challenges related to French-language media.

As a part of the agreement struck by member countries and other institutions within the ITU (International Telecommunication Union), Africa as a whole will switch from analog to digital television on June 17, 2015. This change will open up new perspectives for the development of Africa's audio-visual landscape, from film and TV production to broadcasting and screening, including advertising and hardware. Major players on the audio-visual market have already prepared for Africa's digital transition; these include Canal +, Eutelsat, Orange, Lagardère, StarTimes (China), MultiChoice/DStv, SES, and Intelsat.

In this context, the topics discussed during the talks at SATIS will include the media and culture of French-speaking countries, and they will also present the current state of French-language film production during the talk scheduled on Wednesday, November 19 at 5 pm. Speakers at SATIS will include experts, technical managers of African TV stations, and consultants.

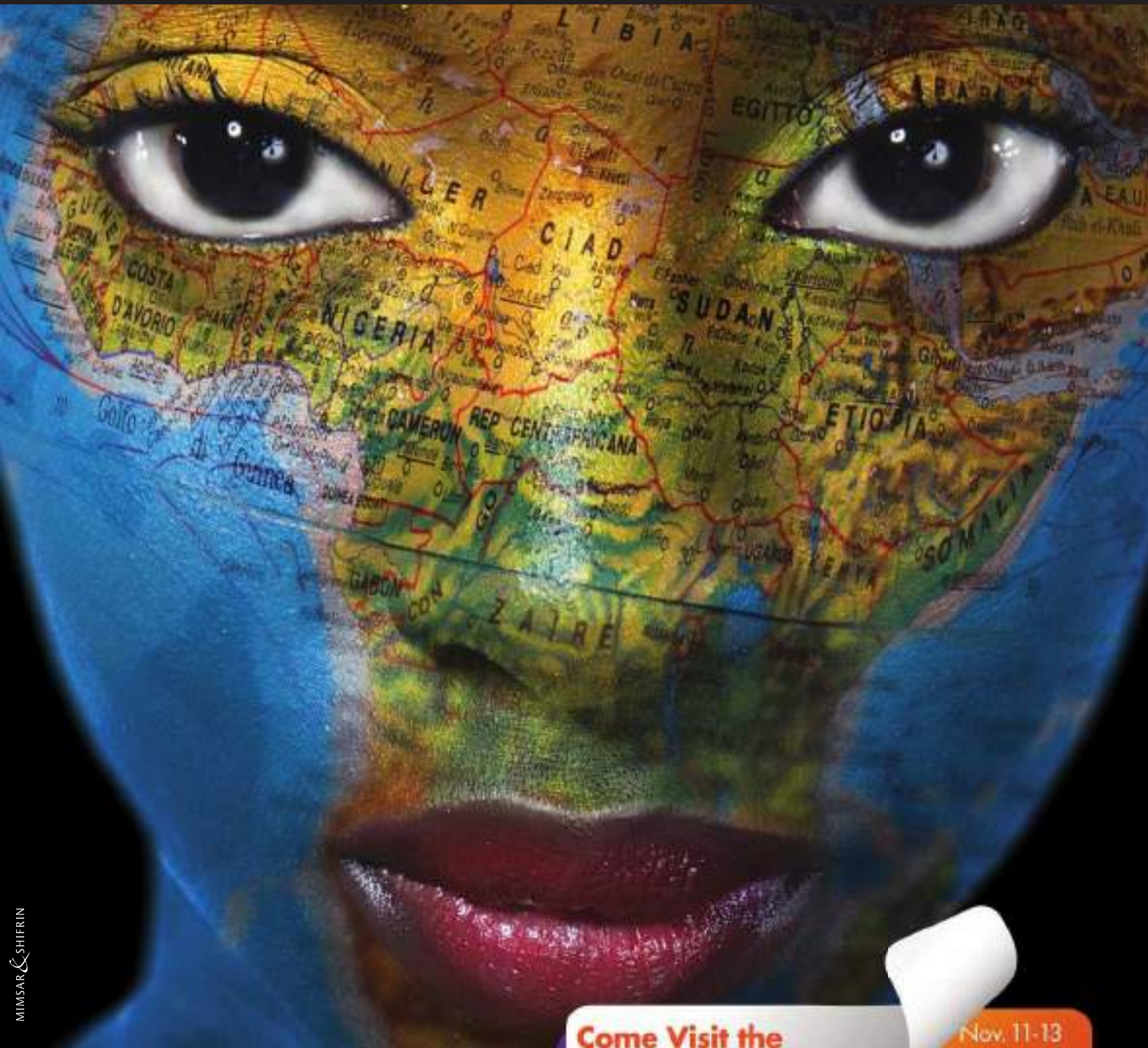
The event will also host a forum on the evolution and business opportunities of DTV and audio-visual technologies in Africa, organized

in partnership with the Paris chamber of commerce's committee on French-African exchanges. The forum will be held on Tuesday, November 18, from 2 pm to 6.30 pm. During that afternoon, ten talks will shed light on the opportunities and challenges of this revolution.

One talk will be dedicated specifically to Nollywood, with Serge Noukoue, who is in charge of acquisitions at A+ and has founded the Nollywood Week film festival; he will share his experience on audio-visual production in Africa. Nollywood was born in the streets of Lagos at the end of the 1980s, and illustrates Nigeria's film industry. The country is the world's second largest producer of films, after Bollywood and before Hollywood, with over 1,000 films each year.

Furthermore, a discussion on the development of the African audiovisual industry and the opportunities for French SMEs will be held by Pierre Jalladeau (general manager of CFI's African branch), Mactar Silla (general manager, MS Consulting and Africa Communication et Conseil), François Thiellet (founder and manager, Théma TV), Jean-Christophe Ramos (corporate business manager, Canal+ Afrique), and Eve-Lise Blanc-Deleuze. They will share advice and strategies to follow, and will also discuss the challenges stemming from China's competition, as major players on the Chinese audio-visual market have already taken notice of Africa's strong potential on this market.

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Exterity joins SACIA to support IPTV integration

A PROVIDER OF professional IPTV technologies for the secure distribution of live, on-demand and recorded video over IP, Exterity has joined the Southern African Communications Industries Association (SACIA).

Exterity has been designing, developing and manufacturing technically innovative products that deliver networked video over IP. Membership of SACIA enables the company to improve its relationships with system integrators and information communication technologies specialists in South Africa.

The decision to join SACIA follows increased demand for the Exterity professional IPTV systems in Sub-Saharan Africa. SACIA has been set up specifically to promote the adoption of professional standards and ethical business practice in the communications industry throughout Southern Africa. To that end, it provides market research and intelligence services, networking and the development of training and skills development programmes.

“Joining SACIA ensures that we are involved with organisations that are shaping the market as demand for our professional IPTV systems continues to accelerate in Sub-Saharan Africa,” said Colin Farquhar, CEO at Exterity.

“This enables us to help set the scene in the

region and to share our know-how with the region’s communications industry as it increasingly deploys professional IPTV systems.”

Gary Davies, sub-Saharan Africa sales manager at Exterity, commented, “SACIA is among the most active associations in South Africa and becoming a member of such an organisation demonstrates our interest in helping our local partners and customers to meet their professional IPTV requirements. We are looking forward to being more involved with the local decision makers in order to develop a sustainable and efficient IPTV industry.”

“Over the last few years our membership bases has expanded to include most of the established technology vendors active in the Southern African market, as well as a growing number of Universities, government departments and business entities,” said Kevan Jones, executive director of SACIA.

“The next step in SACIA development is reflected in greater support from the international vendor community who recognises the business potential of the African market. By signing up as a SACIA member, vendors reinforce their commitment to a higher level of service and ethics.”

Gemalto M2M tech to enable greener energy

DIGITAL SECURITY FIRM Gemalto is providing M2M connectivity for Solarkiosk, a compact, solar powered station transported onboard a mobile vehicle. This cabin features photovoltaic panels across its roof to generate sustainable energy in areas outside of conventional power cabling and infrastructures.

Gemalto’s Cinterion modules deliver rugged M2M connectivity powering a mobile router, provided by INSYS icom, which enables condition monitoring of the Solarkiosks’ photovoltaic panels and tracks energy production and consumption through a web interface.



Solarkiosks support simple plug-in access for appliances, devices and broad range of systems

Liquid Telecom invests in Rwandan network expansion, including first fibre to the home

DATA, VOICE AND IP provider Liquid Telecom has committed to the expansion and investment of its operations in Rwanda, in order to enable more businesses and homes to gain access to its high-speed broadband service both within Rwanda and surrounding countries.

Liquid Telecom has long recognised the advantages of Rwanda’s central African location and role as an Internet services hub for east and central Africa. In June 2014 the company announced that it had completed the build of the East Africa Fibre Ring which connects Kenya, Uganda, Rwanda, Tanzania and back into Kenya. This provides consistently high speeds and continuous uptime across the region. Over the next two years, the group’s wholesale business in Rwanda will invest US\$34mn in laying thousands of kilometres of new fibre across the country and to the borders of Burundi, the DRC, Kenya, Tanzania and Uganda. This new fibre will enable more businesses and homes to access its broadband service. In addition, operators in neighbouring countries will be able to interconnect with Liquid Telecom Rwanda’s network.

As part of the expansion plan, and following a successful rollout at Liquid Telecom Zimbabwe, Liquid Telecom Rwanda will be the first company in Rwanda to lay extensive fibre to the home (FTTH) starting in the capital city of Kigali, where it has already built a metropolitan fibre ring. Homes and businesses in the country have traditionally used a combination of WiMAX, dongles, satellite and mobile broadband but will now be able to connect using fibre laid directly to the premises.

The FTTH service will be available from Liquid Telecom Rwanda’s retail business. It will offer speeds of up to 100Mbps which, combined with unlimited capacity, will provide home connections comparable to large multinational corporations enabling usage such as high definition video, live TV streaming, uninterrupted VoIP calling, real-time online gaming and both uploading and downloading of large files. Future plans for the FTTH service include offering value-added and OTT services similar to those currently launching in Zimbabwe.

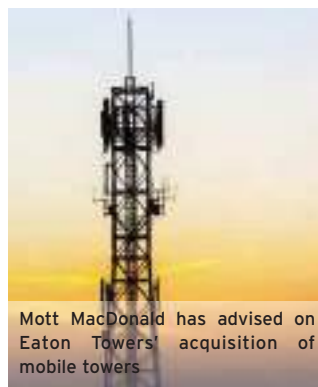
Mott MacDonald advises on mobile towers acquisition

MANAGEMENT, ENGINEERING AND development consultancy Mott MacDonald has supported Eaton Towers’ acquisition of 3,500 mobile network towers from Airtel. The consultancy provided commercial and technical due diligence to Eaton Towers, a leading independent telecoms tower company in Africa.

In 2013, Airtel, a leading global telecommunications services provider, began a process to sell all/part of its mobile network towers in up to 17 African countries. This deal sees Eaton Towers purchase 3,500 towers in six countries which consolidates and builds on its existing operations in Africa. This transaction also follows Eaton Towers’ and Airtel’s strategies to drive cost efficiencies throughout the industry via the use of shared passive infrastructure.

Mott MacDonald provided a 10-year forecast of future tower demand based on market and technology evolution using an in-house developed tower market demand model. This forecasted likely tenancy demand and tenancy ratios and analysed tower space and GIS location data to examine the attractiveness of each portfolio to mobile network operators. An assessment of potential co-location pricing and site operating costs was also provided, using Mott MacDonald’s extensive database of benchmarks.

Andrew Doyle, Mott MacDonald’s manager of technology and communications, said, “Our deliverables gave Eaton’s finance partners confidence in the potential markets they were interested in and were key in finalising this acquisition.”



Mott MacDonald has advised on Eaton Towers’ acquisition of mobile towers

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SA satellite company sets its base in Somerset West

A SOUTH AFRICAN private small satellite contractor, with business interests and ongoing contracts in numerous countries around the world, has just established their headquarters in Somerset Links Business Park in South Africa's Western Cape.

The Space Commercial Service Holdings (SCSH) group consists of a number of subsidiary companies, all specialising in different aspects of the high-tech small satellite industry, and brings with it 48 on-site personnel to Somerset West. This is made up of 37 electrical, mechanical and process engineers, and nine specialists in the fields of IT, geo-risk management, geo information systems, and social development. The balance of staff is made up of sales, marketing, management and administrative personnel.

Apart from buying its own office space at Somerset Links, the group will further invest significantly in a clean room facility, a necessary adjunct to any satellite manufacturing company. Although the clean room is situated within the normal office area, it is a specially constructed room which is totally sterile and thus, suitable for the manufacturing of sensitive high tech equipment. Only personnel with special clearance will be allowed to enter the room, and only after they have taken all the prescribed precautions.

"Our relocation from Stellenbosch Technopark was necessitated by growth in the group and thus, the need for more office space, technical work areas, laboratory space, and especially the need for a manufacturing Clean Room Facility. Easy access to the N2 and a short 20 minute drive from the airport, were all considerations given the travel load on personnel," said Dr Sias Mostert, chairman of SCSH.

"Economic Empowerment is our business. We specialise in creating working platforms for a variety of industries using the unique properties

of geostationary satellites and low earth orbit small satellites. These platforms could be geospatial business intelligence for farming, ecology, weather, mining, urban development, population counts, strategic applications, and the socio-economic development sector."

The Helderberg Business Chamber is more than pleased by their move. Daantjie Malan, chairman of the chamber, said, "We are delighted to welcome Space Commercial Service Holdings into the Helderberg Business fraternity. The entire region is to benefit in terms of job creation and it will certainly send a strong signal to other industries that the Helderberg Basin is a future business growth point, especially being adjacent to the huge Paardevlei development."



From left: Nirkash Jithoo, COO Space Advisory Company, Jessie Ndaba, Programme Manager Space Advisory Company and NewSpace Systems, Dr. Sias Mostert CEO Space Commercial Services Holdings, and James Barrington-Brown, MD NewSpace Systems

SkyVision extends its commitment to Ghana's Crossover Academy for underprivileged children

GLOBAL COMMUNICATIONS PROVIDER SkyVision Global Networks Ltd has donated satellite connectivity solutions to support students at Ghana's Crossover International Academy. SkyVision's donation included upgrading the academy's communications equipment with the support of VT iDirect, and providing Internet connectivity for an additional year, enabling students to access online educational programmes and related e-learning tools.

In 2013, the first phase of this charitable project was initiated jointly by SkyVision and iDirect, a world leader in satellite-based IP communications technology.

SkyVision's SkyDirect VSAT service based on iDirect's platform was installed and deployed throughout the

academy, delivering reliable Internet access to all students.

Located in the remote village of Tongor-Attokrokpo, Ghana, all of Crossover's students are orphans, supported by charitable donations from around the globe. SkyVision's extension project will provide quality satellite communications throughout the school, considered by the faculty, as a 'lifeline' for continued learning. Internet provides the students with access to streaming video, social media, and email, and offers online programs such as the Khan Academy for mathematics, and PRO for reading and comprehension. The extended Internet service will enable over 250 students to enjoy the benefits of global connectivity, enjoying online programming in the classroom and the opportunity to communicate



SkyVision has donated communications equipment to Ghana's Crossover International Academy, with the support of VT iDirect

with the outside world, far removed from their remote villages.

"Without SkyVision stepping up and once again, donating a second year of Internet service, we would have been forced to shut down our e-learning programmes, commented James Conti, co-founder and CEO, Wings for Crossover. "Seeing the joy in the students' faces every morning reminds us how much they appreciate this truly generous gift."

Chad Cooper, co-founder, Wings for Crossover, said, "SkyVision has enabled our students to be educated and to rise above their often difficult circumstances. As a result of SkyVision's generosity, these children will have the chance to break the cycle of poverty through education, make better lives for

themselves, and for the generations to follow."

"We are both proud and honored to support Crossover and the many students in need of education. It has been a pleasure to follow and be part of this important and life-changing project", stated Tzvika Zaiffer, director of product management & marketing.

Ori Watermann, SkyVision CEO, commented, "We are committed to giving back to the global communities in which we work and education is a fundamental stepping stone towards these children's growth and success. This project is proof of the significance and importance of satellite communications in education. SkyVision is proud to support the future in this developing nation, starting with its children, it's most vital resource."

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Posiflex's mobile POS solution for retail and hospitality sectors

POSIFLEX TECHNOLOGY INC., which designs and manufactures point of sale (POS) touch screen terminals and peripherals, has launched a new mobile POS and has opened its first Middle East & North Africa (MENA) office in Dubai in the UAE.

At the 2014 edition of GITEX, held in October in Dubai, Posiflex debuted the MT-4008W, a mobile POS specifically created for both the retail and hospitality sectors. It is an 8" tablet that supports MSR attachment, and can be integrated with the choice of a detachable pistol grip or a hand strap depending on the application. An optional dock station allows the device to function as an all-in-one POS.

The ergonomically designed detachable pistol grip is equipped with a 1D or 2D barcode scanner and houses a removable battery that effectively lengthens the operation life of the tablet. Larger mobile devices are typically cumbersome, but the MT-4008W's pistol grip and precise weight balance ensure the device is easy for a user to carry and handle.



Lightweight, ergonomic and versatile, the Posiflex MT-4008W is the perfect companion for both mobile retailing and hospitality

"The MT-4008W creates a brand new user-friendly experience for mobile retailing and hospitality," said Owen Chen, president and CEO of Posiflex.

The MT-4008W is highly versatile as well as mobile. Its optional dock station integrates a 3" WIFI thermal receipt printer and connectivity options such as Serial ports, USB ports, LAN ports and CR ports. This allows the tablet to transform into a traditional all-in-one POS solution instantly, which can carry out multiple tasks simultaneously.

More than 360mn people live in the Middle East and North Africa and 60 percent of the population is under 25. As such, Posiflex sees strong potential for the development of retail consumption in the region, especially as MENA governments diversify their economies to focus more on both the retail and hospitality markets. Tourism, which accounts for 7.7% of the region's GDP, is rising and helping to further drive up hospitality and retailing revenue.

Al Yah 3 to reach 600mn users

YAHSAT IS WORKING in partnership - with Orbital Sciences Corporation (Orbital), on the manufacture of Al Yah 3, and Arianespace on Al Yah 3's launch into orbit in Q4 2016 from French Guiana.

Masood M Sharif Mahmood, chief executive officer at Yahsat, said: "After a rigorous selection process, Yahsat has chosen two industry-leading organisations that will manufacture and launch our third satellite in late 2016. Having worked with Arianespace for the launch of Y1A, one of the world's most advanced satellites currently in orbit, and with Orbital's impressive track record of building over 150 satellites that have

amassed over 1,000 years of in-orbit experience, both companies have proven their ability to meet and exceed our expectations for world class connectivity in Africa and Brazil.



Al Yah 3 is scheduled for launch in Q4 2016

"Looking ahead as development and launch plans progress, Yahsat will continue to explore ground partners and distributors across both Africa and Brazil. Our aim is not just to launch a satellite, but also provide a 360 degree service platform to facilitate the distribution of broadband and connectivity services in our target markets. Part of this exercise is to ensure we build the right distribution and operational platforms within each of our markets, and we are actively engaged in identifying strong partners across both continents."

David W. Thompson, Orbital's chairman and chief executive officer, commented, "Being a part of this program is very important to our team because it enables us to contribute to the development of the advanced technology industry in the UAE. We look forward to working with the Yahsat team on this high-throughput/light-weight GEOStar satellite."

Half the world will be online by 2017

OVER 50 PER CENT of the global population will have Internet access within three years' time, with mobile broadband over smartphones and tablets now the fastest growing technology in human history, according to the 2014 edition of the *State of Broadband* report, released at the 10th meeting of the Broadband Commission for Digital Development. The report indicates that more than 40 per cent of the world's people are already online, with the number of Internet users rising from 2.3bn in 2013 to 2.9bn by the end of this year. Over 2.3bn people will access mobile broadband by end 2014, climbing steeply to a predicted 7.6bn within the next five years. There are now over three times as many mobile broadband connections as there are conventional fixed broadband subscriptions. The popularity of broadband-enabled social media applications continues to soar, with 1.9bn people now active on social networks. In total, there are now 77 countries where over 50 per cent of the population is online, up from 70 in 2013. The top ten countries for Internet use are all located in Europe, with Iceland ranked first in the world with 96.5 per cent of people online. The lowest levels of Internet access are mostly found in sub-Saharan Africa, with Internet available to less than two per cent of the population in Ethiopia (1.9 per cent), Niger (1.7 per cent), Sierra Leone (1.7 per cent), Guinea (1.6 per cent), Somalia (1.5 per cent), Burundi (1.3 per cent), Eritrea (0.9 per cent) and South Sudan (no data available).

"With broadband Internet now universally recognised as a vital tool for social and economic development, we need to make connectivity a key development priority, particularly in the world's poorest nations. Connectivity is not a luxury for the rich - rather, it is the most powerful tool mankind has ever had at its disposal to bridge development gaps in areas like health, education, environmental management and gender empowerment behind," said ITU secretary-general Dr Hamadoun I. Touré, who serves as co-vice chair of the commission with UNESCO director-general Irina Bokova.



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Viettel's growth in Mozambique acknowledged

AT THE GALA event of the 11th Annual International Business Awards held at the Westin Vendôme Hotel in Paris, France, Movitel - a subsidiary of Viettel Group in Mozambique - was presented as the Gold Winner of 'Fastest Growing of the Year in Middle-East and Africa' Award.

Within only one year, Movitel has increased its coverage area from 60 per cent to 80 per cent and doubled the number of covered people from 35 per cent to 85 per cent. Nearly 600,000 people in at least five rural districts in Mozambique have been covered and served telecom services for the first time in life. Movitel has had over five million users, taking the leading position in the mobile market.

By the end of 2012, only six months from launching, Movitel made total revenue of



In one year, Movitel has increased its coverage area from 60 per cent to 80 per cent

US\$69.7mn. The next year saw significant rise in revenue, US\$154.5mn, of which US\$102.3mn was recorded in the second half of the year, which was an increase of 65.8 per cent year-on-year.

Movitel has improved its successful business strategy as a caring and innovative network for every Mozambican. Especially, Movitel is becoming the favorite operator among the youth and urbanites.

Viettel has been granted telecommunications in nine countries with total population of over 160mn, total investment value of US\$1.5bn. Five subsidiary companies in Cambodia, Laos, Haiti, Mozambique and Timor have provided services. Two companies in Peru and Cameroon launched on October 2014. The other two, in Burundi and Tanzania, are under infrastructure deployment of their networks.

Total revenue from overseas business of Viettel reached US\$1bn in 2013 with around 11.5mn subscribers, bringing in more than US\$180.5mn accumulated profits.

Digital tracker monitors Zambia's public spending

A GROUP OF good governance organisations has launched Application Action 4 Transparency (A4T) to empower citizens with a digital tool that allows them to track public expenditure.

The application is being coordinated by the Zambia Institute of Mass Communication (ZAMCOM), Transparency International Zambia (TIZ) and Sweden's Fojo Media Institute (with the support of the Swedish government).

The project aims at fighting corruption and mismanagement of Government by putting the power to change in the hands of citizens.

ZAMCOM and TIZ launched the pioneering Public Expenditure Tracking Survey (PETS) A4T on May 7, 2014. The initiative is aimed at empowering citizens with a digital tool that will allow them to track public expenditure.

Citizens who have a mobile phone with Internet access can check the amount of Government money pledged



A4T has empowered citizens with a digital tool that allows them to track public expenditure

to various sectors and the amount that has been spent in Lusaka.

For phones with no internet access, the A4T would be available through short messaging system (SMS) service that has been created feeding directly into the application.

The project has been launched in Lusaka as a pilot site with a possibility of being scaled up to other districts at a later date.

Similar programmes have already been launched in the Kampala, Uganda

Nawa Mutumweno

Equity Bank set to challenge M-Pesa

TAISYS TECHNOLOGIES AND Kenyan financial institution Equity Bank are issuing an ultra-thin mobile banking smart SIM with patented technology from Taisys. Equity Bank customers can now enjoy funds transfer, micro-payments and other mobile financial services that are agnostic across mobile devices, including traditional basic-feature phones using Taisys's mBanking and duoSIM offerings. The technology also allows the bank to extend to customers mobile telecommunication services approved by Communications Authority of Kenya.

Traditionally, banks providing mobile banking services rely on the telecommunications provider to issue smart SIMs. Besides substantial investments from the bank in product development, the banks do not have direct control over the platform, making day-to-day maintenance difficult and creating customer experiences that are less than ideal. With

Taisys's patented ultra-thin smart SIM - duoSIM - can be directly attached the surface of an existing telco-issued SIM, and placed into the mobile device. Taisys's duoSIM can then be used

to execute mobile banking transactions, releasing the bank from the limitations of a telco-issued banking SIM.

CEO of Taisys, Jason Ho expresses great optimism in Kenya's market potential. "With a population of 40mn, and 14mn mobile



By adopting duoSIM technology, Equity Bank can now provide an alternative mobile banking and mobile money solution to consumers

money users, Kenya is a mature market with users familiar with mobile financial services. Taisys sees this as a great impetus for growth in mobile banking," he said. He also sees Taisys's collaboration with Kenya's largest bank as a strategic partnership to expand the offering of mobile banking services, and providing such services to a wider population in Kenya.

Nedbank and Gemalto secure online banking

SOUTH AFRICAN COMMERCIAL bank

Nedbank Ltd is deploying the Ezio eBanking solution developed by digital security specialist Gemalto to provide wholesale customers with unmatched online transaction security and superior convenience.

The Ezio Corporate eBanking PKI solution requires no software installation. The user simply connects the USB key to their PC or Mac and the device launches a "safe zone" that permits to securely review, approve and digitally sign all types and amounts of banking transactions within a protected online environment.



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Le rôle essentiel du haut débit mobile en Égypte

LORS D'UNE TABLE ronde réunissant des chefs de file de l'industrie et du gouvernement, qui s'est tenue cette semaine au Caire, à laquelle Son Excellence Atef Helmy, ministre égyptien des Communications et de la Technologie de l'Information, et Hesham El Alaily, Président exécutif de la NTRA, la GSMA a publié un nouveau rapport révélant le potentiel important pour la croissance future en Egypte. En prenant des mesures afin d'accroître la pénétration du haut débit mobile, le pays pourrait débloquer 310 milliards de livres égyptiennes supplémentaires (soit 43 milliards d'USD) de PIB et engendrer 1,2 million de nouveaux emplois dans l'économie égyptienne d'ici 2030. Développé par Plum Consulting, le rapport, « The Economic and Social Impact of Mobile Broadband in Egypt » (« L'impact économique et social du haut débit mobile en Égypte »), estime que cette opportunité ne peut être exploitée qu'à travers des politiques favorables à l'investissement à long terme et un environnement réglementaire stable. Il signale notamment que l'Égypte possède actuellement l'un des taux les plus bas au monde de fréquence assignée au réseau mobile.

« Avec le passage des services vocaux et SMS classiques au haut débit mobile, les

opérateurs mobiles en Égypte sont de plus en plus paralysés par la capacité limitée du réseau national de fibre optique. De même, les connexions internationales à haut débit sont primordiales si l'Égypte espère concourir efficacement au niveau mondial », a déclaré Tom Phillips, chef des affaires réglementaires de la GSMA. Ces entraves, associées à l'absence de l'utilisation du spectre de radioélectrique pour prendre en charge les dernières technologies mobiles à haut débit,

«Le haut débit mobile représente une opportunité importante pour les entreprises, les consommateurs et le gouvernement, pouvant accélérer considérablement le développement économique et social» - Tom Phillips, chef des affaires réglementaires de la GSMA

étouffent la croissance économique. « Des politiques qui encouragent les investissements dans le domaine du haut débit mobile et activent un spectre radioélectrique supplémentaire à allouer aux services mobiles sont essentielles à la transformation de l'avenir économique de l'Égypte. »

Lors de la table ronde qui s'est tenue cette semaine, le ministre M. Helmy a invité l'industrie de la téléphonie mobile de réunir un groupe de travail conjoint visant à répondre aux contraintes actuelles et à évaluer les exigences de l'offre et de la demande dans le cadre du déploiement du réseau mobile haut débit. La formation de ce groupe de travail sera discutée lors de la conférence Mobile 360 - Middle East, organisée par la GSMA, à Dubaï, plus tard ce mois-ci.

Suite à des discussions fructueuses, il est désormais temps pour le gouvernement et l'industrie de prendre des mesures concrètes afin de stimuler l'innovation et la croissance par le biais des réseaux mobiles. Cette collaboration correspond à un aspect critique de notre effort conjoint visant à améliorer les vies de nos citoyens et à positionner l'Égypte en tant que chef de file de la région, a déclaré Son Excellence Atef Helmy.

Oracle comble le déficit de compétences en TI

L'ENTREPRISE ORACLE CORPORATION a lancé une initiative destinée à renforcer et étendre les compétences des professionnels de l'informatique en Afrique. Ce programme comportant quatre volets a été conçu pour répondre à l'adoption de nouvelles technologies par les entreprises et gouvernements africains, laquelle a eu pour effet d'accentuer encore davantage la pénurie de professionnels ayant les compétences nécessaires pour utiliser au mieux les systèmes mis en place.

Selon Oracle, les formidables progrès de la technologie intervenus au cours des cinq dernières années ont généré un déficit de compétences en matière de TI. D'un bout à l'autre de l'Afrique, des organisations adoptent de nouvelles technologies à un rythme qui devance largement la disponibilité de main-d'œuvre qualifiée appropriée.

« À l'heure actuelle, les technologies de l'information promettent de favoriser l'inclusion sociale, de lutter contre la corruption, de développer l'économie numérique tout en créant des liens plus forts entre les citoyens et leurs

gouvernements, les entreprises et leurs clients, ainsi qu'entre les ONG et les communautés qu'elles servent », a déclaré Alfonso Di Ianni, premier vice-président d'Oracle pour la région Europe centrale et orientale, Moyen-Orient et Afrique. « Ces technologies peuvent atteindre tous ces objectifs tout en réduisant considérablement les coûts et en améliorant l'efficacité. Cependant, pour que la technologie appuie une telle évolution, il est indispensable que les organisations aient facilement accès à une main-d'œuvre capable de mettre en place ces systèmes et d'en assurer l'entretien. »

L'initiative d'Oracle est articulée autour de quatre axes prioritaires, à savoir les aptitudes des employés, la compatibilité des infrastructures informatiques, la disponibilité de main-d'œuvre et le développement des compétences des jeunes. Elle s'adresse aussi bien aux gouvernements qu'au secteur privé et aux organisations à but non lucratif afin de mettre en place une stratégie à long terme en matière de compétences à même de répondre à la demande de compétences adéquates en TI.

Nedbank déploie la solution clés en main de Gemalto

SELON DE GEMALTO, Nedbank Ltd a déployé sa solution de banque en ligne Ezio pour offrir à ses clients entreprises une sécurité et un confort d'utilisation sans équivalents pour leurs transactions en ligne. Gemalto fournit également à Nedbank ses services de conseil, la distribution des tokens aux utilisateurs finaux et réalise la gestion à distance de ces équipements pour le compte de Nedbank Ltd.

Avec cette solution entièrement externalisée, les utilisateurs Nedbank connectent simplement une clé USB, qui ouvre une « zone de sécurité » permettant d'approuver et signer numériquement tout type de transaction dans un environnement en ligne protégé.

La solution PKI « Corporate » de banque en ligne Ezio ne nécessite pas d'installation logicielle, ce qui élimine le recours au support technique souvent coûteux, tout en garantissant un haut niveau de satisfaction utilisateur. Il lui suffit de connecter la clé USB à son PC ou à son Mac pour que l'appareil lance une « zone de sécurité » permettant d'approuver et signer numériquement tous les types et tous les montants de transactions bancaires dans un environnement en ligne protégé. Ezio assure également l'intégrité de la session, et ceci même dans le cas où la plateforme de connexion pourrait s'avérer vulnérable. La plateforme évolutive et multi-application peut être administrée à distance, permettant à la banque de mettre à jour les certificats et déployer de nouveaux services sans déployer d'équipements supplémentaires.

« Nous utilisons les solutions PKI de Gemalto depuis plus de dix ans, et chaque nouveau déploiement est un franc succès, » indique Fred Swanepoel, directeur des systèmes d'information de Nedbank Ltd. « Dans le but d'offrir des solutions bancaires de tout premier plan à nos clients entreprises, nous avons déployé la toute nouvelle solution PKI de Gemalto, lancée sous le nom de Plug and Transact Token™. Il s'agit pour nous de nous différencier de nos concurrents en proposant des solutions sécurisées toujours plus conviviales et qui permettent un meilleur suivi des informations ».



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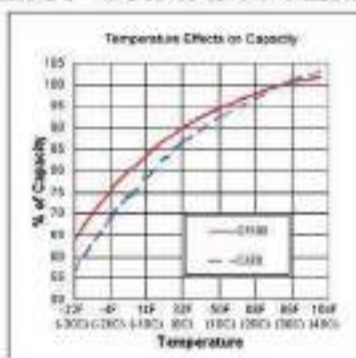
- Remote/Hybrid Sites
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- Off-Grid/Renewable
- Grid scale energy storage
- Other cycling applications



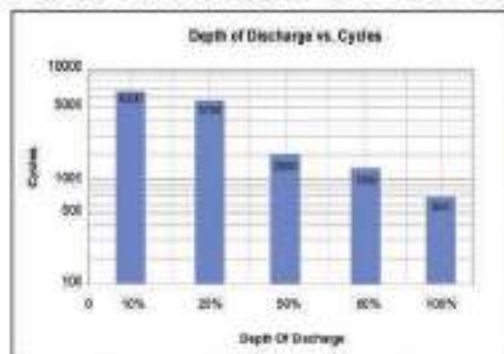
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Held in November, in Cape Town, AfricaCom 2014 promises to be the biggest and best African technology event, gathering senior decision-makers from across the digital sphere

FOR ANYONE INVOLVED in this continent's digital economy, Africa Com is the event to be seen at. Attended by 9,000 of the smartest, most switched-on digital movers and shakers in Africa, supported by over 300 of the biggest-hitting speakers representing digital enterprise and initiatives in Africa and beyond the continent, the event of choice for more than 375 of the world's most innovative, forward-thinking telecommunications brands, this is place and the event to showcase solutions and services to deliver value to Africa's communications technology networks and users.

To ensure that as much of the diversity of the market is addressed, AfricaCom now comprises 11 events:

- Vision for Africa Keynotes.
- AfricaCom 100.
- LTE Africa.
- Africa Cast Plus Multiplatform Focus Day.
- TM Forum Live @ Africa Com.
- VSAT Africa.
- Mobile Money & M-Commerce.
- Digital Music Africa.
- AfricApps.
- Africa Com Masterclasses and Entrepreneurs Incubatur Hub.
- Africa Com Awards.

Exhibitors at an innovative event

There are many innovations on show, from new and established technologists. Examples of exemplary innovators follow below and in the following pages.

PeerApp offers a glimpse at the future of Africa as a digital continent. Growth in Internet content consumption is driven by increased bandwidth, appetite and devices, and operators face challenges in delivering Internet content - especially video - cost-effectively and in line with customer expectations. PeerApp helps 80 operators in Africa and 450 globally to speed Internet content delivery across their networks to their subscribers.

6d Technologies supplies agile and flexible solutions across value added services and network solutions, and works to support mobile marketing, revenue optimisation, unified device management, and mobile commerce. 6d works with Econet Wireless in Zimbabwe on a service delivery platform solution, serves Tigo with its number

management system in multiple African markets, and works with Smart in Tanzania on unified device management.

Satellite operator ABS offers a range of tailored solutions including broadcasting, data and telecommunication services to broadcasters, service providers, enterprises and government organisations. It operates a fleet of six satellites - ABS-1A, ABS-2, ABS-3, ABS-4/Mobisat-1, ABS-6 and ABS-7 - covering 80 per cent of the world's population across Africa, Asia Pacific, Europe, the Middle East, CIS and Russia.

ABS has procured two Boeing 702SP satellites (ABS-3A & ABS-2A) for launch in 2015 and has optioned more satellites to add to its fleet over the next three years.

Shenzhen Coship Electronics is exhibiting, promoting hi-tech Chinese enterprise in digital video. COSHIP has provided global pay TV operators with a variety of digital TV solutions which have been deployed in Europe, Asia, North America, South America, Oceania and Africa.

AfriPipes provides customers fibre optics ducting solutions. The company commenced manufacturing operation in November 2007 in Durban, South Africa - and has built its business by deploying German and American technology with high throughput. Its associate company, AfriPipes Kenya, operates out of Nairobi, manufacturing 32mm and 40mm AfriSil Ducts.

The Mosaic portfolio developed by BICS comprises a comprehensive, flexible and innovative suite of solutions designed to be used individually, or collectively. BICS has recently deployed full connectivity for Unitel's newly-launched mobile network operator (MNO) in São Tome and Principe, allowing residents and visitors to make international voice calls and use short message service (SMS) and data roaming technology.

Specialists in backhaul solutions and network infrastructure, Bluwan's multi-gigabit wireless transmission system allows service providers to solve bandwidth density issues by increasing the coverage and capacity of existing networks. LinkFusion, Bluwan's point-to-multipoint backhaul and access solution, can be deployed as service providers seek to combat network saturation, capacity shortages and coverage gaps.

World Panel Inc has developed a powerful suite of mobile energy solutions that offer power, durability and affordability to charge 5 Volt battery devices - including cell phones, smartphones, tablets and LED lights. The company's 'Direct-from-the-sun' patented technology enables charge times as fast as a wall outlet, at an affordable price.

Workz has increased its capacity to serve communications markets with an expanded fulfilment centre in Dubai, in the UAE. The secure printing and services provider opened its new Dubai headquarters in September 2014 - a 60,000 sq ft facility including not only a new fulfilment, card and packaging printing facility but also logistics and warehouse space. As the largest telecoms logistics and fulfilment centre in the region, the new facility increases the company's current production capacity to 60mn retail packs per year. ☺

Alcatel-Lucent and MTN Nigeria set out to build ultra-broadband network

ALCATEL-LUCENT IS OPENING up Africa's most populous nation to the benefits of ultra-broadband connectivity by launching a superfast, 100 gigabit-per-second fiber-optic network with MTN Nigeria, a subsidiary of Dubai-based MTN Group and the leading service provider in Africa.

MTN Nigeria, which covers more than almost 90 per cent of Nigeria's land mass, will deploy a 100G network that re-uses existing 10G optical assets thereby preserving MTN past investments while ensuring future proof connectivity.

Nigeria's growing economy is fueling a proliferation of mobile subscribers, which number about 275 to every one landline in the country. As a result, Nigeria has a significant need for reliable, mobile broadband access to support growing demand for bandwidth hungry services such as streaming video plus the ever-increasing need from enterprises for storage and data center connections. The new network also gives MTN the capacity and flexibility to offer wholesale services to other service providers in the region.

A fleet of satellite solutions for Africa

WITH 37 SATELLITES serving broadcasters, video service providers, telecom operators, ISPs and government agencies operating across Africa, Asia, Europe and the Americas, Eutelsat is one of the leading operators in the commercial satellite business.

Meeting the communications requirements of markets in Africa is of strategic importance for our company. Eutelsat has been active in the African market for more than 16 years and with a stronger global network and two new satellite launches in 2015 offering greater African C- and Ku-band coverage, we are in a significantly stronger position than ever before to serve our customers in the region.

Currently, eight Eutelsat satellites, located at orbital slots from 5° West to 70° East, offer Ku- and/or C-band capacity for video and IP services in sub-Saharan Africa: Eutelsat 5 WEST A (C-band), Eutelsat 3D, Eutelsat 7A, Eutelsat 10A, Eutelsat 16A, Eutelsat 36A and B and Eutelsat 70B. All these satellites also offer telecom services (except Eutelsat 16A and Eutelsat 36A).

The Indian Ocean region is served by 6 satellites: Eutelsat 5 WEST A (C-band), Eutelsat 7A, Eutelsat 10A, Eutelsat 16A, Eutelsat 36A and Eutelsat 36B. All of these offer video, IP and telecom services (except Eutelsat 36A). Telecom services are also offered by Eutelsat 16B. In addition, with the planned launch in 2015 of two new satellites featuring African coverage in C- and Ku-band, we are showing further commitment to help all categories of customers reach their markets throughout the continent.

Eutelsat 8 WEST B, a new high capacity satellite, will be launched in 2015 to 8° West. It will introduce a C-band mission to 8° West, with 10 operational transponders connected to footprints covering the African continent and reaching west to South America. Eutelsat 8 WEST B will also feature 40 operational Ku-band transponders designed primarily to serve Direct-To-Home markets in North Africa and the Middle East.



Eight Eutelsat satellites, located at orbital slots from 5° West to 70° East, offer Ku- and/or C-band capacity for video and IP services in sub-Saharan Africa

Eutelsat will also be leasing capacity on a new RSCC (Russian Satellite Communication Company) satellite, Express-AMU1, to be launched in 2015 to 36° East. This satellite will provide follow-on and expansion capacity for Eutelsat 36A. Express-AMU1 will be a state-of-the-art high-capacity satellite with up to 70 transponders. It will ensure service continuity and growth for broadcast markets developed by Eutelsat in sub-Saharan Africa. Eutelsat's capacity on the satellite will be called Eutelsat 36C.

Eutelsat is confident about the future of satellite in the African market. The Broadcast sector represents a vast potential with significant opportunities for growth to support new digital platforms, increase adoption of HD and accelerate analogue switch-off. Africa's VSAT market should also be one of the fastest growing in the world over the next 20 years. The number of VSAT terminals will be driven by demand for back-up services and reliable high-speed internet connections from a wide range of sectors including oil & gas, mining, banking, transportation and distribution as well as government services.

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Reachability is key to Zain's digital service

Throughout Africa, operators are increasingly aware of the need for their digital service offerings to be dynamically steered by the changing needs and online behaviours of their subscribers, which has had a positive impact on Tecnotree's activity in this region. To be a successful telecoms player and to remain relevant, you need to know not only how, when, where and which services subscribers use their smartphones for, but also ways to collaborate with companies offering these services and developing packages to fit into their customer's lifestyle.

For example, the proliferation of social media continues at pace and with the rapidly increasing number of mobile devices connecting to the web, accessing social media from mobile phones is a trend that is showing no sign of slowing down. For operators, this is a golden opportunity for reaching the current connected generation.

Call completion is the key touch point between OTT (messaging and social media) applications and the traditional voice service. It is therefore not surprising that in order for operators to be more attractive and relevant to their subscribers, they need to offer options to integrate services between these two communication spheres. The Tecnotree Reachability Express solutions enable operators to reach out and integrate person to person messaging into the parallel OTT communication streams, as relevant and appropriate in their markets.

At the same time operators must be pragmatic about the fact that the use of traditional voice messaging is declining, with a certain profile of subscribers using it extensively while others prefer to only receive notifications of missed calls. The Reachability Express suite allows for high volume MCN at low cost, while on the same architecture combining rich services and integration capabilities. This is important from the perspective of service provisioning, service migration and charging. It therefore optimises core network integration and resource consumption, driving down OPEX and operational complexity.

Similarly, Visual Voicemail provides a visual interactivity to end users for voice mail messages. In contrast to the traditional voicemail message retrieval method of calling in to a voicemail service number, visual voicemail users receive messages as they are automatically downloaded to their handsets. In addition, intuitive user interfaces and high functionality give end users the ability to easily change settings as well as personalise their voicemail accounts and greetings. The service improves customer experience, the ability to leverage premium bundles, easy personalisation for customers, 100 per cent voice mail retrieval rate, campaigns, promotions and advertisements.

*Stavros Vougas,
vice president MEA & APAC, Tecnotree*

Zain Kuwait's new, single-click access Visual Voicemail system, available to customers through existing handsets

The Visual Voicemail delivery for Zain Kuwait includes the Tecnotree Agility Call Completion solution with Tecnotree Visual Voicemail functionality, which provides interfaces between the backend voicemail system and mobile handsets. The Visual Voicemail functions independently from the voicemail backend and thus supports all generations of Tecnotree's messaging platforms.

Nadia Al Saif, value added service director at Zain Kuwait, commented, "This new service innovatively allows customers to easily access and manage their voicemails on their iPhone and Android operating systems with just one click. By providing an additional platform for integrating 3rd party advertising and other operator related content services - Visual Voicemail can truly be harnessed as a tool to re-engage with the subscriber to consume more operator aggregated services - a valuable tool for CSPs to generate additional revenues."

Arabsat and Selelevision to launch broadcast broadband TV

SELEVISION AND ARABSAT have entered into an exclusive long-term partnership to deliver the first hybrid broadcast broadband TV (HbbTV) service to the MENA (Middle East & North Africa) region. The service will be provided to Arabsat customer base from three different locations - Jordan Media City in Jordan, Du in UAE and Overon in Spain. The Arabsat Satellite based HbbTV service will be complimented by the Selelevision OTT platform and content library of Selelevision to provide different viewer experience for the 26deg Arabsat hotspot. Broadcasters will enjoy different standardised applications in addition to the wide possibilities of customised applications. The service will be available to viewers on all HbbTV compatible set-top-boxes in the market. Furthermore, Arabsat and Selelevision will launch the first HbbTV Channel in the region as a pilot to present the concept to the customer base of Arabsat.

HbbTV is a global initiative that brings together broadcast and broadband TV services into one ideal user experience through connected TVs, set-top boxes and multiscreen devices; the HbbTV standard utilises existing standards and web technologies including OIPF (Open IPTV Forum), CEA, DVB, MPEG-DASH and W3C

Dr Raed Khusheim, chief executive officer at Selelevision, said, "We are delighted to enter into this strategic partnership with Arabsat, one of the world's leading satellite operators. We are constantly looking forward and committed to delivering engaging new services for customers, The HBBTV service will be compatible with all available HBBTV-ready boxes in the market, furthermore, we have also announced REDO, Selelevision new invention; the first hybrid android unit with approved C.A.S system platform: REDO unit will allow us to provide a variety of interactive new hybrid services to the market before any other provider in the region."

Khalid Balkhyour, president & CEO of Arabsat, said, "Arabsat is always keen to deliver new experience to its viewers and facilitate access to new technology for its broadcasters base customers; this partnership with Selelevision will add value to Arabsat hotspot at 26deg E with its growing neighborhood that will benefit both the broadcaster and the viewer. This platform will leverage on Arabsat reach and on Selelevision extremely competitive offerings and services. Both Parties have invested in this platform to provide an excellent cooperation model in the industry."

Ceragon supports network expansion

Wireless hauling specialist Ceragon has received follow-on orders from a global tier 1 operator serving 20 countries across Asia and Africa, bringing the total order value to over US\$50mn in the year to date from this customer. In Africa, Ceragon's Evolution Long-Haul solution will serve to expand the operator's mobile reach across eight national markets. In Asia, Ceragon's all-out-door expertise and FibeAir solutions will be used to both expand existing 3G services and facilitate the upgrade to high-speed 4G/LTE networks.

Ira Palti, president and CEO of Ceragon, said, "Both the African and Asian markets continue to evolve at a rapid pace. Ceragon is excited to take part in such growing number of global network expansion projects."

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Mahindra Comviva, a global leader in mobility solutions, partners with over 130 mobile service providers and financial institutions in over 90 countries.

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Ericsson adopts new networks software model

PACE OF CHANGE in networks is accelerating and puts great demand on prompt upgrades. With application virtualisation, network evolution is increasingly driven through new software functionality. Studies conducted by Ericsson show that networks with the latest software release perform better and offer a superior user experience. With the increasing importance of regular software upgrades there is a need to adapt the telecom software models so that they become similar to the IT industry - with clear software packages and transparent pricing models. To achieve this, Ericsson has introduced a new software model, the Ericsson Software model, with the release of Software 15A.

Stéphane Téral, principal analyst mobile infrastructure and carrier economics at Infonetics Research, said, "The telco model as we know it is obsolete. The old hardware-based telecom model isn't in synch with today's software-driven network reality. As virtualization increasingly decouples hardware from software, mobile operators need to embrace the ICT software model to become more agile and remain relevant."

Ericsson's software model introduces



Ericsson is leading initiatives to utilise network assets more dynamically

software value packages such as HD voice, multi-carrier mobility and load management, enabling operators to simplify the implementation of innovative functionality. The software packages address customer needs in four areas; secure smart device business, increase coverage and capacity, drive efficiency and capture new revenues.

Together with a software subscription component, the Ericsson's software model reduces time to market for new functionality. With these software value packages delivered on a predictable basis, operators can more efficiently integrate upgrades into their network and simplify the network planning process. Regular upgrades mean that users always enjoy the best experience from the networks.

Johan Wibergh, head of segment networks at Ericsson, said, "This is a logical evolution in the shift toward virtualization. Our new model builds on the software performance benefits by making it simpler and faster for operators to implement the packages that best address their business needs. Networks can do much more today and their speed of evolution will only increase."

GL enhances T1 E1 emulation / analyzer range

A KEY SUPPLIER of test, monitoring, and analysis equipment, GL Communications has enhanced its T1 E1 Analyzer Software and Hardware to version 8.10.1. Vijay Kulkarni, CEO of the company, explained, "Unlike conventional test equipment, GL's test platforms provide visualization, capture, storage, and convenient features like portability, remotability, and scripting. Our T1 E1 line of products provides comprehensive analysis and emulation capability of any product on the market. Any traffic over T1 E1 lines including voice, fax, modem, signaling, mobile, IP, VoIP, ATM, and more is addressed. Our newly introduced tScan16 is a high-density T1 E1 board with 16 Rx ports and the newer PCIe (x1) bus interface. The sixteen T1 E1 ports are Receive-only ports optimized for high performance voice and data capture, monitoring, and analysis requirements. tScan16 extends the family of GL's T1 E1 platforms with greater density, increased ports, and reduced power."

The new Dual T1 E1 Express (PCIe) Boards are high-density Dual T1 or E1 boards with newer PCIe (x1) bus interface. These cards are identical to the portable tProbe units except for FX0 FXS and Datacom functionality. In addition to basic T1 E1 applications and optional special applications, Dual T1 E1 Express (PCIe) Boards also support enhanced VF drop and insert with software selectable VF Tx and Rx impedances (135 Ω, 150 Ω, 600 Ω, 900 Ω, or High), Pulse Mask Compliance, Jitter Generation and Measurement testing applications. The software products: HDLC Tx Rx Server is WCS-based server module, which provides HDLC frame transmit/receive capabilities over HDLC streams on T1 E1 lines. It permits to create multiple HDLC streams of various bandwidths (time-slots, hyper channels, and sub channels) and provides UDP interface to the client applications for data Tx/Rx over these newly created HDLC streams. The application (client) and the HDLC Tx Rx server exchange the data over UDP transport. The WCS LAPD Server provides Layer 3 LAPD protocol services over GL's T1 E1 boards. It permits to create multiple LAPD links of various bandwidths (time-slots, sub-channels) and provides UDP interface to the client applications for generating & receiving LAPD payload over these created LAPD streams.

PCCW Global and Telecom Malagasy collaborate on improving connectivity into and out of Madagascar

MADAGASCAN NATIONAL TELECOMMUNICATIONS operator Telecom Malagasy (Telma) is working with PCCW Global, the international operating division of Hong Kong telecommunications service provider HKT, on the country's first international MPLS interconnection. Telma offers fixed, mobile and Internet capacity through the EASSY submarine cable and the 6,000km+ national fibre optic backbone. It offers, also, a mobile money service.

The MPLS interconnection will result in Telma's Ethernet and IP VPN coverage being extended across PCCW Global's resilient MPLS network, which reaches 3,000 cities in more than 130 countries, plus connectivity to and from Madagascar via major submarine cable systems including EASSY.

In addition, the agreement will give PCCW Global greater local access to Madagascar cities, including Antananarivo the capital city and to the other major hubs. Madagascar is the world's fourth largest island and is located in the Indian Ocean of the Southeast coast of Africa.

Importantly, this new interconnect agreement will boost business development in Africa, a significant market for both PCCW Global and Telma.

Patrick Pisal-Hamida, Telma Group's chief executive officer, said, "This collaboration is an important milestone in the development of our international business, especially international data services. It will extend the coverage area of our services beyond Madagascar to the rest of the world and vice versa."

James Welch, PCCW Global's vice president and head of sales of EEMEA, said, "This agreement is a critical element of our wider pan-African development. Interconnecting with Telma ensures that we can provide extensive connectivity to Madagascar and the rest of Africa at competitive cost and with faster provisioning times, too."



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Flipboard comes to Windows Phone

WINDOWS PHONE ENTHUSIASTS can get excited about the Lumia 830 rolling out around the world—and the Flipboard team is ready to celebrate too. Flipboard is pre-loaded on Lumia 830 phone and is available on all Windows Phones with at least 1 GB of RAM, such as the Lumia 920 and HTC One M8. However, Microsoft and Flipboard have confirmed that their teams are continuing to work together to develop a roadmap for optimising Flipboard for lower memory Windows Phones. Like the release for Windows tablets and desktops, this newest edition of Flipboard is tailored just for Windows Phone 8.1 users.

From its architecture to visual design, Flipboard for Windows Phone includes some great features. As CTO Eric Feng explains, "We're re-imagining many of our designs and interactions so readers can get to more of the content they care about more quickly."

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Nilesat inks multi-transponder contracts for Eutelsat's 8 West B broadcast satellite

EGYPTIAN SATELLITE OPERATOR Nilesat has taken a long-term lease for multiple transponders on the Eutelsat 8 West B satellite to be launched in mid-2015 to the leading video neighbourhood in the Middle East and North Africa. Eutelsat is one of the world's most experienced operators of communications satellites.

The 7/8 degrees West video neighbourhood operated by Eutelsat and Nilesat broadcasts more than 1,000 TV channels to over 52 million homes located from Morocco in the West to the Gulf in the East. Eutelsat and Nilesat have progressively built a comprehensive broadcast infrastructure at 7/8 degrees West, comprising three Eutelsat and two Nilesat satellites specifically designed for Direct-to-Home reception. Both operators have steadily brought new capacity on line to meet thriving demand and the acceleration of High Definition channel launches.

The next phase of expansion comes next year with Eutelsat 8

West B that will bring additional resources, increased operational flexibility and improved signal integrity for client broadcasters.

The additional transponders booked by Nilesat on Eutelsat 8 West B complement resources already leased on the Eutelsat 8 West C satellite that equips Nilesat to meet immediate customer expectations for high-performance capacity. Services on Eutelsat 8 West C satellite will be transferred to Eutelsat 8 West B once the satellite enters service.

Michel Azibert, Eutelsat chief commercial and development officer, said, "Eutelsat's partnership with Nilesat has fostered the creation of an unmatched broadcasting neighbourhood serving channels seeking to optimise their reach and deliver high quality.

"We are committed to delivering industry-leading service and look forward to pursuing and strengthening even further our strong collaboration with Nilesat."

Samsung's smart watch gets a full-web browser

OPERA MINI HAS become the first web browser on Samsung's Gear S, the Tizen-based wearable device platform. Users of this new smart watch will be able to enjoy web browsing from their wrists.

Opera Mini on black Samsung Gear S

With more than 250mn monthly users around the world, Opera Mini is known for its compression technology that shrinks the size of webpages to as little as 10%. The result is a faster and more energy-efficient browsing experience. It helps to load image-heavy pages in a snap.

Finger-friendly features for small-screen web browsing

In addition, the Opera Mini browser includes many finger-friendly features. The Smart Page gives users all their social updates and the latest news on one screen. Opera Mini's Speed Dial features website shortcuts as large buttons, enabling Gear S users to reach their favorite sites in a single tap. Private browsing removes any trace of the web pages visited on the wrist-gazer's device.



A full-web browsing experience on a wearable device

"As a lightweight but powerful browser maker, Opera has been a pioneer of making the web accessible across a huge variety of connected devices, such as the internet keyboard, the dual-screen handheld game console, VOIP phones and, now, wearable device," said Lars Boilesen, CEO of Opera Software. "We are thrilled that Opera Mini will be the first browser for Samsung Gear S users to download. This is an exciting, new experience for smart-gear users."

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Our world. Your world.

Millicom's money service automatically pays returns

A SUBSIDIARY COMPANY of telecommunications and media group Millicom, Tigo Tanzania launched a first-of-its kind service recently when it paid out a return directly to 3.5mn Tigo Pesa mobile money customers.

The new service, launched as Tigo Wekeza (Swahili for "Tigo Invests"), will now provide customers with a quarterly return based on the average balance of cash held in their Tigo Pesa accounts.

The initiative is a world-first in several ways.

Customers do not need to register separately in order to benefit and any returns due are paid directly into their Tigo Pesa wallet. If a customer so chooses, they can nominate a non-profit beneficiary instead.

This month's back-dated return was based on average balances held over three and a half years.

Millicom's President and CEO, Hans-Holger Albrecht said: "This innovation reflects our commitment to develop mobile money into an even more attractive service and will extend financial inclusion further.

"It comes in a year during which we have already pioneered cross-border mobile money transfers with automatic currency conversion as well as a unique interoperability arrangement with other operators in Africa."

In Tanzania, Tigo has secured regulatory

approval for its Tigo Wekeza service following new rules introduced by the Bank of Tanzania earlier this year.

To date, no other regulatory financial authority has instituted similar provisions. In Namibia for example, service providers are permitted to earn interest on pooled funds but payments made directly to customers are banned.

Tigo Pesa customers can now expect to receive an SMS message notifying them each time payment returns to them are due. Non-active users can benefit as long as they reactivate their account in response; while those that don't can access the funds at any later stage.

Tigo Tanzania's General Manager Diego Gutierrez said, "With Tigo Wekeza now in place, we expect its value to grow as more and more subscribers start and continue to regard Tigo Pesa as a store of value and wealth creation. We also expect to see widening financial inclusion in the long run."

Tom Phillips, the Chief Regulatory Officer of the mobile industry association, the GSMA, said in recognition: "This unique service is a further example of the many pioneering ways in which the industry supports inclusive financial and social policy goals.

"Congratulations to Tigo. I look forward to seeing other operators offering similar services."

Ericsson to work on expansion in Botswana

BOTSWANAN WIRELESS OPERATOR BTC Mobile, which operates under the beMobile brand, has selected Ericsson for the expansion of its network infrastructure.

According to a recently-published report by the Botswanan news outlet Mmegi Online, the project is expected to be completed by the end of the year, with the aim of boosting mobile network coverage and increasing subscriber numbers. "We have set ourselves apart in the market as a service provider that customers across the various groupings of low and high income levels can count on for the widest coverage," commented Paul Taylor, CEO of beMobile's parent Botswana Telecommunications Corporations Limited (BTC).

TXO Systems demonstrates expertise at AfricaCom

A PROVIDER OF professional asset management services and consultancy to the telecoms industry, TXO Systems works with its clients to acquire, redeploy, resell, and recycle technology assets, responsibly and sustainably, allowing them to generate revenues, reduce expenses and achieve corporate responsibility objectives.

Founded in 2005 and operating on five continents, TXO Systems' clients include fixed and mobile operators, leading original equipment manufacturers, large enterprises and a broad range of other channel partners. TXO Systems is certified to ISO 9001, ISO 14001, OHSAS 18001, ISO 27001, TL9000 and AATF and WEEE compliant processes.

TXO Systems is returning to AfricaCom, at which it will be demonstrating how it can help operators drive massive savings on infrastructure procurement costs and create new revenue opportunities by redeploying, reselling or recycling their surplus telecoms equipment. Tom Parker, VP business development at TXO Systems, said, "This is without doubt the best telecoms event in

Africa and a great platform for TXO to showcase its asset recovery and recycling services. This year, we look forward to demonstrating our new smart inventory management tools, i-VALUE, i-JUDGE and i-TRAC, to existing and new telecoms clients."

TXO has significant experience in supporting telecom network upgrade, expansion and maintenance programmes and managing end-to-end asset recovery projects, in Europe, the Middle east and Africa (EMEA), Asia-Pacific regions and the Americas - serving manufacturers and operators.. It was awarded, recently, the TL 9000 V5.0 certification for quality management. The award addresses the brokering and distribution of telecommunications equipment including switches, transmission equipment, and legacy and optical equipment. TL 9000 certification denotes conformance to a telecommunications-specific set of requirements based on the ISO 9000 Management System, developed by the Quality Excellence for Suppliers of Telecommunications Forum (QuEST Forum) to distinguish 'best in class' suppliers and manufacturers.

NEC at work on Zambia's new backbone

ZAMTEL AND NEC Corporation, which specialises in the integration of IT and network technologies, are working together on the construction of a new digital microwave radio transmission network to boost mobile coverage and capacity for citizens, enterprises and tourists across Zambia. The turnkey deal, which includes the supply, delivery, installation, testing and commissioning of NEC's microwave transmission network equipment, is expected to be completed within 12 months and will cost US\$18.3mn. NEC will upgrade Zamtel's existing backbone and access systems and commission new links to connect its macro base stations and core network wirelessly.

This investment in Zamtel transmission infrastructure aims to upgrade and modernise the company's digital microwave transmission backbone network in order to meet current and foreseeable future growth in mobile data demand, while supporting the company's LTE rollout plan.

"This partnership will see NEC design, manufacture, supply, deliver, install, test, migrate and commission a native Ethernet microwave backbone and access radios specifically tailored to Zamtel's requirements," said Zamtel CEO Dr Mupanga Mwanakatwe, who added the new digital microwave backbone and access project will include the installation of 2Gbps, 600Mbps, 300Mbps and 150Mbps backbone and access networks based on native Ethernet microwave radio network technologies, adding that on completion, the investment will lead to an advanced national IP microwave backbone and access network.

Dr Nobuhiro Endo, president at NEC Corporation commented, "By boosting the coverage and capacity of its wireless backhaul network, Zamtel will be able to meet the ever rising demand for mobile broadband services from local citizens, enterprises and tourists across the country. NEC's highly reliable and cost-effective solution will enable Zamtel to support continued economic growth and underpin emerging services, such as mobile money and high definition mobile TV, in both rural and urban locations."

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The new Russian satellites for Africa

With three new satellites set to enhance coverage across the continent, RSCC offers unique footprints with support for any type of satcom or broadcasting application

RUSSIAN SATELLITE COMMUNICATIONS Company (RSCC) is a new player on the African satcom market. The company has got 47 years of vast experience in the industry and currently operates 12 satellites in 11 GEO orbital slots located on the arc from 14W to 145E. Main domestic market for RSCC is Russia, where it is a major satellite operator, but the company for many years has been successfully working in Europe, MENA and Central Asia.

In 2014-2015 RSCC implements total renewal of its orbital fleet. Three new satellites will have coverage over Sub-Saharan Africa: Express-AM6 (53E), Express-AM7 (40E) and Express-AM8 (14W). The first of them (Express-AM6) was successfully launched in the end of October 2014. Launches of the other two are planned for the 1-st half of 2015. These new satellites will provide quite unique footprints which allow deploying any type of satcom and broadcasting application in Africa.

- Express-AM6 (53E). Pan-African C-band beam, providing excellent opportunity for TV broadcasters to distribute content over African continent and for telecom service providers to deliver satellite connectivity all across EMEA region.
- Express-AM7 (40E). High-power steerable spot C and Ku band beams, designed for DTH, cellular backhaul, broadband internet access, USO, distance learning, telemedicine and



Andrey Kirillovich, PhD, Director of Integration & Projects, Russian Satellite Communications Company



Express-AM7 (40E) steerable spot C and Ku band beams

government applications. They also provide better coverage of certain regions in Africa.

- Express-AM8 (14W). Wide Ku-band footprint stretching from Middle East across North Africa to West Africa, including the waters of Persian Gulf, Red Sea, Mediterranean and Gulf of Guinea. Ideal for enterprise VSAT, maritime and SCADA applications.

The significance of satellite connections

Nowadays when many submarine cables have arrived to the continent and a lot of satellite capacity is pointed towards Africa, there is a quite interesting situation on the market. The total number of satellites working in Africa is huge, but if you look at each specific region or country the footprints differ. This situation makes satellite service providers working on many satellites simultaneously, in order to benefit from the best coverage of a specific region. 2dB difference can reduce the total cost of ownership for entire satellite network greatly. This allows network operator to use smaller antennas, less powerful BUCs and provide higher throughput with better availability by using most advanced MODCODs, to squeeze more bits of information from each Hertz of satellite capacity. And in the end to make satellite connectivity more affordable for end users.

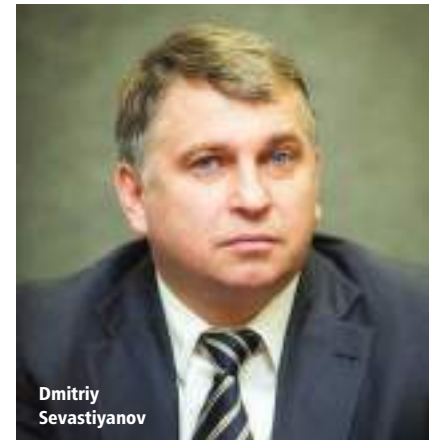
Why RSCC works for Africa

With the launch of three new RSCC satellites African satellite service providers will have an opportunity to improve coverage of certain regions greatly. It is worth mentioning in particular Express-AM7 satellite planned for launch to 40E in Q1 2015. Its powerful steerable spot C and Ku band beams are ideal to operate in West and South Africa, supporting cellular backhaul, corporate VSAT and DTH applications, government, first responders, telemedicine, distance learning and USO networks, as well as offshore communications in the Gulf of Guinea. Besides that high availability and resistance to rain fade of C-band meet network requirements of Oil & Gas industry, cellular operators and other CIR based applications with high SLAs, while high EIRP and G/T levels make C-band beam cost-effective for customers.

Moreover, RSCC satellites can be packed with dedicated solutions and VSAT equipment bundles helping service providers to increase satellite bandwidth utilization efficiency. This will allow network operators to reduce CapEx for their networks and increase the economic efficiency of each MHz leased from satellite operator. ©

Andrey Kirillovich, PhD
Director of Integration & Projects
Russian Satellite Communications Company

Entering a new frontier

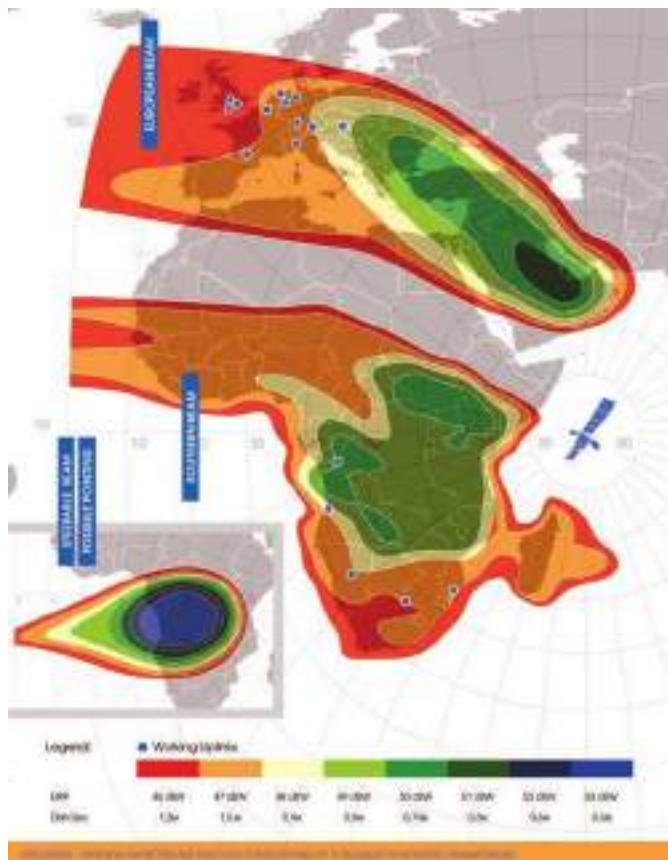


Dmitry Sevastyanov

Russian communications operator Gazprom Space Systems elaborates its expansion strategies in Africa

THIS YEAR, GAZPROM Space Systems (GSS) has made an impact on the African and Middle East markets. Among other achievements, GSS was recognised by the world telecom experts of Euroconsult as a "Regional Operator of the Year" at the World Satellite Business Week in Paris in September 2014. Could you elaborate on your strategy and what projects have already been implemented in Africa, in particular?

Our team is working very hard in these markets and, taking into account strong competition in these regions, we are pleased with the results. In such a highly competitive and complex market as Africa, we rely on providers having extensive experience in the region. Our company makes an effort to strongly support and develop the established partnership. We are constantly improving our services, to create a comfortable business environment for our customers and are always willing to share business risks with them. We faithfully and promptly treat even minor requests, and are ready to calculate and re-calculate link budgets to provide the most optimal solution and deliver satellite capacity for testing at any time. Such efforts bring the result! Just a few examples of the projects that we have implemented with our partners.



Telemedia (South Africa) and GSS arranged broadcasting of TV channels for the biggest Angola government television corporation Televisão Pública de Angola (TPA) via the Yamal-402 satellite. TPA came to Yamal-402 because of its high transponder EIRP, which allows to provide Direct-to-Home (DTH) video in all regions of Angola including Cabinda and the Portuguese-speaking Islands of São Tomé and Príncipe. Besides, the extensive coverage makes it possible to receive these TV channels in the embassies of Angola throughout sub-Saharan Africa.

Cooperation between GSS and Telemedia has been developing since the beginning of 2014 when the South African operator, with a nine-metre antenna located in a Johannesburg suburb, uplinked a bouquet of African TV programs. Among them, sports channels dedicated to horse racing were the most popular. These horseracing channels are interesting not only for bookmakers and betting shops in South Africa but also for the viewers across the entire southern and central African region from Dakar (Senegal) in the west to Mauritius, Reunion and Madagascar in the east. These countries have the target audiences for horse racing services of Phumelela, the owner of these TV channels. Another package of educational TV channels is uplinked by Telemedia in the transponder with the inter-beam connectivity (Southern – European) for reception in Europe, Middle East and North Africa.

We continue our cooperation with a Namibian company SatSpace. It is a well-known provider of reliable and cost-effective Internet service on the continent. SatSpace started using Yamal-402 capacity in October 2013. Since then, the company doubled the utilised capacity. Currently, SatSpace is completing the construction of their own teleport in Angola for providing services via Yamal-402, which will allow us to extend our cooperation in Africa significantly.

Recently, GSS and the company ISAT Africa (a member of Wananchi Group Holding Limited in Kenya and one of the biggest players on the satcom/ broadcast market in Africa) announced a contract, according to which ISAT Africa would use Yamal-402 Southern Beam for operation of the network, deployed in DR Congo and other Central African countries. We also extend business with our European partners. Castor Networks is one of the first customers of GSS for Yamal-402. The company uses capacity for their services in 3 Yamal-402 beams i.e. Northern, European and Southern, as well as cross-strap connectivity between European and Southern beams. Castor Networks has an office in Johannesburg, and opened another representative office in South Sudan recently. This office promotes Internet access services based on Yamal-402 in the region. In South Africa, Castor Networks moved a lot of VSATs to Yamal-402. Besides, a number of big projects for governmental agencies of African countries were implemented with the capacity of the Yamal-402 Southern Beam. The European Beam is used by the company for maritime projects in the Mediterranean Sea and the Middle East. Services for oil and gas enterprises as well as for maritime business are realised in cooperation with ITC Global (USA). Among our other active business partners I would like to highlight such companies as OnLime (Germany), BentleyWalker (UK), IABG (Germany), GlobeComm (Netherlands). The list is constantly growing, and we do hope that it will be filled up with new close associates both in Africa and beyond. ©

A business model to bridge the digital divide

How new wireless backhaul techniques are bringing connectivity to underserved areas and profits to operators

TBRINGING UNIVERSAL CONNECTIVITY to urban areas in Africa is well publicised. Whilst major cities benefit from the majority of investment, the cost and uncertain returns involved in expanding connectivity into remote or less established urban areas often deters operators from investing more widely. However, a new wave of ultra-efficient wireless technology is opening up these markets and presenting profitable opportunities for operators to roll-out wide scale coverage.

A business opportunity

Although the challenges with rolling out broadband in Africa are frequently talked about, the revenue opportunities these fast growing areas present to the mobile industry are much less discussed. With their high population density, youthful demographics and increasing number of new business ventures, the socio-economic profile of these areas has led to a pent-up demand for high speed connectivity (mobile and fixed).

Small and medium sized enterprises (SMEs), for instance, are important drivers of growth in economies across Sub-Saharan Africa as they account for up to 90 per cent of all businesses. With AfricanEconomicOutlook.org recently forecasting that the African continent's economies are set to accelerate from an average 4 per cent growth rate in 2013 to between 5 and 6 per cent in 2015, SMEs clearly present a big opportunity for operators.

Being able to cost-effectively bridge the digital divide and expand connectivity in these growing areas therefore represents a competitive edge for operators at a time when the mainstream mobile market is becoming saturated. Recent technological advances in wireless infrastructure mean mobile operators have never had a better opportunity to capitalise on this demand.

The road to wide-scale connectivity

Whilst mobile operators have known for some time that they need to diversify and create new revenue streams, setting up traditional infrastructure to address fixed connectivity is not always financially viable; a large initial investment may be required, taking many years to break-even.

This had led a growing number of forward thinking operators to maximise the return on their existing backhaul infrastructure by using spare capacity to address enterprise access. This co-existence of multiple virtualised services within the same physical network is made possible through the intelligent software now available in wireless backhaul solutions like point-to-multipoint (PMP) microwave.

By creating converged networks such as this, operators can deploy the high capacity backhaul needed to future-proof the mobile network, and simultaneously monetise its spare capacity.

This highly cost effective approach is revolutionising the business case for operators to address the large but diffuse population of SMEs with latent demand for enterprise-grade internet access. Not only does this represent profitable business for the operator, but there are also well-established societal benefits; the World Bank estimates that a 10 per cent increase in broadband penetration can deliver up to 1.5 per cent GDP growth and up to 4.5 indirect jobs per direct job created.

A new wireless wave

Further cost efficiencies can be achieved through PMP microwave which creates a wide-area sector of coverage from a 'hub' location. Multiple sites, either backhaul or access, can be served by a PMP sector, which enables equipment and spectrum costs to be amortised across a number of links. Analyst consultancy Senza Fili found this allows PMP microwave to deliver total cost of ownership savings of up to 50 per cent over fibre or point-to-point microwave technologies, while delivering identical carrier-grade services.

The software defined networking (SDN) ability of the latest high capacity PMP microwave solutions provides the flexibility to customise virtual networks and support a range of services. For example, dedicated capacity can be allocated to backhaul at the same time as defining tiered connectivity offers for enterprise access. By efficiently managing resources in this way, operators can run mobile backhaul at a much lower cost and achieve a quick return on investment for enterprise access.

Strategy Analytics recently documented that the use of SDN to boost the efficiency of data traffic on backhaul could save mobile

operators in Africa and the Middle East \$162 million a year by 2017.

Vision for the future

Economic growth in Africa is undoubtedly building momentum in the enterprise access market, due to both the growing number of SMEs and in the large multinationals strengthening their presence in the region. However, the geographical distribution of businesses requires operators to review their strategies if they are fully to address this demand.

By utilising the latest wireless technologies like PMP microwave, operators now have an economically viable business model to expand coverage and maximise the opportunities from this market. This not only provides new revenue streams, but bridges the digital divide through providing new carrier-grade connectivity to previously under-served areas.

At CBNL, we've worked with Tier 1 operators across Africa in deploying PMP microwave networks which backhaul next generation mobile and enterprise access services. This converged approach has not only supported our customers' growth strategies but brought untold benefits to the businesses and communities in which they serve. ©

Dr John Naylor, CTO at CBNL

Fibre for industry

SIEMENS IS EXPANDING its portfolio of industrial network products with the Scalance X204-2FM Industrial Ethernet Switch (FM = fibre monitoring) and the MM991-2FM media module. The new devices are the first to have integrated functions for the diagnosis of glass fibre optic cables in industrial networks. They enable users to detect faults such as reduced signal power at an early stage and then to initiate countermeasures so as to increase availability. Diagnostics can easily be performed from any computer with Internet access via a Web interface or simple network management protocol (SNMP).

www.siemens.com

Why C-band spectrum is a critical catalyst for African development

C-BAND SPECTRUM IS widely used throughout Africa to provide essential connectivity and capacity, particularly in remote or rural locations. This critical connectivity supports the growth of Africa's GDP and delivers services that enhance the lives of millions of Africans.

C-band's importance to the continent of Africa and the satellite sector cannot be denied, but there are other parties seeking access to the band. The International Mobile Telecommunications (IMT) community is targeting C-band in its quest for more spectrum, and an agenda item will address this request at the International Telecommunication Union's (ITU) World Radiocommunication Conference (WRC-15) in November 2015.

The operation of IMT services in C-band has the potential to cause excessive levels of harmful interference and might preclude future use of this band for satellite services. This could have a drastic impact on communications and critical services throughout the continent.

For example, a number of important sectors providing services across Africa are reliant on C-band:

- The financial services industry uses C-band to connect bank branches, facilitating financial inclusion on a continent where - according to the World Bank - less than a quarter of adults have an account with a formal financial institution.
- Many African countries have identified small businesses as significant contributors to

economic growth and job creation. Satellite provides cost effective and robust broadband services for these users, helping them expand their endeavours and access international markets: firstly, governments utilise satellite communications for a number of essential services, including telemedicine and e-learning; secondly, satellite provides secure communication channels for the public sector. During elections, C-band spectrum facilitates communication between voting stations and helps expedite the aggregation and transfer of ballots.

In Nigeria, the C-band spectrum is pivotal to the country's lucrative television industry, with satellite assisting in providing capacity for earth stations. It is expected that Nigeria's entertainment and media industry will reach revenues of approximately US\$8.5bn by 2018 (PwC), with television advertising, subscriptions and licence fees providing US\$1bn of that total.

Furthermore, more than 25mn mobile subscribers in the Democratic Republic of Congo (DRC) are reliant on C-band capacity to provide mobile and internet connectivity. Satellite is used to provide maximum reach and reliability and also serves as a back-up to fibre connections.

Angola's oil industry also utilises C-band for VSAT communication on the west coast, because the spectrum is resistant to rain fade, providing maximum reliability in an area prone to heavy rain fall.

C-Band spectrum cannot be shared with IMT

Research conducted recently by Euroconsult in partnership with the European Space Agency¹ has shown that sharing the spectrum with mobile wireless services will negatively affect satellite services - including public safety functions. The interference that would be created by sharing could disrupt critical connectivity for global businesses, governments, relief workers and communities. This effect will not be immediate but, rather, will be felt over time as each country that wants to introduce these new services will need to take action domestically to make the spectrum available to mobile operators.

The IMT community is also promoting the idea that C-band satellite applications can easily be moved to other frequency bands, such as Ku- and Ka-bands. This is untrue:

- The large footprints of C-band are necessary for many regional mobile and fixed networks and if C-band is no longer used, it could result in a costly migration process that could preclude services from being expanded to more remote regions in need of connectivity.
- In regions that experience heavy and sustained rainfall, Ku- and Ka-band are not as reliable as C-band, which could harm many of the networks in place, particularly those that are used for the banking and oil and gas industries. Any interruption in service could result in huge revenue losses; impacting the region's overall GDP. ©

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- ▶ Channelized access for DSO T1 E1 T3 E3
 - ▶ In an STM-1, any or all 84 T1s or 63 E1s can be identified / processed for Tx and Rx
 - ▶ Test or monitor any TDM traffic e.g. ISDN, SS7, CAS, or other channelized protocols
- ▶ Unframed / Unchannelized Processing
 - ▶ Unchannelized BERT for ATM, PoS, and RAW
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Autour de la vague de nouveaux services et applications innovants

Une étude de la GSMA révèle que plus de la moitié des citoyens dans les États arabes sont dorénavant abonnés à des services de téléphonie mobile

PLUS DE LA moitié de la population des États arabes du Moyen-Orient et d'Afrique du Nord sont dorénavant abonnés à un service mobile, offrant à la région une occasion unique d'utiliser la technologie pour favoriser la croissance sociale et économique. Selon le nouveau rapport de la GSMA, intitulé « Arab States: Mobile Economy 2014 » (États arabes : l'économie de la téléphonie mobile en 2014), on comptait 195 millions d'abonnés uniques à la téléphonie mobile fin 2013 dans la région, soit un taux de pénétration de 53 pour cent de la population totale. Le nombre total de connexions mobiles¹ dans la région s'établissait à 404 millions en fin d'année.

« La téléphonie mobile a enregistré une croissance spectaculaire dans les États arabes ces cinq dernières années, procurant d'importants avantages socio-économiques dans chaque pays de cette région diversifiée », a déclaré Anne Bouverot, Directrice générale de la GSMA. « Alors que les opérateurs régionaux continuent d'investir dans les réseaux et services de haut débit mobile, nous invitons les gouvernements de la région à collaborer avec le secteur de la téléphonie mobile afin d'atteindre tout une gamme d'objectifs, depuis le déploiement de réseaux dans des zones mal desservies en Afrique du Nord jusqu'à l'assurance de la mise en place de la bonne infrastructure afin de soutenir les centres d'affaires mondiaux tels que Dubaï.

« Dans les économies émergentes, les solutions de commerce mobile élargissent les services financiers aux populations non bancarisées et aident à combler le fossé numérique. Dans les pays du Golfe, la téléphonie mobile favorise l'innovation dans

Pénétration des abonnés uniques à la téléphonie mobile dans les États arabes en 2013 (% de la population)

Algérie	48 %
Bahreïn	76 %
Égypte	53 %
Irak	60 %
Jordanie	71 %
Koweït	77 %
Liban	51 %
Libye	61 %
Maroc	51 %
Oman	72 %
Palestine	46 %
Qatar	73 %
Arabie saoudite	74 %
Sud-Soudan	16 %
Soudan	41 %
Syrie	42 %
Tunisie	53 %
Émirats arabes unis	83 %
Yémen	45 %
États arabes (total)	53 %

Source : GSMA Intelligence

des domaines telles que les communications M2M (entre machines) et les solutions de ville intelligente. Nous constatons également que les réseaux mobiles jouent un rôle important dans la réponse aux catastrophes et la gestion des crises », a ajouté Mme Bouverot.

Un paysage de la téléphonie mobile diversifié

Les 19 marchés formant les États arabes comprennent à la fois les pays du Golfe avancés et de nombreux marchés émergents très peuplés en Afrique du Nord. Ces deux sous-régions varient fortement en termes de conditions socio-économiques, de pénétration de la téléphonie mobile, de maturité technologique et d'environnements réglementaires.

Un certain nombre de pays du Golfe, dont

Bahreïn, le Koweït et les Émirats arabes unis (EAU), affichent déjà des taux de pénétration d'abonnés uniques à la téléphonie mobile supérieurs à 75 pour cent. En comparaison, seulement 16 pour cent de la population au Sud-Soudan est abonnée à un service mobile (voir tableau). L'Égypte est le plus important marché de la région avec 44 millions d'abonnés uniques à la téléphonie mobile à fin 2013, représentant 23 pour cent du total de la région. Les cinq plus importants marchés, en termes de taille, sont l'Égypte, l'Arabie saoudite, l'Irak, l'Algérie et le Maroc, qui représentent ensemble près des deux tiers du nombre total d'abonnés uniques à la téléphonie mobile de la région.

Une région en croissance rapide

Le secteur mobile dans les États arabes a enregistré une croissance supérieure à la moyenne mondiale au cours des cinq dernières années. Les abonnés uniques à la téléphonie mobile ont progressé de 9,5 pour cent par an (TCAM) entre 2008 et 2013, contre une croissance moyenne de 8,2 pour cent au niveau mondial ; les connexions mobiles ont augmenté de 13,2 pour cent par an au cours de la même période, contre un taux de croissance de 11 pour cent au niveau mondial.

Le manque général d'infrastructures de lignes fixes dans la région signifie que la téléphonie mobile est déjà le principal moyen de communication et également de plus en plus le principal moyen d'accès à l'Internet. La téléphonie mobile a joué un rôle actif pour réduire la fracture numérique et réaliser l'inclusion financière des populations précédemment mal desservies, en particulier dans certaines parties de l'Afrique du Nord. ©

«Le mobile amène une vague de nouveaux services et applications innovants dans la région, bien que nous ne faisons que commencer à voir le potentiel de transformation positif du haut débit mobile»

Une partenariat entre NTT Com et Liquid Telecom autour IP

LA SOCIÉTÉ NTT Communications Corporation (NTT Com) a été sélectionnée par Liquid Telecom pour fournir des services de transit IP visant à répondre à la demande croissante de bande passante sur le marché africain. NTT Com fournit des services de conseil, d'architecture, de sécurité et des services cloud pour optimiser les environnements des technologies de l'information et des communications.

Andrew Alston, directeur de stratégie IP chez Liquid Telecom, a déclaré : « La demande pour une capacité IP sur notre réseau fibre panafricain continue de croître bien au-delà des prévisions mondiales pour l'Afrique. NTT Com est un fournisseur fiable qui nous fournit un transit IP de haute qualité vers et depuis l'Internet mondial sur tous les continents. Liquid Telecom partage la vision d'avant-garde IPv6 de NTT Com et IPv6 est déployé intégralement à travers la totalité de notre dorsale africaine »

Making more from mobile number portability

Why a failure to facilitate switching means poorer service, and less market competition, and lower levels of innovation

ACCORDING TO RESEARCH published by the GSMA in November 2013, so far only a handful of countries in Africa have introduced mobile number portability (MNP), which allows people to retain their existing phone number when switching operators. This low take-up is not unique to Africa; the GSMA's report says that only a quarter of developing markets have introduced MNP to date, while only a further 15 per cent are known to be implementing MNP in the future.

Under European Union law, a personal mobile number is now enshrined as a human right with the legislators firmly of the opinion that people shouldn't be forced to change their digital identity when seeking a higher-quality mobile service. However, this argument has failed to impress some regulators in Africa who remain lukewarm towards MNP despite a general consensus about its benefits. The accepted arguments in favour of MNP are that removing the barriers to switching enables consumers to search for a better service and price which then stimulates market competition, innovation, better service levels and also, in some cases, reduces the power of a dominant player and encourages new entrants into the market.

So what are the barriers to the adoption of MNP in Africa?

The priorities of regulators

The traditional role of most regulators has been managing disagreements and disputes between the operators and between operators and government rather than protecting the rights of the consumers. In addition, many regulators are busy addressing a range of conflicting priorities such as network sharing, improving quality of service (QoS), redistributing spectrum and establishing central broadband infrastructures and so MNP is often quite far down their list of priorities.

Another worry is that the introduction of MNP will start a price war which is not generally good for markets - or government tax revenues - where large-scale infrastructure investments still need to be funded - and indeed can negate one of the major benefits of MNP which is that it forces operators to invest in improving their service.

Resistance by dominant operators

Naturally the largest operator will not welcome any threats to its captive customer base and there is little to say about this! However, experience shows that it is often the strongest operators that will benefit from MNP due to their superior service and product capabilities.

However, one would think that where there is a competitive market operators would welcome the opportunity for consumers to switch easily with the result that the best most cost-effective service provider gaining market share. But this doesn't seem to be happening as many large African countries with a high number of domestic operators (five or more) such as the Democratic Republic of Congo have yet to introduce MNP. In Uganda it was decided that MNP implementation would be costly and that the market was ready to benefit fully from MNP. However, the technology is widely available and simply needs to be customised to suit each market.

Demand from customers, and network issues

The time taken to port numbers to use the facility is often perceived as the main obstacle for switching. However, according to the GSMA, in Ghana, 92 per cent of porting requests are completed within five minutes with almost half a million numbers (447,095) ported in the country during the year ending June 2013, up 21 per cent year-on-year.

The Ghana success story can be attributed to strong leadership from the National Communications Authority which actively drove the MNP programme, understood the complexity and challenges related to launching MNP and ensured the MNP service was efficient, consistent and reliable. In some countries - for example, Zimbabwe - many people own a dual-SIM handset that makes it easy to switch between networks and so there may be no real incentive to port their numbers. And, in Kenya, it is cheaper to buy a new SIM than to port from one operator to another. And, in most countries, mobile money services are specific to individual networks and cannot be ported with the associated mobile number.

Therefore, customers thinking of porting their number are often put off due to the risk and inconvenience of losing their existing mobile money service.

Analysis of industry prospects

Thecla Mbongue, senior research analyst for Africa at the analyst firm Ovum, has observed, "MNP has been launched in six African markets so far: South Africa, Egypt, Kenya, Ghana, Morocco and Nigeria. In Sub-Saharan Africa more specifically, MNP has not had much impact on operators' market shares. The markets are predominantly prepaid with a high occurrence of multiple SIM cards usage. In such environments, mobile users share their multiple numbers with their contacts and do not often see the need of going through the process of porting numbers. We believe that most of the subscribers porting their numbers would be small business users who do not want to lose customers when changing numbers. The main reason for porting numbers include: poor quality of service on the network to be left and more attractive tariffs on a new network."

World Telecom Labs (WTL) developed Text To Port, a vital component of Nigeria's MNP programme, which enables people to text their provider in the first instance to notify their intention to switch to another provider. This text then sparks a string of actions by the old and new provider to transition both the number and the customer's account. www.wtl.be

James Wild, a consultant at Laurasia Associates, has worked on the MNP programmes in Ghana, Nigeria and Kenya. He believes that the low take-up of MNP in Africa is not surprising given the situation in the rest of the world. He said, "When we talk about low take-up in Africa, we need to remember that across European countries only around 4-8 per cent of mobile customers switch providers each year. This is in a saturated and developed market with much price competition. Therefore it's not really surprising that in Africa and other non-saturated emerging markets that only 1-2 per cent of mobile subscribers ask to switch."

However, Wild says that 55 per cent of countries worldwide have MNP and he expects that within five years it will be universal. ☺

Leigh Smith, MD, World Telecom Labs

The danger of counterfeit cabling

A look into how the influx of copper coated aluminium cable coming via less scrupulous installers is now making its way into the cabling market and what is being done to tackle this issue

AFRICA FACES A growing problem with counterfeit cable, with unscrupulous manufacturers and distributors passing non-standards compliant cable including copper clad aluminium (CCA) product off as the real thing. Lee Funnell, EMEA technical manager at Siemon, explains why it pays to be vigilant and why purchasing and installing anything less than a quality industry standards compliant system from a reputable source can be costly.

Product counterfeiting is a well-known problem. However, establishing the scale of this activity is notoriously difficult. A report from the Organization for Economic Cooperation and Development put the value of counterfeit goods that crossed international borders at over US\$250bn, while the International Chamber of Commerce (ICC) expects the global counterfeit goods market to be worth US\$1.7 trillion by 2015 — that is over two per cent of the world's total current economic output.

Increasing influx

The structured cabling industry is by no means immune from the influx of fake products and systems. Africa is already seeing a significant increase in reports of copper clad aluminium (CCA) being manufactured, installed and used. Those purchasing it generally fall into two groups — one, who are actively seeking out and trying to pass off CCA as standards compliant cable, and second those who are being duped into thinking that they have got a bargain due to its lower price. In some instances component compliant certificates are provided, misrepresenting the actual product supplied.

CCCA's CableCheck App is a convenient field-screening tool for checking suspicious cable communications cable

CCA cables typically appear under three distinct guises:

- Cables openly sold as CCA, usually at around half the price of their solid copper counterparts
- As low cost 'own brand' or unbranded versions pretending to be genuine copper cables
- Counterfeit cables masquerading as well-known brands, or with names similar enough to the genuine thing, as to fool the uninformed buyer

CCA cable is now widely available and is even sometimes sold via legitimate outlets that also sell premium branded products. This has led to proper practices becoming blurred and there are even those in the industry who are trying to defend its use, mainly because it has been used for many years in RG58 and RG59 coaxial data cables.

Material loss

CCA cables generally consist of an aluminium central core of around 80 per cent of the conductor diameter, with the remaining outer 20 per cent being copper cladding. Aluminium conductors exhibit inferior electrical and mechanical properties and, as a direct consequence, offer poor signal transmission, particularly at low frequencies with restricted flexing capabilities also leading to poor physical contact of the end points.

Aluminium also has poor malleability compared to copper, meaning that it will break more easily if overworked, which is a particular issue for patching. CCA also suffers from oxidation of exposed aluminium at connection points and this can drastically reduce the lifetime of connections.

Standards issue

While their composition should certainly be enough to deter their use, the fact is that CCA cables are not compliant with any local or internationally recognised standards. There is no ambiguity when it comes to the requirements defined in these standards, as the details in the specification are



CCA cable is now widely available and is even sometimes sold via legitimate outlets that also sell premium branded products.

comprehensive with respect to the cable conductors. Some examples are as follows:

- IEC 61156 states that 'the conductor shall be a solid annealed copper conductor'
- ISO/IEC 11801 at an international level and EN 50173-1 in Europe specify conductors to be solid copper
- EN 50288 says that 'the conductor shall be solid copper and comply with the requirements of EN50288-1:2003'
- ANSI/TIA-568-C.2, by reference to ANSI/ICEA S-90-661-2006 for Category 5e, states that 'solid conductors shall consist of commercial pure, annealed, bare copper'

Drilling down

According to independent laboratory tests by Delta and others, CCA cables fail to meet the basic requirements of four-pair, twisted-pair cables - CCA cables fail insertion loss, DC loop resistance, return loss, and fail on attenuation to crosstalk ratio (ACR).



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Siemon conducted its own tests on a sample of CCA cable purporting to meet Category 5e standards – and the results were negative.

The cable under test had a length measurement of 89.5 metres and the test was carried out to ANSI/TIA-568 Category 5e permanent link standards using a Fluke DTX-1800. The cable ends were terminated to Siemon MAX® 5e outlets.

Not surprisingly, the link failed on both insertion loss and return loss. The insertion loss failed across the entire frequency range, with a massive negative margin of 9.9dB at 72.8MHz. The cause of this was a DC loop resistance of 43.5 ohms. The standard requires that DC resistance of any conductor not exceed 9.38 ohms per 100 metres, so the maximum loop resistance should have been $9.38/100 \times 87.3 \times 2$ or 16.24 ohms.

The return loss failure was across all four pairs, with the worst-case margin being -6.8dB at 73MHz.

The heat is on

Perhaps the biggest cause for concern about the use of CCA is that these cables do not have any form of genuine fire performance rating. In fact, none of these cables are able to conform to the Underwriters Laboratories (UL) fire grades.

CCA cables also have a greater heat resistivity than copper and will produce higher than expected temperature rises when used to provide power over Ethernet (PoE and PoE+). Its higher attenuation properties bring about some frightening possibilities, particularly in applications such as IP CCTV, where power is continuously drawn through network cables on a 24/7 basis. It is a very real possibility that heat will build up faster than it can be dissipated, with potentially disastrous outcomes.

Purchasing criteria

The standards are unequivocal about the requirement for solid copper conductors and, therefore, substituting CCA for copper in existing designs and claiming category compliance is both fraudulent and high risk, and should never be entertained. Despite the warnings, the temptation to use low-cost CCA cable instead of standards compliant all copper variants is proving too hard for some to resist.

The negative consequences, however, could be significant and are likely to result in demands for replacement of the entire installation, which will leave the installer in serious financial difficulty while the dispute is resolved with the supplier. Litigation and damage to reputation are just two likely outcomes for any installers that go down this route. For end users though, the message is simpler – make sure you know what you are getting.

Words of warning

With such a diverse choice of high quality products on offer via expert manufacturers and distributors, there is absolutely no reason to use sub-standard CCA cable. The smartest investment is in systems that are proven to

Any cost-saving option is short-lived and that the failure rates and real risks associated with this sub-standard cabling mean that the costs far outweigh investment in quality systems



Aluminium conductors exhibit inferior electrical and mechanical properties and, as a direct consequence, offer poor signal transmission, particularly at low frequencies.

meet industry standards for quality, safety and performance. Now due to the efforts of organisations like the Communications Cable & Connectivity Association (CCCA), Fibreoptic Industry Association (FIA) and BICSI, as well as leading vendors, the market is becoming better educated about CCA cable and the dangers of purchasing and installing counterfeit cabling. ©

Nokia Networks shows how to make smartphone browsing faster and cheaper

NOKIA NETWORKS HAS conducted the first live network trial of a software feature that improves smartphone performance on 3G networks. Nokia High Speed Cell FACH, which encompasses three 3GPP standard features, cuts smartphone-generated network signaling by up to 80 per cent, boosts response time by up to 65 per cent and achieves up to 20 per cent faster browsing. Up to 40 per cent power savings, contributing to longer smartphone battery life for subscribers, were also shown. The tests were run on the commercial 3G/HSPA network of a major European operator using test devices fitted with Qualcomm Snapdragon processors that support High Speed Cell FACH.

Running applications such as WhatsApp Messenger, Facebook Messenger, web browsing

and e-mail, smartphones often send and receive small data packets of just a few hundreds of bytes or a few kilobytes. High Speed Cell FACH handles these small data packets more efficiently to improve the overall customer experience and enable operators to support a higher number of smartphones on their networks.

“Smartphones already outsell feature phones and by 2018, smartphone penetration in some developed markets is expected to exceed 90 per cent.⁽¹⁾ With virtually all these smartphones being 3G-enabled, it’s important to be able to improve network efficiency under high signaling load,” said Thorsten Robrecht, vice president, Mobile Broadband portfolio management at Nokia Networks. “Nokia Networks already offers

a unique set of software features to reduce smartphone signaling. High Speed Cell FACH is now the next step.”

Part of the Nokia Liquid Radio WCDMA Software Suite, High Speed Cell FACH is already available, so operators can prepare for the market when smartphones support the feature.

High Speed Cell FACH is an important capability that Qualcomm Technologies supports on its latest Snapdragon processors that are now commercially available to smartphone manufacturers. These live network tests produced substantial performance gains that exceeded Qualcomm’s expectations, including beating previous laboratory test results.

(1) Informa (December 2013)

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Un plan national pour le haut débit

L'opportunité importante pour les entreprises, les consommateurs et le gouvernement, pouvant accélérer considérablement le développement économique et social

LORS D'UNE TABLE ronde réunissant des chefs de file de l'industrie et du gouvernement, qui s'est tenue cette semaine au Caire, à laquelle Son Excellence Atef Helmy, ministre égyptien des Communications et de la Technologie de l'Information, et Hesham El Alaily, Président exécutif de la NTRA, la GSMA a publié un nouveau rapport révélant le potentiel important pour la croissance future en Égypte. En prenant des mesures afin d'accroître la pénétration du haut débit mobile, le pays pourrait débloquer 310 milliards de livres égyptiennes supplémentaires (soit 43 milliards d'USD) de PIB et engendrer 1,2 million de nouveaux emplois dans l'économie égyptienne d'ici 2030. Développé par Plum Consulting, le rapport, « The Economic and Social Impact of Mobile Broadband in Egypt » (« L'impact économique et social du haut débit mobile en Égypte »), estime que cette opportunité ne peut être exploitée qu'à travers des politiques favorables à l'investissement à long terme et un environnement réglementaire stable. Il signale notamment que l'Égypte possède actuellement l'un des taux les plus bas au monde de fréquence assignée au réseau mobile.

« Avec le passage des services vocaux et SMS classiques au haut débit mobile, les opérateurs mobiles en Égypte sont de plus en plus paralysés par la capacité limitée du réseau national de fibre optique. De même, les connexions internationales à haut débit sont primordiales si l'Égypte espère concourir efficacement au niveau mondial », a déclaré Tom Phillips, chef des affaires réglementaires de la GSMA. Ces entraves, associées à l'absence de l'utilisation du spectre de radioélectrique pour prendre en charge les dernières technologies mobiles à haut débit, étouffent la croissance économique. « Des politiques qui encouragent les investissements dans le domaine du haut débit mobile et activent un spectre radioélectrique supplémentaire à allouer aux services mobiles sont essentielles à la transformation de l'avenir économique de l'Égypte. »

Lors de la table ronde qui s'est tenue cette semaine, le ministre M. Helmy a invité l'industrie de la téléphonie mobile de

réunir un groupe de travail conjoint visant à répondre aux contraintes actuelles et à évaluer les exigences de l'offre et de la demande dans le cadre du déploiement du réseau mobile haut débit. La formation de ce groupe de travail sera discutée lors de la conférence Mobile 360 - Middle East, organisée par la GSMA, à Dubaï, plus tard ce mois-ci.

Suite à des discussions fructueuses, il est désormais temps pour le gouvernement et l'industrie de prendre des mesures concrètes afin de stimuler l'innovation et la croissance par le biais des réseaux mobiles. Cette collaboration correspond à un aspect critique de notre effort conjoint visant à améliorer les vies de nos citoyens et à positionner l'Égypte en tant que chef de file de la région," a déclaré Son Excellence Atef Helmy.

Recommandations pour la croissance à long terme

Pour réaliser pleinement le potentiel du haut débit mobile, le rapport propose que le gouvernement et le régulateur travaillent main dans la main avec l'industrie du mobile afin de développer une vision claire pour une « Égypte numérique » qui stimule l'investissement. Parmi les principales recommandations :

Adoption d'un environnement réglementaire stable pour soutenir l'investissement du secteur privé dans les domaines de la fibre optique et des réseaux mobiles.

Développement d'un nouveau plan national pour le haut débit qui s'aligne avec les pratiques internationales optimales afin de surmonter les obstacles rencontrés dans le passé et définir des objectifs et des politiques révisés pour les 10 prochaines années.

Libération d'urgence d'un spectre radioélectrique supplémentaire dans les bandes 700 MHz, 800 MHz, 1,8 GHz et 2,1 GHz grâce à un processus équitable et transparent pour résoudre les problèmes de capacité et de couverture mobiles. L'autorité nationale de régulation des télécommunications est invitée à publier un calendrier clair avec les échéanciers pour la libération de ce spectre afin de stimuler les investissements.

L'accès aux installations nécessaires au déploiement du haut débit mobile - telles que les conduits de fibre optique, les passerelles internationales et les sites de pylônes - devrait être surveillé de près afin d'assurer l'efficacité des prix de gros pour tous les participants au marché.

Amélioration de l'utilisation des services gouvernementaux en ligne afin de faciliter la pénétration des services mobiles à haut débit.

« Le haut débit mobile représente une opportunité importante pour les entreprises, les consommateurs et le gouvernement, pouvant accélérer considérablement le développement économique et social », a ajouté Phillips. « L'industrie du mobile est prête et disposée à travailler en étroite collaboration avec le gouvernement égyptien pour favoriser l'innovation et la croissance grâce à la technologie mobile, et positionner l'Égypte comme un chef de file dans la région et améliorer la vie de ses citoyens. »

Nous accueillons favorablement les conclusions de la table ronde qui s'est tenue cette semaine et sommes impatients de tirer profit de cette dynamique pour réaliser des changements concrets permettant d'accélérer le développement économique et social en Égypte par biais du réseau de téléphonie mobile," a poursuivi M. Phillips. ©

MTN, Alcatel-Lucent, et un réseau fibre optique 100G

ALCATEL-LUCENT DÉPLOIE UN réseau de fibre optique 100 Gbit/s très haut débit avec MTN Nigeria, filiale du groupe MTN basé à Dubaï et principal fournisseur de services en Afrique. Le pays le plus peuplé d'Afrique pourra ainsi tirer pleinement parti des avantages d'une connectivité très haut débit.

MTN Nigeria, qui couvre près de 90% de la superficie du pays, va procéder au déploiement d'un réseau 100G s'appuyant sur l'infrastructure 10G optique existante, afin de capitaliser sur les investissements déjà en place, tout en déployant une solution d'avenir, à la pointe de la technologie.

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Striking the right balance

What to do, and what to remember, when managing digital and traditional platforms for customer service



IN AN AGE where people are just as likely to contact a call centre or visit a branch as they are to Tweet, email or text a company, it has become essential for businesses to have a multi-channel customer service strategy. Organisations that get this right will not only retain a higher percentage of customers, they are also more likely to attract repeat business and attract new business as their reputation grows. However, as customer care continues to evolve into a complex cross-channel environment, some companies are struggling to harness the rapidly changing landscape to positively affect business outcomes.

Understanding the new customer experience

Most organisations, regardless of what industry they operate in, still lack sufficient direction on how to develop a comprehensive cross-channel customer service strategy that delivers effortless care across multiple contact points. Developing an effective cross-channel delivery model requires a clear view into the root cause of cross-channel behaviour. Businesses need an end-to-end view of the customer experience across all channels in order to formulate and deploy a multi-channel strategy that provides

measurable gains in customer satisfaction, including phone, web, chat, email, social mobile and SMS.

Technology advances including social media and the emergence of online customer support options such as chat, coupled with the breakthrough of mobile, has meant some businesses are not sufficiently equipped for this new customer service landscape.

Changing customer communications channels

While many people still prefer to contact a call centre for issue resolution, growing consumer demand for self-service solutions means that online customer service delivery now comes a close second. Convergys research found on cross-channel experiences,

Convergys research found on cross-channel experiences, 35 per cent of consumers contact a call centre in the first instance, while 28 per cent will visit a website



35 per cent of consumers contact a call centre in the first instance, while 28 per cent will visit a website. There is now an inherent willingness to use online and other self-service options, depending on the complexity of the resolution involved. This behaviour is likely motivated by an unspoken belief that one channel is better-suited to quickly resolve that specific issue. In other words, customers gravitate to the channel of least resistance depending on what they are trying to do.

Mobile adds a further dimension to the customer service mix. Of four emerging channels - mobile, text, social and webcam - mobile apps and text messaging had the highest current usage among younger ages. While these mobile service options are not yet commonplace in general, there is higher adoption among younger generations; 23 per cent of 18-35 year olds used mobile apps and text message as a customer service channel, compared to just seven per cent of 55-74 year olds. This is a trend that will only accelerate as the 'digital native' population (categorised as those born after 2000) increases and grows in influence.

In order to build a seamless cross-channel customer platform, there are a number of factors to be considered. This can include elements such as; the business operation, the physical location of your customers, the availability of customer service staff and, of course, budget.

Investment in online must be a priority in order for the organisation to futureproof itself for the next generation of consumers. For example, effective tools to capture social media chatter about the organisation, or a chat facility on the company website coupled with prompt resolution, can be a powerful tool

Developing an effective cross-channel delivery model requires a clear view into the root cause of cross-channel behaviour.

Investment in online must be a priority in order for the organisation to futureproof itself for the next generation of consumers

for customer satisfaction. As organisations mature their multi-channel approaches, chat must be positioned as a proactive intercept tactic. However, only a few organisations have successfully implemented an online chat support function.

Plan for the future, don't forget the present

Although there has been a rise in the use of mobile, social and online to contact businesses, particularly among 'Generation Y' and 'digital natives', businesses should not look for a root and branch overhaul of their customer management systems quite yet. It remains vital for companies to maintain a balance between traditional (phone, post) and digital (social, online) customer support programmes in order to cater for all their customers.

There will always be demand to speak to someone on the phone, in the same way as there will always be demand for self-service resolution via technology channels. What is important is that businesses can help the customer via their preferred channel and offer swift service in order to deliver the best possible customer experience. Those organisations that accelerate adoption of these cross-channel strategies, and use analytics to better understand their customers behaviours and preferences, will position themselves to become industry leaders with levels of customer service unmatched by their competitors. ©

Cormac Twomey, SVP EMEA at Convergys

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La présence des femmes aux marchés en développement

De la assistance technique, des réunions, des études d'incidence, des bonnes pratiques et des boîtes à outils pour réduire la fracture entre les sexes au niveau des compétences numériques et de la connectivité

L'ENGAGEMENT DE LA GSMA et la Clinton Global Initiative est en faveur de l'opération Connected Women « Accélérer l'essor de l'économie mobile féminine », lors de la réunion annuelle de la Clinton Global Initiative qui s'est déroulée à New-York. La GSMA et ses partenaires coopèrent dans le cadre du programme Connected Women pour accélérer la croissance de l'économie numérique féminine ; leur action a déjà touché 10 millions de femmes par l'intermédiaire des initiatives existantes. Le programme Connected Women va mener des études qui fourniront des enseignements précieux sur les avantages socio-économiques d'une plus grande intégration des femmes à tous les niveaux, et qui seront utilisées par les partenaires pour développer des initiatives et des services à l'attention des consommatrices et des travailleuses.

« L'omniprésence et l'accessibilité financière du mobile nous offre l'opportunité sans précédent d'améliorer le développement social et économique », a déclaré Anne Bouverot, Directrice Générale de la GSMA. « Les femmes, en particulier, ont cependant tendance à être laissées pour compte, non seulement en tant que consommatrices de services mobiles, mis aussi en tant qu'employées et dirigeantes dans le secteur des communications mobiles. Pour y remédier, la GSMA s'est alliée à des acteurs-clés du secteur qui ont l'ambition d'exploiter davantage le potentiel de l'économie numérique féminine. »

Des obstacles à l'accès

En partenariat avec le Ministère australien des affaires étrangères et du commerce extérieur (DFAT) et l'Agence américaine pour le développement international (USAID), la GSMA va entreprendre un projet de recherche pour mieux comprendre les disparités actuelles entre les sexes au niveau du téléphone mobile, les catalyseurs et les obstacles à l'accès au téléphone mobile et à son utilisation, ainsi que les implications pour les décideurs du secteur et autres parties prenantes. Cette étude comptera parmi les plus complètes réalisées à ce jour par la communauté internationale sur les souhaits et les besoins technologiques des

femmes à la base de la pyramide. Ce projet de recherche comprendra 12.000 entretiens et 84 groupes de discussion en Chine, en Colombie, en République Démocratique du Congo, en Égypte, en Inde, en Indonésie, en Jordanie, au Kenya, au Mexico, au Niger, au Nigeria et en Turquie.

En partenariat avec A.T. Kearney, la GSMA va aussi entreprendre et publier un travail de recherche majeur qui examinera l'état de l'égalité entre hommes et femmes dans le secteur, mettant en lumière les bonnes pratiques et offrant des conseils stratégiques dans les domaines de changement potentiel. L'objectif de ce travail de recherche est de mieux faire connaître les opportunités pour les femmes et leur rôle dans l'écosystème mondial des télécoms, ainsi que d'impulser le changement dans le secteur en montrant comment les femmes peuvent soutenir les aspirations du secteur. Le rapport fournira des indicateurs permettant de suivre les progrès et l'activité.

Des services appropriés

Une fois les rapports de recherche finalisés, au début 2015, les partenaires du programme GSMA Connected Women, parmi lesquels on trouve actuellement Ooredoo, Qualcomm, Roshan et Smart Communications, se sont engagés à en exploiter les enseignements et les recommandations pour mettre en place des programmes et des services destinés aux femmes qui sont leurs clientes et leurs employées. Les opérateurs partenaires de la GSMA utiliseront les résultats pour fournir des services appropriés, notamment : un meilleur accès à l'internet mobile pour les

femmes ; le recrutement de femmes comme distributrices de recharges de téléphones mobiles au sein de leurs communautés, ce qui leur permettra d'élargir l'accès numérique tout en générant des revenus pour leur foyer ; la fourniture d'information et de services dont les femmes ont besoin en matière de santé, d'éducation et de compétences professionnelles ; la fourniture de technologie mobile aux ouvrières d'usine pour leur donner accès à l'information sur la santé ; et le lancement de services conçus pour protéger les femmes en situation de vulnérabilité, en leur permettant de bloquer les correspondants indésirables, empêchant le harcèlement et la violence verbale.

Mme Bouverot a poursuivi : « Le programme GSMA Connected Women est le fer de lance du développement de l'économie numérique féminine et nous avons hâte d'accueillir de nouveaux partenaires pour nous aider à apporter des avantages socio-économiques essentiels aux consommatrices et aux travailleuses du monde entier. » ©

Une solution pour Djazzy

ALCATEL-LUCENT FOURNIT SA solution de transmission par faisceaux hertziens en mode paquet 9500 MPR (Microwave Packet Radio), leader du marché, à Djazzy (OTA). Ce projet va permettre de moderniser l'architecture de backhauling mobile de l'opérateur, afin de répondre à la demande liée à l'explosion de l'utilisation de smartphones.

OTA, une division de Vimpelcom, est fournisseur de services mobiles algérien. Le système 9500 MPR longue distance d'Alcatel-Lucent va doter l'infrastructure OTA d'une capacité huit fois supérieure, avec un encombrement géographique trois fois inférieur aux systèmes traditionnels.

Le système consistera également en une infrastructure nettement plus rentable en dehors des zones urbaines et dans les régions reculées du pays. Ce projet de modernisation réseau répond aux besoins de l'opérateur en matière de fourniture d'accès 3G, mais aussi en matière de services 4G LTE futurs.

«L'omniprésence et l'accessibilité financière du mobile nous offre l'opportunité sans précédent d'améliorer le développement social et économique» - Anne Bouverot, Directrice Générale de la GSMA

Service plans based on real-time QoE

RESEARCH COMMISSIONED BY Mahindra Comviva and conducted by Ovum Consulting indicates a need for operators to adopt a consumer-centric approach than a network-centric data optimisation strategy. The study reveals that 20 per cent of sites are congested at any point in time.

With the growth in mobile data, the complexity of managing traffic has also intensified driven by greater use of bandwidth hungry applications and heightened customer expectations for an ever-higher Quality of Experience (QoE). According to Ovum Research's recent forecasts, global mobile broadband connections will cross US\$4.5bn at a CAGR of 19 per cent from 2012 to 2018 as demand for data connectivity from big and small-screen devices continues. It also predicts that mobile broadband revenues will grow to approximately US\$278bn in 2018 at a CAGR of 11 per cent. In the face of unrelenting data growth, the study highlights the benefits operators

would reap by deploying intelligent media optimisation to deliver an assured service experience and better monetise data traffic. Current optimisation techniques are applied principally as a blunt instrument for Capex containment. The broad application of optimisation policies such as compression has negative fallout on revenue, especially for operators who predominantly extend volume based plans to customers. As an example, video optimisation in a high-traffic location improves bandwidth utilisation and overall browsing experience. However, the application of the same policy at congestion-free locations generates lower traffic volume, reducing the number of bytes and revenues per customers.

Commenting on the significance of media optimisation, Madan G Onkar, vice president, Internet and broadband solutions, said, "Data is the new growth category for operators in emerging markets. The ability to delight customers with a personalised, consistent, experience and innovative offers is a critical

services differentiator. Intelligent context-aware application of optimisation techniques would enable operators to balance twin pressures of network and revenue growth."

Data traffic is distributed unevenly on the network. Around 20 per cent of cell sites are congested at any point of time. The study posits a more intelligent approach to optimisation is possible, one that can improve customer experience and service personalisation based on real-time invocation of business rules and policies. Unlike conventional techniques, intelligent media optimisation selectively applies performance-improvement techniques, based on a combination of variables including cell traffic load, customer location, network type, application, device and ARPU profile.

Currently, 20 per cent of operators have invested in intelligent optimisation tools. The report indicates that 60 per cent of operators would deploy intelligent media optimisation in 2014 and 2015, driven by the need to deliver a consistent QoE and growth revenues. ©



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Ecosystem emerges with smart devices as drivers

The Global mobile Suppliers Association (GSA) updates its research on the LTE ecosystem, confirming that smartphones are driving growth in long-term evolution adoption

THE LATEST UPDATE to the *Status of the LTE Ecosystem* report published recently by the Global mobile Suppliers Association (GSA) confirms that 183 manufacturers have announced 2,218 LTE-enabled user devices, including operator and frequency variants. 978 new products were announced during the past year, representing 79 per cent annual growth. The number of manufacturers increased by 52.5 per cent in the same period.

Smartphones are the main user device category and the main growth driver. 1,045 smartphone products have been launched, translating to an improved share of 47 per cent of all LTE device types. This compares with 455 smartphones and 36 per cent share a year ago. 98 per cent of LTE smartphones are multimode, capable of operating on at least one 3G technology in addition to LTE.

The next most popular LTE device category is routers (comprising CPEs and personal hotspots), followed by tablets, with dongles pushed down to 4th place. 207 LTE-connected

tablets are announced, which is an 18% increase in the last 3 months alone.

The 1800 MHz (3GPP band 3) continues to be the most prominent band for LTE network deployments globally and also has the largest devices ecosystem with 944 user devices. Over 42% of all LTE devices can operate in this spectrum.

The evolving LTE ecosystem

The GSA represents GSM/EDGE, WCDMA-HSPA and LTE suppliers, providing reports, facts, analysis and information explaining market developments and trends. This latest Status of the LTE Ecosystem report covers LTE FDD and TDD devices. The majority of terminals operate in the FDD mode. The TDD mode also has a fast maturing ecosystem with 644 devices announced. The ecosystems for TDD bands 38 (2.6 GHz) and 40 (2.3 GHz) dominate and are virtually identical, each supported by more than 420 user terminals. Band 41 (2.6 GHz) is well represented with 261 products, followed by Band 39 (250 products). Another rise in the

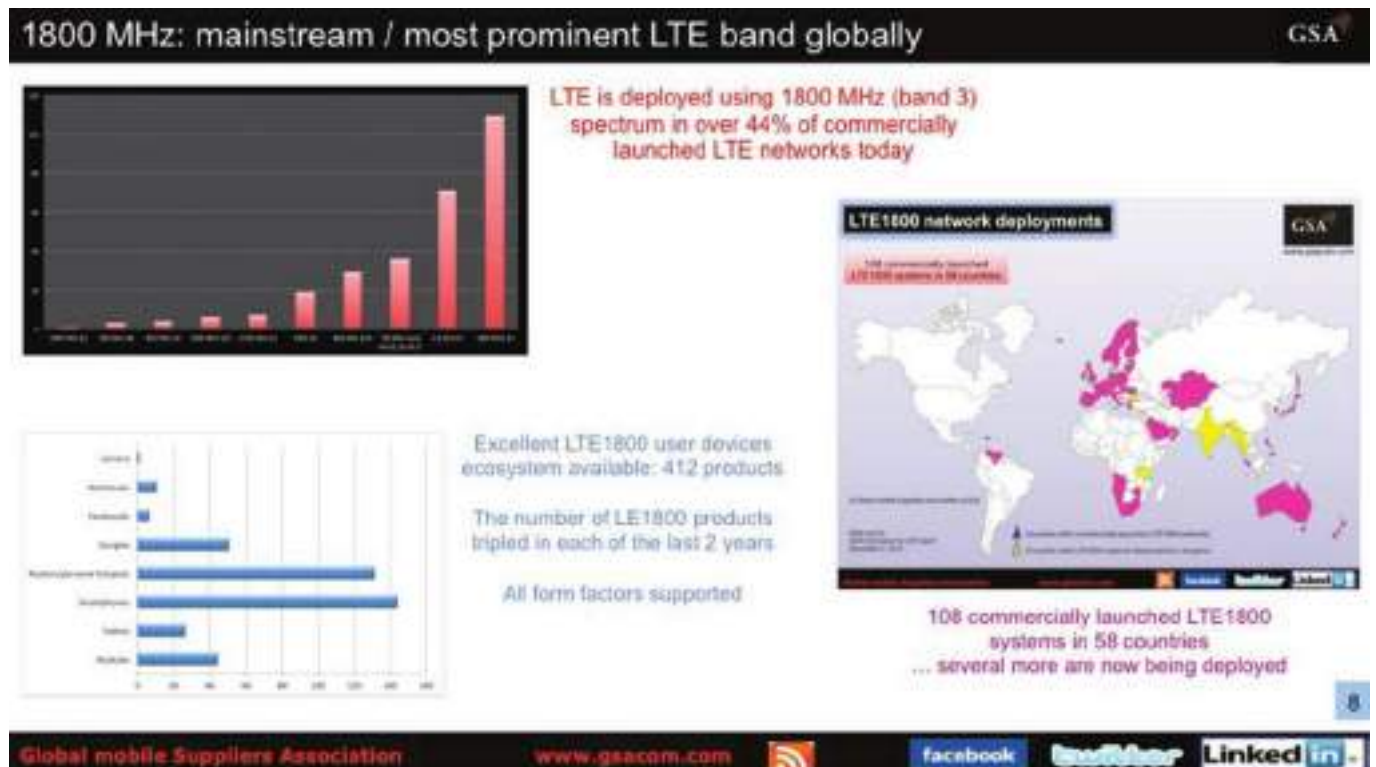
number of devices supporting Bands 42 and 43 (3.5 GHz) is noted.

Alan Hadden, president of the GSA, said, "Operators worldwide are investing strongly in improving the customer experience, efficiencies and growth. 25 per cent of LTE devices support Category 4 (150 Mbps peak downlink speed). 16 devices support Category 6 (300 Mbps)."

Global capabilities

Many operators are bringing HD voice service to their LTE customers by introducing VoLTE, technology. Availability of VoLTE-enabled terminals is rapidly expanding. 146 VoLTE-capable phones (including carrier and frequency variants) have been announced by leading vendors including Apple, Asus, Fujitsu, Huawei, LG, Pantech, Samsung, Sharp and Sony Mobile.

Worldwide, 331 LTE networks are commercially launched (GSA Evolution to LTE report, September 2014). GSA expects this to rise to at least 350 networks by end 2014. ©



Global LTE1800 commitments (Source: GSA)

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PowerOasis power solution optimises solar energy and delivers optimum value in Papua New-Guinea

FG WILSON'S INTERNATIONAL telecommunications prowess has been reaffirmed by the role its generator sets played in helping a major telecoms operator make huge operational cost savings on a solar hybrid power solution across Papua New-Guinea.

PowerOasis, the a leading supplier of telecoms power solutions for remote and off-grid sites, successfully delivered the innovative project on behalf of Digicel – one of the region's largest telecoms operators. Close monitoring of the project during the first year of operation has revealed an operational cost saving of over US\$40,000 and a 72 per cent reduction in diesel fuel consumption.

The solar hybrid power solution involved the installation of 25 FG Wilson generator sets – a combination of P11-6S (11 kVA) and P16.5-6S (16 kVA) – all of which included integrated 1,000L fuel tanks and extended service engines - helping to reduce maintenance requirements and increase service intervals to 1,000 hours.

John O'Donohue, CEO of PowerOasis, commented, "The key objective of PowerOasis's hybrid power solution for Digicel was to significantly reduce overall operational costs – and choosing FG Wilson generator sets was key to successfully achieving this. We know through experience that FG Wilson generator sets are relatively easy to install and major cost savings were made at the outset as it took less than five days to deploy the site, rather the 12-15 day deployment time which is often the case.

"Given the extreme remoteness of a lot of the Papua-New Guinea sites and the challenging nature of the terrain, durability was a vital attribute for the generator sets, which is a hallmark of the FG Wilson product. The 1,000L fuel tanks on which the generator sets are mounted played an important role in ensuring their reliability and in protecting against fuel theft, which can be a major burden on costs for off-grid projects.

"Digicel's specifications required a solution which would significantly decrease fuel consumption and achieve more cost-effective maintenance intervals. Through the hybrid power solution we have managed to deliver a project which has required no more than five site maintenance visits and diesel refuels per



The Papua New-Guinea project is a high-profile demonstration of FG Wilson's expertise in the telecommunications sector

year – sites such as these can often require a site visit every month.

"We benchmarked the generator sets operating individually at the sites against them operating as part of a hybrid solution and the cost savings delivered by the hybrid solution are vast. The initial outlay can be greater, but there is no doubting the major savings that can be enjoyed in the long-term.

"For operators rolling out new networks in remote markets, the need for reliable, efficient power sources has become a critical factor - the difference between profit and loss. PowerOasis hybrid solutions, using FG Wilson generators, are ideal for rapid site development."

With a peak power load of 1.5 KW required at each site, the generators, batteries, solar arrays and rectifiers are sized and configured to meet operational and autonomy hours. The battery charge cycles are managed to comply with manufacturer recommendations and achieve battery life of at least four years. The remote monitoring of the sites is proactively managed by Digicel, with PowerOasis providing back-up support.

Stephen McKinty, GM at FG Wilson, commented, "The Papua New-Guinea project is a high-profile demonstration of our well-established and internationally-renowned expertise in the telecommunications sector. The robust and resilient design of generators for the telecoms industry is paramount to their performance, especially if situated in remote locations. Our renowned product availability was an important reason for FG Wilson generator sets being chosen for this project.

"Our generator sets deliver power every

hour of every day in even the most remote and harsh telecom sites, which is why customers throughout the world turn to FG Wilson to meet their needs in this sector. Choosing FG Wilson means lifecycle costs you can count on, combined with the guarantee of expert local support which comes with every project we help deliver.

"The PowerOasis solution optimises the energy captured from sunlight which helps lead to cost savings in diesel fuel, reduced servicing overheads and prolonged generator life. Improvements in site availability leads to further business benefits, including reduced subscriber churn and increased revenue generation. The direct costs savings result in a rapid return on investment in the solar upgrade to the generator/battery hybrid solution."

FG Wilson has been providing reliable power to the telecoms sector for over 47 years. As part of its commitment to ongoing product development, FG Wilson has recently developed a suite of new options to meet the specific needs of the telecoms sector. These include a range of base fuel tanks with various high capacity options, single or double wall, fuel anti-theft features and single point lifting.

Through a global network of 370 Dealers, FG Wilson successfully serves and supports customers all over the world. With the back-up of FG Wilson's Applications Support Team, and Technical Support Centre, Dealers can meet any power requirement, no matter how complex. ©

For more information about FG Wilson, visit www.fgwilson.com

Building blocks to data management

Why jailbroken devices - which have been modified with user-installed software - pose a significant threat to enterprise operations

PERSONAL AND ENTERPRISE computing landscapes are changing, and software ecosystems are changing with them. Mobile phones and tablets outsold conventional desktop and notebook computers in 2013, and continue to expand in terms of footprint and functionality. These rapid mobile computing device sales are driving increased rates of app downloads. Market predictions for mobile app downloads are expected to be well over 200bn per year by 2017, according to ABI Research. It is clear that mobile apps across multiple platforms are making steady and dramatic inroads into the enterprise, with iOS leading adoption rates.

As a result of this strong mobile adoption, app developers who could once simply focus on application source code reviews and web and desktop-centric security reviews, are now seeing the need to significantly expand their security requirements scope to align with a new threat landscape that is specific to the mobile computing platform. IT security teams are also confronted with the change of the use of new devices in traditional regulated markets. A recent study by the Ponemon Institute found that many organisations are not taking the necessary steps to protect regulated data, such as protected health information (PHI) on mobile devices and in the cloud. This presents a worrying trend and the challenges around mobile security, which will only continue to grow in complexity.

Mobile apps are being targeted by hackers

Mobile devices are being used for everything from consumer banking and e-commerce to enterprise productivity, infotainment and more. As a result, more and more sensitive data and intellectual property (IP) is finding its way onto these platforms. One issue is that mobile devices are characterised by untrusted execution environments. In other words, hackers can quite easily invade these devices without the owner's knowledge and compromise apps and data, as well as lost devices being an easy target for identity theft, data theft, and fraud.

Market predictions for mobile app downloads are expected to be well over 200bn per year by 2017, according to ABI Research

All business segments are adopting mobile devices into their productivity and services growth plans, including financial institutions, retail establishments, game publishers, video service providers, and hackers. Malware, unauthorised access, code tampering, piracy, and intellectual property theft are all major issues on the mobile platform. These challenges are more difficult to deal with because mobile devices, and the resident apps, live outside the firewall and are predominantly owned and maintained by users rather than companies. Even on corporate devices that have security policies such as mandatory PINs, business policy wrappers and authentication policies, apps and data are still vulnerable to attack. This is because all these measures assume that the device's controlled download and execution automatically protects the apps, the data, and the user. In reality, a jailbroken device



Vince Arneja, VP Product Management, Arxan Technologies

may do none of these things.

Jailbreaking (iOS) or rooting (Android) is the process of bypassing restrictions, policies and safeguards built into devices by Apple and Android operating systems to enable device owners (and hackers) to install apps from outside the official App store and to bypass usage restrictions and checks that are built into the platform. In a traditional sense, jailbreaking/rooting is executed by a user on their own device in order to use their personal device "freely". These jailbroken/rooted devices present a tempting target for hackers, who are able to leverage these compromised environments to cause direct financial loss and ultimately damage a corporate brand.

Building a self-defending and tamper-resistant app

Protecting an application and its code in a fundamentally distrusted and potentially malicious environment is a different discipline from IT security policy enforcement, and requires a fundamentally different approach. The key is to leverage the same multi-layer, binary code protection paradigm as used for tamper-resistance in applications. This will help achieve effective mobile shielding obile computing. ©



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Innovations in broadcasting

The latest solutions and services on show at the annual International Broadcasting Convention event for professionals engaged in the creation, management and delivery of entertainment and news content

IBC 2014 came at an interesting time for many visitors, just three weeks before the UK Digital Production Partnership's 'File Delivery Day'. From October 1 onward, all major broadcasters in Britain will require television programme and advertising content to arrive as data files rather than on digital video tape. This is bad news for motorcycle couriers but very good indeed for the UK's primary telco, BT, which is enjoying high demand from production houses for direct optical IP connectivity. Broadcasters around the globe are making a similar transition.

"FD-Day was high on the agenda of practically every UK visitor we talked to," commented Eyeheight sales director Martin Moore. "It will also affect overseas production companies creating programmes for UK-based broadcasters, and not before time given that the whole world is now moving away from tape to IP-based content delivery. Fast file turnround is becoming increasingly important throughout the production and postproduction business. Our latest BroadcastSafeFCPX plug-in allows a programme file to be processed on a modern high-specification Apple desktop computer faster than it takes to view rather than typically four times longer than real-time on a low-spec

machine. Faster processing means faster delivery of completed content, higher operational efficiency throughout the business chain."

512 gigabyte SanDisk memory

The original catalyst for the migration to file-based broadcasting was the popularisation of networked media asset management, allowing programme editors and playout facilities to share content via networked hard-disk drives. Almost equally important has been the

capacity, half a terabyte, ready to go straight into your snapshot camera or latest-generation broadcast production camera. Price, when the card is introduced, will be US\$799.99.

File-based media asset management has itself shrunk in size, cost and complexity through the increasing use of channel-in-a-box systems. This approach was pioneered by PlayBox Technology which celebrated at IBC2014 both its 15th anniversary plus the delivery of over 15,000 playout and branding channels.

The future of broadcasting is quite easy to predict, dictated primarily by consumer display manufacturers, with 4K UHD-capable screens displacing HD screens as the affordable standard for home viewing, sourcing initially from video upconverted within each set, just as many viewers today watch upconverted SD on their 1920 x 1080 displays

increasing use of solid state flash memory by camera crews who previously shot on tape. One of the biggest new products at IBC this year was also the smallest: a postage-stamp-sized SanDisk memory with 512 gigabyte

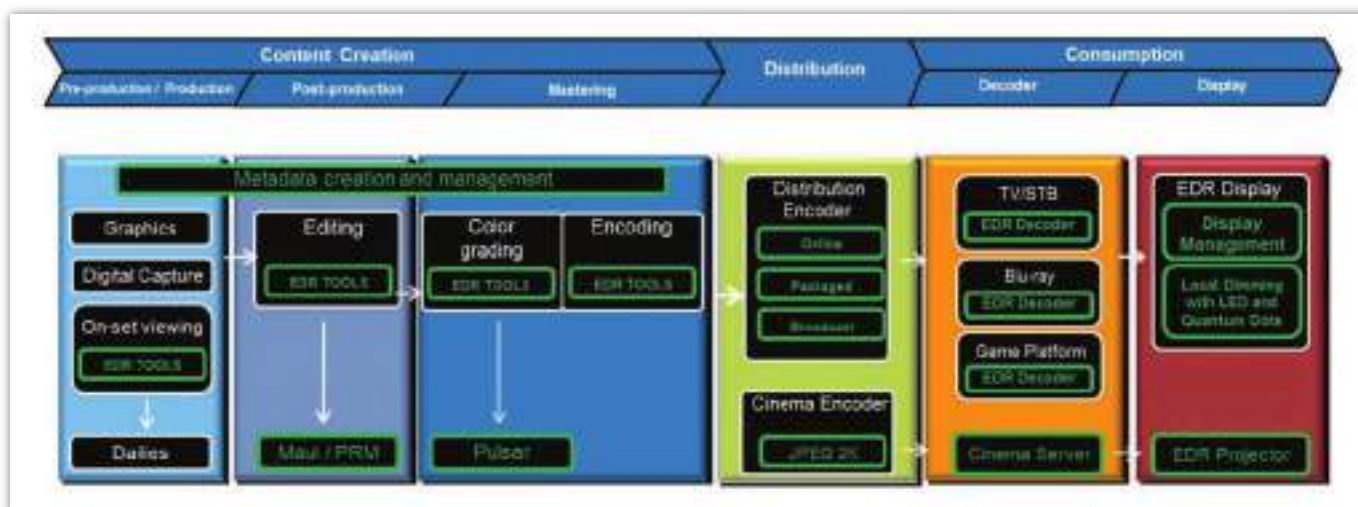
Samsung's prototype 105 inch 4K resolution 21:9 curved UHDTV video display was a real jaw-dropper. It should be obligatory viewing for anyone wondering what 4K has to offer in a domestic television viewing environment. 21:9 is of course the CinemaScope format which became popular in the film industry from 1953 onward. Prototype video screens using this format have been shown in recent years by a few display manufacturers and could well displace 16:9 in the long term.

Wider still was a 10,000 x 2,000 pixel resolution 360 degree panoramic video capture system shown by the Fraunhofer Institute for Telecommunications. This sourced from 10 compact high-definition cameras facing upwards into a circular configuration of flat mirrors.

For convenience, the live-stitched image was displayed on a single relatively small flat screen. It was promoted as a format from which editors could select 16:9 (or wider) video from a recording surround-vision production. Interest in 3D at broadcast trade shows has declined almost to zero. One conceptually original demonstration in IBC's Future Technology area was an attempt to show a direct-view holographic video image generated in a small dish. The result defied my efforts to



Samsung's prototype 105 inch 4K resolution 21:9 curved UHDTV video display



photograph it but a summary can be read at www.3dragons.jp. Equally unexpected, albeit daft, was GoPro's 'Fetch' camera harness for dogs. A snip or snap at 69 euros. Camera control can be performed remotely using an iPhone app. If only one could control the dog.

Anevia chose IBC2014 as the launch venue for a new service which will allow cloud storage and cloud streaming of OTT media content. It is based on the integration of Anevia's ViaMotion products with Amazon Web Services, allowing operators to offer cloud TV to their subscribers, including live, VOD, catchup and nPVR services.

Fast file turnaround is becoming increasingly important throughout the production and postproduction business; the BroadcastSafeFCPX plug-in allows a programme file to be processed on a modern high-specification Apple desktop computer faster than it takes to view rather than typically four times longer than real-time on a low-spec machine

IP Live Production

Kirk's award for the most significant IBC2014 conference paper would quite certainly go to Messrs Chen, Gardiner, Kojima and Stone of Sony for their presentation titled 'IP Live Production'. The main objective of this approach is to retain the production practices of SDI and implement commercial off-the-shelf IT infrastructure. The SDI router could be replaced by an IP switch allowing connected production equipment to communicate using IP rather than SDI. A network interface would be integrated into all new production equipment. For legacy SDI equipment, an SDI-to-IP conversion module would be required using the same network interface. A reduction in the physical infrastructure is the most obvious benefit, resulting from the higher bandwidth and duplex capability of IP physical cables (2 x 10 gigabits per second for 10GBE compared with 3 gigabits per second for 3G-SDI). Monitoring within the broadcast facility becomes more flexible. Video and audio sources can be monitored in the gallery as usual and on desktop computers or portable tablets. Proxies and thumbnails can be generated at source, which further simplifies monitoring and reduces the need for multi-view processors. The proposed IP live production system can support streaming of real-time and non-real-time metadata alongside video and audio signals, which is not possible with SDI-based infrastructure.

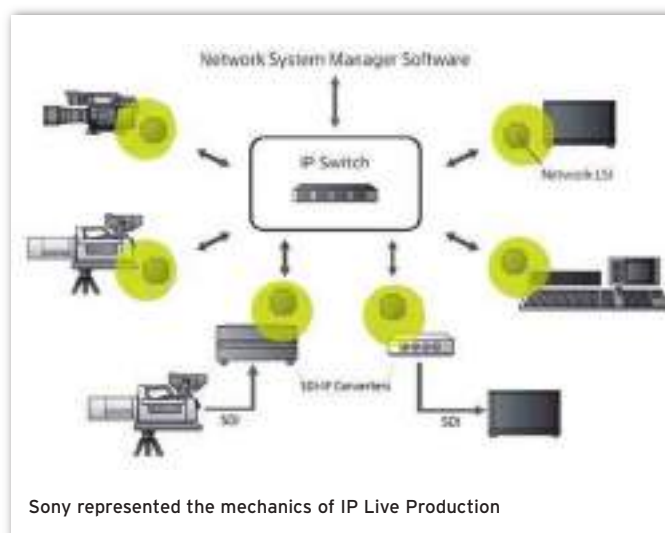
The Art of Better Pixels

In 'The Art of Better Pixels', D.G. Brooks of Dolby summarised experiments aimed at delivering extended video dynamic range rather than, as the television industry has tended to do, simply concentrating on increased display resolution:

"It is hard to exaggerate the impact that the cathode ray tube had, and still continues to have, on the design of television standards. First, the colour gamut was defined by the rare-earth phosphors used. Second, the brightness was limited to approximately 100 candela per square metre both to control large area flicker and to prevent the electron beam from spreading and reducing spatial resolution. UltraHD as specified in ITU-R BT.2020 was the first standard partly to break free from these constraints but it retained the CRT reference brightness limit and corresponding electro-optical transfer function based on the gamma characteristic of the CRT.

"Tests were performed to determine the baseband bit-depth required to ensure that no contouring artifacts would be visible. The traditional TV gamma 2.4 non-linear curve was found inefficient for high dynamic range images. Both 10 and 12-bit PQ extended dynamic range (EDR) signals can be encoded by the dual-layer codec proposed. The standard dynamic range base layer can be coded as either 8 or 10-bit depending on the backwards compatibility requirements.

"Existing TV receivers ignore the enhancement layer. EDR receivers would combine base and enhancement layers to reproduce EDR images at either 10 or 12-bit PQ depending on the source. The TV receiver would also incorporate a new display management block which maps the content to the evolving characteristics of each display by using metadata present in the EDR stream."



Sony represented the mechanics of IP Live Production



The Fraunhofer Institute for Telecommunications used 10 compact high-definition cameras facing upwards into a circular configuration of flat mirrors

Beyond Metadata

T. Tommasi (ESAT-PSI, Belgium) and colleagues addressed the subject 'Beyond Metadata: Searching your archive based on its audio-visual content'. The proposed system (AXES) allows users to retrieve content instantaneously using metadata, spoken words, or a vocabulary of reliably detected visual concepts comprising places, objects and events. Users can also interrogate using models are learned on-the-fly, using training images obtained from an internet search engine. The system supports different types of model for object categories (e.g. 'bus' or 'house'), specific objects (landmarks or logos), person categories (e.g.

'people with moustaches'), or specific persons. The AXES system was successfully implemented at the Netherlands Institute for Sound and Vision in Hilversum) and at the BBC in London.

LTE Broadcasting

Jörg Huschke (Ericsson, Germany) described the company's LTE Broadcast system which is based on the Long Term Evolution standard. Ericsson expects video traffic in mobile networks to grow by around 55% annually until 2019.

"In a dense cellular network, it is not spectrally efficient to continuously broadcast linear TV programmes with low viewing numbers. Those programmes are better provided on-demand using fixed broadband or LTE unicast only in cells where users request them. The threshold in the considered scenario is a viewing share of about 1 to 4%. There are only 7 to 12 programmes with a yearly average viewing share above this threshold.

"We propose to employ a dedicated signal for each of both devices even for the same TV stream. A signal adapted to the high signal-to-interference-plus-noise ratio (SINR) of roof-top antennas should be used for technologies required to support legacy fixed receivers, whereas for the signal adapted to the low SINR typical for mobile receivers it is essential to use the most efficient technologies soon after ratification of the standards."

DVB-T2 Lite

The IBC's own award for best paper at this year's conference went to G. Alberico and colleagues from Italian broadcast, RAI, for their contribution: 'DVB-T2 Lite - exploiting HDTV networks for services to mobile receivers'.

Summary

The future of broadcasting is quite easy to predict, dictated primarily by consumer display manufacturers. 4K UHD-capable screens will soon displace HD screens as the affordable standard for home viewing, sourcing initially from video upconverted within each set just as many viewers today watch upconverted SD on their 1920 x 1080 displays. 4K camera prices are now following the pattern experienced in HD camera pricing a decade ago.

The market both in Europe and worldwide has already reached the point where 4K is the logical choice for every production company keen to future-proof its material. ©

IBC returns to Amsterdam 11-15 September 2015.

David Kirk



PlayBox playout and branding solutions at AfricaCast

PLAYBOX TECHNOLOGY DEMONSTRATED additions to its range of broadcast playout and branding solutions at the 2014 AfriCast exhibition in the Nigerian capital, Abuja, 21-23 October - exhibiting together with C2S Nigeria.

PlayBox Technology UK sales director Ben Gunkel said, "AfriCast is by far the most important show for broadcasters in sub-Saharan Africa. It gives us the opportunity to meet with many of our existing customers in the region and has certainly proved effective in generating new business...African broadcasters have long appreciated the IT-based approach which PlayBox Technology pioneered and continues to develop. Working in partnership with C2S Nigeria, we are able to deliver a modern, interconnected and highly automated platform plus a very high standard of customer support."

Mr Gunkel elaborated, "We will be demonstrating a complete working system centred on our AirBox automated playout system, TitleBox graphics manager and CaptureBox PRO multichannel ingest server. AirBox provides automated content playout for satellite channels, cable head-ends, over-the-air broadcasters and corporate TV users. It can be programmed locally or remotely to operate



A PlayBox Technology system in use at Nigerian-based broadcast channel EbonyLife TV, located at the ultra-modern movie production centre in Calabar, Cross River State

unattended 24/7. The enhanced AirBox incorporates a GPU-enhanced graphics mixer which allows video rotation effects and depth-order laying effects to be performed in real time. Logo animation facilities are also added with a multiplicity of applications in titling, captioning or channel branding. The audio capabilities of AirBox are also expanded with support now provided for AJA Corvid video cards, Dolby E and Dolby Digital Plus.

"CaptureBox PRO allows multiple channels of high-definition or standard-definition content to be captured from SDI digital feeds, analogue sources and MPEG transport streams. Four video sources can be monitored

on a single screen and controlled via a new streamlined user interface. The CaptureBox PRO feature set also includes capture-list import from third-party traffic systems, a GPU-accelerated encoding engine, plus expanded metadata handling and creation during the ingest process. Loudness metering with true-peak measurement allows audio level monitoring and adjustment at any time."

Mr Gunkel explained that the introduction of ScheduleBox, available as software for an existing PlayBox Technology system or as an independent server, allows template-based management of single, or multiple television channels. He said, "Operators can select daily, weekly or monthly views and perform programme block management per television channel. Gaps or overlaps are easily identified in the programme blocks. Block status such as draft, new and ready-for-publishing can be monitored and controlled. Enhancements include nested blocks for easy ad placement and management; validation rules for checking against pre-defined media usage rules; customised playlist item properties; customised schedule view; automated gap-filling based on block category and improved schedule/template view."





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des CI de commutation d'antenne RF pour smartphones compatibles avec la norme LTE Advanced

TOSHIBA CORPORATION A annoncé le développement de nouveaux CI de commutation d'antenne RF SP12T pour les smartphones compatibles avec la norme LTE Advanced pour obtenir la plus faible perte d'insertion [2,4] et la plus petite distorsion RF de l'industrie. L'expédition d'échantillons commence dès aujourd'hui.

Avec le développement des communications mobiles, le nombre de bandes de fréquences RF et de débits de données augmente considérablement.

Les caractéristiques des CI de commutation d'antenne, utilisés dans les circuits RF des appareils mobiles, évoluent vers les fonctions multiports et l'amélioration des performances RF, notamment de la perte d'insertion et de la linéarité. De plus, afin de répondre à l'augmentation spectaculaire des appareils de communication mobiles à haut débit sur les marchés émergents,

l'amélioration de ces performances RF doit être obtenue en utilisant une méthode économique.

En réponse à ces exigences, Toshiba a développé le « TaRF6 », un processus TarfSOIMC nouvelle génération (le RF SOI [silicon on insulator] avancé de Toshiba) en utilisant une technologie de silicium sur isolant (SOI). Le TarfSOIMC réalise l'intégration des circuits analogiques, numériques et RF sur une même puce. Par rapport aux autres solutions traditionnelles, comme les GaA, il crée une solution économique qui prend en charge des performances RF et des fonctions de commutation extrêmement complexes.

Avec le nouveau processus « TaRF6 », des transistors MOSFET personnalisés pour les applications de commutation RF ont été développés et utilisés dans le nouveau CI de commutation d'antenne RF SP12T, entraînant ainsi une performance de 0,42 dB dans la



Toshiba Corporation a annoncé le développement de nouveaux CI de commutation d'antenne RF SP12T

perte de l'insertion (f=2,7 GHz) et de -90 dBm dans la distorsion de deuxième harmonique. Par rapport aux produits utilisant le processus «

TaRF5 » précédent, on observe une amélioration de 0,26 dB dans la perte d'insertion (f=2,7 GHz) et de 18 dB dans la distorsion de deuxième harmonique. La perte d'insertion plus faible contribue à une consommation d'énergie faible des smartphones, tandis que la distorsion plus faible contribue au développement de smartphones avec agrégation d'opérateurs qui exigent une faible distorsion.

Toshiba élargira sa gamme de produits utilisant le processus « TaRF6 » à faible perte d'insertion et faible distorsion d'ici la fin de l'année pour répondre aux exigences des fonctions complexes et multiports exigées par la norme LTE qui est actuellement implémentée dans le monde, et par la norme LTE Advanced qui doit suivre. Toshiba envisage par ailleurs de proposer des services de fonderie SOI utilisant la technologie TarfSOIMC.

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