

Communications Africa Afrique

www.communicationsafrica.com

Satellite

Investment options for rural connectivity

TETRA

Smarter radio technology for public services

Informatique

Analyse des données d'intérêt maritime

Data centres at the core

Investing in last-mile infrastructure



Burundi event marks TV5 Monde promotion of francophone transmissions

FEATURES: ● Communications ● Radio ● Broadcast

REGULAR REPORTS: ● Agenda ● Solutions



The Intelsat Globalized Network

Profitably connect the unconnected.

The Intelsat Globalized Network allows you to quickly and cost-effectively expand into new markets and upgrade existing networks to 4G service. Now you can deliver reliable and high-performance broadband connectivity to anyone, anywhere in the world by incorporating high-throughput satellite technology into your terrestrial networks.

www.intelsat.com/data-telecoms3



INTELSAT

Envision. Connect. Transform.



CONTENTS

Bulletin	4
Events	8
Agenda	10
Solutions	34

A note from the Editor

IN THIS ISSUE of Communications Africa/Afrique, there is analysis of the relationships between satellite and social media. There are, also, insights from WIOCC's CEO, Chris Wood, on local access for enterprise connectivity. This issue also covers the data centre industry, addressing the growth in cloud-based services and effective cabling infrastructure. The increased adoption of TETRA is assessed, too. Broadcast stakeholders can read our review of NAB. All ICT operators can gain from learning about key players in standby power generation, F G Wilson and Himoina. Lastly, this issue offers analysis of financial technology.

Main Cover Image: SES
Inset: TV5 Monde

Une note du rédacteur

DANS CE NUMÉRO de Communications Africa/Afrique, il y a un article sur la connaissance de la situation maritime, et de différentes agences maritimes nationales. Aussi, il y a un rapport du lancement d'un projet national qui se traduira la souveraineté de l'Etat tunisien dans le domaine de l'audiovisuel, avec un grand nombre de téléspectateurs et une variété des contenus proposés par les chaînes tunisiennes.

FEATURES

Satellite	18
Social media and the satellite revolution, and which countries moved first for better connections	
Submarine	19
WIOCC CEO Chris Wood offers insights into the commercial considerations underpinning African access initiatives	
Data	20
The growth in cloud-based services and the consequences for traffic management; and what to do when selecting cabling infrastructure	
TETRA	24
Analysis of the increased adoption of secure radiocommunication technology in the Middle East and Africa	
Broadcast	26
The latest broadcast machines, devices, software and suppliers at NAB	
Energy	31
F G Wilson celebrates five decades of standby power production and distribution; and how Himoina 's range of gensets for the telecoms industry have been making their mark in Africa	
Commerce	33
What ICT operators can do, and the technologies available, to prevent and manage fraud effectively and protect their customer base	

ARTICLES

Informatique	23
Des représentants de Maurice et des pays riverains de l'Océan indien ont pu développer leurs compétences en matière de visualisation et d'analyse des données d'intérêt maritimes et partager leurs expériences	
Transmission	30
Le lancement d'un projet national qui se traduira la souveraineté de l'Etat tunisien dans le domaine de l'audiovisuel	

Managing Editor: Andrew Croft - andrew.croft@alaincharles.com

Editorial and Design team: Bob Adams, Prashant AP, Hiriya Bairu, Sejal Bhat, Miriam Brtkova, Ranganath GS, Georgia Lewis, Rhonita Patnaik, Rahul Puthenveedu, Zsa Tebbit, Nicky Valsamakris, Vani Venugopal, Louise Waters and Ben Watts

Production: Kavya J, Nathanielle Kumar, Nelly Mendes, Donatella Moranelli and Sophia Pinto Email: production@alaincharles.com

Publisher: Nick Fordham

Publishing Director: Pallavi Pandey

Magazine Sales Manager: Vinay T Niar - Tel: (91) 80 68888847, Fax: (91) 80 67710791, Email: vinay.nair@alaincharles.com

Country	Representative	Telephone	Fax	Email
India	Tanmay Mishra	(91) 80 65700911	(91) 80 67710791	tanmay.mishra@alaincharles.com
Nigeria	Bola Olowo	(234) 8034349299		bola.olowo@alaincharles.com
UAE	Graham Brown	(971) 4 448 9260	(971) 4 448 9261	graham.brown@alaincharles.com
USA	Michael Tomashefsky	(1) 203 226 2882	(1) 203 226 7447	michael.tomashefsky@alaincharles.com

Communications Africa/Afrique



Audit Bureau of Circulations - Business Magazines

Head Office:
Alain Charles Publishing Ltd
University House
11-13 Lower Grosvenor Place
London SW1W 0EX, United Kingdom
Telephone: +44 20 7834 7676
Fax: +44 20 7973 0076

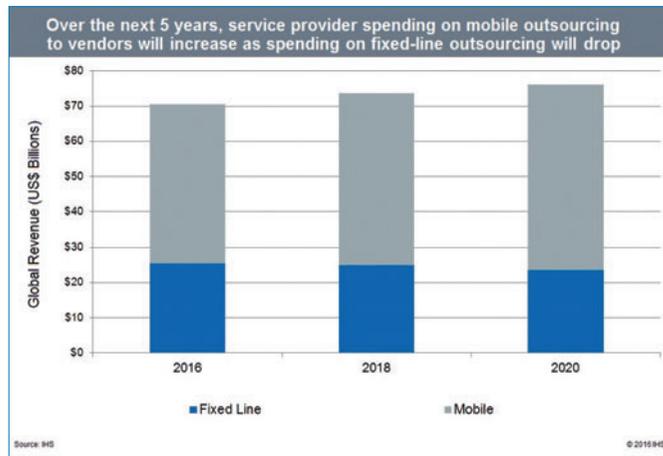
Middle East Regional Office:
Alain Charles Middle East FZ-LLC
Office 215, Loft 2A
PO Box 502207
Dubai Media City, UAE
Telephone: +971 4 448 9260
Fax: +971 4 448 9261

Subscriptions: circulation@alaincharles.com
Chairman: Derek Fordham
Printed by: Buxton Press **Printed in:** May 2016
Communications Africa/Afrique is a bi-monthly magazine
ISSN: 0962 3841

Alain Charles Publishing
Serving the world of business

Telecom outsourcing services continue to grow on a global scale

ACCORDING TO ANALYSIS by **IHS Technology**, the global telecom outsourcing services market is projected to reach US\$76bn by 2020, growing at a compound annual growth rate (CAGR) of two per cent, driven by mobile network outsourcing deals as more and more mobile operators try to keep their operational expenditure (opex) under control by removing non-core task and focusing on customers' experience and information and communications technology (ICT) business, as well as network transformation that requires a merger of IT and telecom network teams; in 2015 service providers' unabated need to outsource non-core tasks led global outsourcing services revenue to increase three per cent in 2015 over the prior year, reaching US\$69bn.



Airtel divests DRC telecoms tower assets to Helios Towers Africa

TELECOMMUNICATIONS SERVICES PROVIDER **Bharti Airtel** and towers company **Helios Towers Africa (HTA)** have reached agreement on the divestment of approximately 950 telecoms towers in the Democratic Republic of Congo (DRC) from Airtel to HTA, including towers currently under construction in the DRC; Bharti Airtel executive chairman Christian De Faria said, "The agreement is in line with our stated philosophy of divesting passive infrastructure and promoting sharing of towers to enhance operational efficiencies that will further the growth of telecom services."

Eaton Towers improves business with Adaptive Insights software

INDEPENDENT TELECOM TOWER company **Eaton Towers** has implemented software developed by cloud corporate performance management (CPM) specialist **Adaptive Insights** to consolidate financials across seven countries, transforming its financial reporting and driving business expansion; the software deployment enabled Eaton Towers to accelerate its monthly reporting by 100 per cent and facilitate its raise of US\$350mn in equity funding in 2015, which was critical to the company's expansion from three to six markets in less than a year.

ITU discusses digital deliverables for future financial services

INTERNATIONAL TELECOMMUNICATION UNION (ITU) Focus Group on Digital Financial Services (FG DFS) met recently in Washington, DC, in the USA, to discuss key elements of a global roadmap it is developing to help telecom and financial services regulators; Sacha Polverini, chairman of the FG DFS and senior programme officer of the **Bill & Melinda Gates Foundation** Financial Services for the Poor (FSP) programme, said, "It is the first time ITU has partnered with international organisations like the **World Bank**, **CGAP (Consultative Group to Assist**

the Poor), **GSMA (Groupe Speciale Mobile Association)**, **AFI (Alliance for Financial Inclusion)** and others to initiate a forum like this."

French fintech company Lemon Way launches new subsidiary in West Africa

PRESENT IN MALI since October 2014, working in partnership with the **International Bank of Mali (IBM)**, offering mobile payment, deposit and withdraw cash and money transfer services, French financial technology firm **Lemon Way** has launched **Lemon Way Africa**, a subsidiary based in Dakar, Senegal; the CEO of the new subsidiary, Stéphane Draï, who is a specialist in African payments infrastructure, said, "Lemon Way Africa aims to distribute its products to all populations in order to promote banking inclusion as sought in the continent."

NEC supplies iPASOLINK E-band microwave radios to Orange Egypt

TECHNOLOGY COMPANY **NEC Corporation** has been selected by **Orange Egypt** to provide **iPASOLINK EX**, its outdoor, integrated, ultracompact microwave radio system supporting 7080 GHz band communications (E-band), initially live with a group of 60 links; "By using NEC's **iPASOLINK EX**, we will be able to provide a different experience for our users over the LTE network, with faster access and higher reliability," said Hisham Siblini, chief technology officer, Orange Egypt.

NCC consults CTO on satellite communications regulations

SENIOR OFFICERS FROM the **Nigerian Communications Commission (NCC)** attended a workshop on Satellite Communications Regulations recently at the headquarters of the **Commonwealth Telecommunications Organisation (CTO)** in London, in the UK; Shola Taylor, Secretary-General of the CTO, who moderated the workshop, commented, "We are pleased to have the opportunity to assist our Nigerian colleagues in their role in regulating satellite communications in Nigeria and look forward to working with them further on this in the future."

MTN bundles World Panel's SunStream to maintain the mobile power lifeline

IN SOUTH AFRICA, **MTN** has introduced a promotional package featuring the **World Panel SunStream**, which allows users to stream electricity from the sun directly into their mobile devices; according to Hennie Botha, World Panel's managing director for South Africa, SunStream is designed for "someone who views their mobile device as a lifeline, but lacks the power to keep it charged".

MTN South Africa offers a promotional package featuring World Panel's SunStream



SES invests in commitment to controlling interest in O3b Networks

XSATELLITE OPERATOR **SES** has increased its interest in **O3b Networks** to 50.5 per cent, so taking a controlling share in the company, and enabling SES to augment differentiated capabilities in enterprise, mobility and governmental sectors by adding O3b's suite of products and customers; Karim Michel Sabbagh, SES president and CEO, commented, "The move to take control of O3b is a game-changing acquisition and a major step in the execution of SES's differentiated strategy, and complements SES's growth strategy."

50

YEARS OF
POWER
GENERATION



www.FGWilson.com

When you buy an FG Wilson generator set, you are buying into 50 years of engineering experience.

Since 1990, we have installed over 600,000 generator sets from 6.8 – 2,500 kVA and today our products are hard at work in over 150 countries in hospitals, banks, airports, data centres, factories, construction sites, hotels, offices and telecommunication networks.

And all are supported by a network of 370 Dealers and a Parts Distribution Centre which delivers 3 million parts each year. Whatever your power needs, FG Wilson has the answer.

For more details, please visit:

www.FGWilson.com/caf_3



Un forum africain sur le peering et l'interconnexion, à Dar es Salaam

LE SEPTIÈME **FORUM africain sur le peering et l'interconnexion (AFPIF)** se déroulera sur une période de 3 jours du 30 Août au 1er Septembre, 2016 à Dar es Salaam, Tanzanie; étant un forum multi-acteurs, AFPIF cherchera à favoriser les possibilités d'interconnexion transfrontalières en s'assurant que les principaux acteurs – les fournisseurs d'infrastructure, les prestataires de services, les IXP, les régulateurs, les institutions financières internationales et les décideurs sont présents à cet événement.

Autour de la future feuille de route pour les services financiers numériques

LE GROUPE SPÉCIALISÉ sur les services financiers numériques (FG DFS) de l'**Union internationale des télécommunications (UIT)** s'est réuni à Washington DC pour discuter des éléments clés d'une feuille de route qu'il est en train d'élaborer à l'échelle mondiale pour aider les régulateurs et les opérateurs de télécommunication et de services financiers à utiliser les technologies numériques mobiles afin de remédier aux problèmes de l'exclusion financière; Sacha Polverini, Président du Groupe spécialisé et principal responsable du programme "Financial Services for the Poor" (Services financiers pour les pauvres) de la **Fondation Bill & Melinda Gates**, a déclaré: "Pour la première fois, l'UIT s'associe à des organisations internationales comme la **Banque mondiale**, le **CGAP (Consultative Group to Assist the Poor)**, la **GSMA (Groupe Spécial Mobile Association)**, l'**AFI (Alliance for Financial Inclusion)** et d'autres entités, pour créer une instance de ce type."



Sacha Polverini, Président du Groupe spécialisé et principal responsable du programme "Financial Services for the Poor" (Services financiers pour les pauvres) de la Fondation Bill & Melinda Gates (Photo: ITU/P Woods)

Sofrecom promeut l'égalité des chances, reçoit le Label Diversité AFNOR

FILIALE D'**ORANGE**, **SOFRECOM** reçoit le Label Diversité **AFNOR** lors d'une cérémonie organisée au Ministère du Travail, de l'Emploi, de la Formation professionnelle et du Dialogue social en présence de Jacques Moulin, Directeur Général de Sofrecom, Abdessamad Bouzoubaa, Directeur RSE de Sofrecom, Christine Albanel, Directrice Exécutive RSE, Diversité, Partenariats et Solidarité d'**Orange** et Laurent Depond, Directeur de la Diversité d'Orange; comme le souligne Jacques Moulin, Directeur Général de Sofrecom, « Par ce label, nous démontrons que l'ensemble des femmes et des hommes du Groupe Sofrecom sont porteurs des valeurs de respect des différences culturelles, en totale cohérence avec le contexte international de notre activité ».

Une solution de e-shopping innovante en Afrique, de CFAO

AVEC **AFRICASHOP**, QUI entend proposer à la clientèle africaine un accès direct et simplifié aux plus grandes marques internationales, **CFAO** offre e-commerce innovante en Afrique, à la fois lorsque le e-commerce en Afrique représentait 2% des opérations de commerce électronique dans le monde, soit 8 milliards de dollars; Olivier Nguyen-Khac, Directeur général d'Africashop a dit : « Les e-consommateurs en Afrique avaient jusqu'à présent accès à une offre limitée due à la complexité pour les sites français et européens de livrer leurs produits jusqu'au domicile du client en Afrique. »

IBM met à disposition l'informatique quantique sur le Cloud IBM pour accélérer l'innovation

UNE INITIATIVE MAJEURE au sein de l'**IBM Research Frontiers Institute**, la plate-forme d'informatique quantique d'IBM fonctionne de façon fondamentalement différente des ordinateurs actuels, effectue certains calculs beaucoup plus rapidement que ce qui est possible avec des ordinateurs classiques; maintenant, IBM Research donne pour la première fois au public un accès à l'informatique quantique, avec la possibilité d'accéder et de conduire des expériences sur le processeur quantique d'IBM.

Orange présente des acteurs de la transformation digitale à Vivatechnology

VIVATECHNOLOGY PARIS 2016 réunit 5 000 start-up pour créer une multitude d'opportunités de collaboration entre start-up, entreprises, dirigeants, investisseurs, universitaires et leaders d'opinion du monde entier; **Orange** soutient les start-up en leur fournissant un accompagnement (via le réseau d'accélérateurs Orange Fab ou d'incubateurs que nous soutenons en Afrique), une aide matérielle (via la mise à disposition d'API auprès de la communauté des développeurs), et financière (via Orange Digital Investment).

OSN s'allie à Eutelsat pour l'HD et à l'Ultra HD au Moyen-Orient et en Afrique du Nord

L'**OPÉRATEUR DE TÉLÉVISION** payante au Moyen-Orient et en Afrique du Nord, **OSN** accroît ses capacités sur le puissant satellite 8 West B exploité par **Eutelsat Communications**; Mark Billinge, Directeur technique d'OSN, a déclaré : « L'arrivée de ces nouvelles capacités nous permettra d'offrir à nos téléspectateurs une qualité d'image exceptionnelle. »



8 West B exploité par Eutelsat

Orange conclut l'acquisition de l'opérateur mobile Tigo en République démocratique du Congo

MOINS DE TROIS mois après avoir signé un accord avec le groupe **Millicom**, pour l'acquisition de 100 % de l'opérateur mobile Tigo en République démocratique du Congo (RDC); le marché mobile en RDC est actuellement le plus grand marché mobile d'Afrique Centrale et d'Afrique de l'Ouest, après le Nigeria, avec plus de 80 millions d'habitants et un taux de pénétration mobile relativement faible de 50 % de la population.

Un colloque pour se pencher sur une utilisation des services par satellite exempte de brouillage

LES PARTICIPANTS AU Colloque international de l'UIT sur les télécommunications par satellite analyseront les mesures permettant d'éviter les brouillages des systèmes de télécommunications par satellite; des experts du monde entier examineront les technologies permettant de détecter, d'identifier, de localiser et d'atténuer les brouillages préjudiciables.

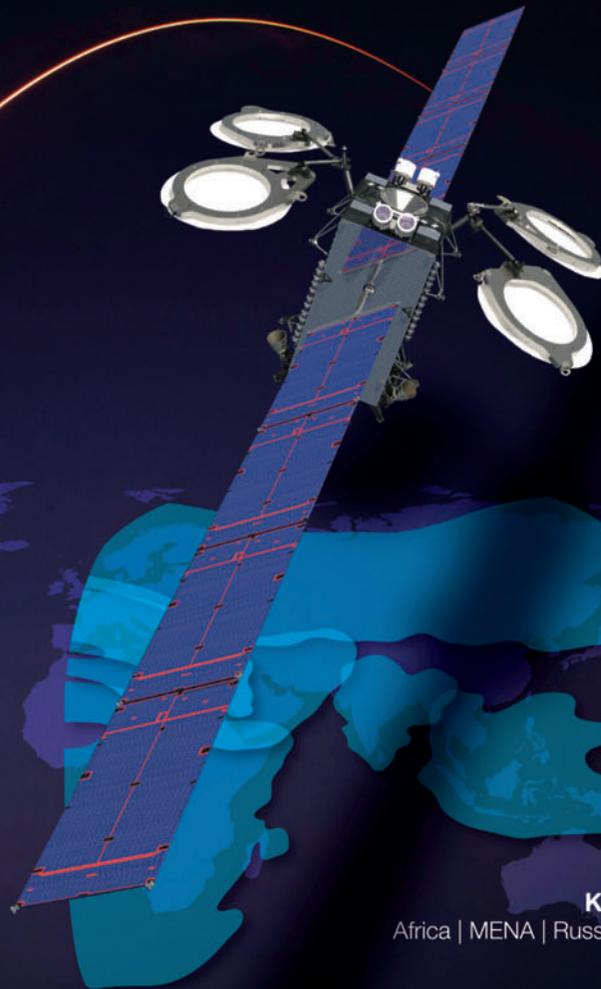


ABS-2A^{75°E}

LAUNCHING SOON

Expanded Capacity at the Prime Location of 75°E, serving Sub-Saharan Africa, South East Asia, South Asia, Russia and MENA.

High performance Ku-Band beams to support DTH services, enterprise networks, VSAT, maritime and mobility solutions.
Contact ABS for your satellite solutions at info@absatellite.com



KU BAND BEAMS
Africa | MENA | Russia | S Asia | SE Asia

@ ABS-2A Launch, 1 March 2015



www.absatellite.com

Events/Événements 2016

JUNE/JUIN

31 May-2 Jun	Critical Communications World	Amsterdam, The Netherlands	criticalcommunicationsworld.com
31 May-2 Jun	DISCOP Africa	Abidjan, Cote d'Ivoire	discopafrika.com
31 May-2 Jun	SITIC Africa	Tunis, Tunisia	www.siticafrica.com
4-10	InfoComm	Las Vegas, USA	www.infocommshow.org
8-9	West Africa Com	Dakar, Senegal	www.comworldseries.com
13-15	Global Media Forum	Bonn, Germany	www.dw.com
14	MEDIA-TECH	Hamburg, Germany	www.media-tech.net
14-16	Commonwealth ICT Ministers Forum	London, UK	www.cto.int
20-21	Digital Marketing World Forum	London, UK	www.digitalmarketing-conference.com
21-22	Cloud World Forum	London, UK	cloudanddevopsworld.com
22-24	Convergence World Africa	Nairobi, Kenya	www.convergenceafricaworld.com

JULY/JUILLET

6-7	MVNOs Industry Summit Africa	Johannesburg, South Africa	africa.mvnoindustrysummit.com
-----	-------------------------------------	----------------------------	-------------------------------

AUGUST/AOÛT

30 Aug-1 Sep	African Peering and Interconnection Forum (AFPIF)	Dar es Salaam, Tanzania	www.internetsociety.org
2-4	Africa Telecoms Fraud, Revenue Assurance & Risk Management Forum	Dar es Salaam, Tanzania	www.fbrents.com
16-17	Telecoms Big Data Analytics and Customer Experience Summit	Dubai, UAE	www.fbrents.com

SEPTEMBER/SEPTEMBRE

8-12	IBC	Amsterdam, The Netherlands	www.ibc.org
21-22	Nigeria Com	Lagos, Nigeria	www.comworldseries.com

ITU reports on trends in IoT, interoperability, and broadband roll-out

THE LATEST EDITION of ITU's annual global ICT regulatory report, Trends in Telecommunication Reform 2016, charts and analyses the challenges and opportunities facing today's ICT regulators as services proliferate, platforms converge and network operators ready their infrastructure for the next round of data-intensive technologies, from 5G mobile to the Internet of Things (IoT).

The annual Trends in Telecommunication Reform publications are a key part of the dialogue with the world's information and communications technology (ICT) policy-makers and regulators in an increasingly converged digital environment. Trends in Telecommunication Reform 2016 brings together insights from a broad range of leading global experts to help regulators, ICT analysts and tech journalists gain a deeper understanding of the issues facing an increasingly broad array of ICT players - and consumers.

Digital challenges and opportunities

New ICT goods and services are bringing with them enormous social and economic disruption. But while there are many benefits to be reaped, the report highlights regulatory challenges that must be addressed to preserve the 'level playing field'

considered essential to competition and innovation. With the theme of 'exploring regulatory incentives to achieve digital opportunities', the report emphasises the growing importance of flexible, light-touch, technology-neutral regulatory principles which stimulate market growth while protecting the rights of consumers and encouraging new entrants.

"Information and communication technologies are now all-pervasive and will be central to helping the world meet all 17 Sustainable Development Goals. The role of ICT regulators in creating an enabling environment for ICT growth and development has never been more critical," said Houlin Zhao, ITU Secretary-General. "ITU's annual Trends in Telecommunication Reform report supports regulators around the world to put the right policies in place for their national markets."

"To realise the full potential of the digital economy, policy-makers and



regulators have a key role to play in building policy and regulatory environments in which new technologies can flourish," said Brahim Sanou, Director of ITU's Telecommunication Development Bureau. "This 16th annual edition of Trends in Telecommunication Reform focuses on regulatory incentives to achieve digital opportunities which I believe upholds the ultimate goal of regulators: serving consumers."



Brahima Sanou, director of ITU's Telecommunication Development Bureau (Photo: ITU/P Woods)

The logo for Measat, featuring the word "measat" in a bold, blue, lowercase sans-serif font. The logo is positioned in the upper left quadrant of the page, set against a background of a stylized world map with a blue and orange curved graphic element in the top left corner.

measat



**AFRICASAT-1a:
Africa's Premium
Broadcast and
Communications
Satellite**

Strategically located at 46.0°E, the AFRICASAT-1a satellite provides high powered satellite capacity across the African continent. With excellent look angles, customized solutions and connectivity to Middle East, Europe and South East Asia, AFRICASAT-1a has become Africa's preferred satellite communications platform.

Tel: +60 3 8213 2188 Email: sales@measat.com www.measat.com

JRM and NEC work on PBX for Egypt

THE MINISTRY OF Interior of Egypt has commissioned JRM for Communications, NEC's business partner in Egypt, to provide a complete new communications infrastructure in replacement of its existing PBX network. This large-scale project involves the delivery and installation of 12 UNIVERGE SV9500 communication servers and 20 SV9100 communication servers. In addition, 149 Remote UG50's are part of this large network. JRM was able to land this project due to its dedicated service and support with the Ministry of Interior of Egypt for over 15 years and the company's dedicated commitment to NEC's wide range of IT & Communication solutions.

"We are extremely pleased to win this big project that extends the close relationship with our appreciated customer the Ministry of Interior," said Reda Kamal, CEO at JRM for Communications.

France-IX activates marketplace for IP-centric services

INTERNATIONAL INTERNET EXCHANGE **France-IX** has activated its Marketplace, where peering members can buy any IP-centric service over its IXP platform. This buying model enables new services to be provisioned quickly and easily over private circuits setup over the platform, and also delivers significant cost efficiencies to buyer-members. France-IX is the first IXP to offer anti DDoS solution through its Marketplace along with other services including IP transit.

"The role of IXPs is changing, especially for those which are international exchange points like France-IX," said Franck Simon, managing director at France-IX. "IXPs used to provide purely a technical platform for carriers, ISPs and CDNs to peer, meaning interconnecting their networks and exchanging their own traffic. But now, with such a large and diversified membership including a growing segment of enterprises, we saw the opportunity to extend from simple peering to facilitating a marketplace where our members can buy the services they need from our partners. By including services such as anti-DDoS, we are going beyond other IXPs' offerings and we are proud to be an innovator in the evolution of the IXP."



France-IX serves the Middle East and Africa from its base in Marseille

France-IX members will benefit from cost-efficiencies when they buy services through the marketplace. Cost optimisation is created through seamless provision of the service they buy and how simple it is; members already have a port in place and there is no need for them to order a new cross-connect, so all they have to do is manage their existing port. When members use their ports for peering only, there is usually some unused capacity on them that could be partly filled by subscribing to additional services and so optimising the cost of the peering port. Further cost benefits are gained from multiple sellers of the same service offering competitive pricing.

The first France-IX Marketplace seller is **Orange International Carriers**, one of the world's leading wholesale providers, which is offering its comprehensive portfolio of innovative and flexible solution to France-IX' operators, international carriers and OTT peering members.

"Network operators who peer at the France-IX can now benefit from all these Orange services at the best wholesale prices along with quick and seamless service delivery by France-IX," said Pierre-Louis de Guillebon, managing director at Orange International Carriers.

Strategic business with African broadcasters for Egatel

EGATEL, A SPANISH company specialised in research, development and manufacture of RF systems designed to broadcast analogue and digital TV signals, has developed African business as a strategic priority, working in several countries which are implementing digital TV (DVB-T/T2) networks.

After an initial project in Morocco with **SNRT (Société Nationale de Radiodiffusion et de Télévision)**, Egatel is now working in Algeria for ion contracts awarded for the supply and installation of solutions including 600W, 300W and 50W digital transmitters and auxiliary equipment.

In Tanzania and Kenya, Egatel has supplied its high-efficiency digital transmitters as part of important turnkey projects - including antenna systems, filters or combiners, electrical protections, etc.

Egatel is currently working with ongoing installations in Tanzania, and is on working on fresh projects in Kenya. The company is deploying the TV network in Tanzania for Sahara Media Group, a private national channel and operator. It is also rolling out a TV network for **APD** in Kenya, a Spanish company acting as main contractor of **KBC (Kenyan Broadcasting Corporation)**, in a large project involving 10 new sites.

Egatel at NAB

In terms of its product portfolio, Egatel has recently improved energy efficiency throughout its RF power range, with an innovative design with the latest signal processing technology. The company



Egatel is supplying and installing equipment in Algeria for TDA

demonstrated its innovations at the 2016 NAB Show in April in Las Vegas, USA, presenting in particular its new Low Power TV Transmitters and Gapfillers series. The TUWH1000 and RUWH1000 families have a compact design reaching output powers up to 115 Wrms in a single rack unit and facilitating operators installation, operation and maintenance tasks. With this launch, the company extends the High Energy Efficiency concept over the whole RF power range, by applying Wideband Doherty Technology to

TV Transmitters and Gapfillers that will be used in the latter stages of TV network coverage.

"They offer an unbeatable cost - performance (CAPEX/OPEX) ratio. No other broadcast manufacturer has assumed this commitment in favour of energy efficiency applied to energy and space savings," said José Mariño, director of sales and marketing at Egatel. "TV channels need easy ways of reducing expensive maintenance costs and seek reliable and high-quality systems."

Eaton sells to ATC

INDEPENDENT AFRICAN TOWER company Eaton Towers Group has signed a definitive agreement to sell its South African towers to ATC South Africa for an undisclosed sum.

Terry Rhodes, CEO of Eaton Towers said, "The successful execution of our Build-to-Suit strategy over the last few years has resulted in a unique portfolio of some 300 towers serving some 600 tenants across South Africa. We have built a focused and profitable business and are very pleased that ATC South Africa, as the leading independent tower operator in South Africa, has agreed that our high quality towers make a natural 'win-win' fit with their company.

"The sale, which represents about five per cent of Eaton Towers' total business, will allow us to invest further in the countries where Eaton Towers are market leaders and expand into new markets in Africa."

The South African market of some 30,000 towers is still dominated by the telecoms and broadcast organisations, who own over 90% of the towers.

EMTEL Mauritius enhance its digital strategy with Tecnotree

GLOBAL TELECOM IT solutions provider Tecnotree has been selected by mobile network operator EMTEL Mauritius (part of the Airtel group), to expand its call completion and MDX platform - enabling the rapid roll out of new messaging and voice services for its subscribers. Tecnotree will help EMTEL to enhance its digital strategy by supplying a content management and service delivery platform and call completion solution that enables hardware and network modernisation, all the while reducing the company's operational expenditure (OPEX) for provisioning and maintenance.

As a result of the agreement, EMTEL will deliver an improved customer experience to its mobile subscribers through enhanced reachability and multi-channel messaging services. Through Tecnotree's intelligent Content Management and Service Delivery platform, EMTEL's legacy voicemail system will be upgraded to the latest session initiation protocol (SIP) based call completion stack, within a virtualised environment.

"At Tecnotree, powering better experiences for our customers in the rapidly changing digital marketplace is always a high priority," said Padma Ravichander, CEO, Tecnotree.

"We're delighted to be strengthening our relationship with EMTEL by offering customers enhanced multiple messaging services, through call completion, to achieve "true reachability."

A particularly interesting feature of the EMTEL deployment is Tecnotree's Agility Call Completion suite.

Call Completion hosts an operator's entire reachability and messaging services and can generate revenue even when customers have their mobile turned off.

By enabling default reachability services such as Missed Call Notification (MCN) and Notify Me, Call Completion helps subscribers to be available 100 per cent of their time.

With permanent voicemail box, customers receive not only voice, but also fax and video messages. Visual Voicemail (VVM) further enhances the operator's messaging offering by synchronising messages and mailbox status, making them available through an easy-to-use mobile application.

Moreover, a temporary and personal voicemail box is created on demand only and when a message is received.

The Tecnotree Agility Suite, of which Call Completion is a component, offers a full complement of products and solutions that meet the needs of diverse communications service providers. Tecnotree offers a number of flexible choices; meaning an operator can deploy in-house complete integrated systems or standalone products in phases.

Previous African deployments have included Unitel Angola, which serves over seven million mobile subscribers in its GSM, 3G and 4G/LTE network, covering 90 per cent of Angola's population.

The Angolan deployment was completed in response to ongoing increasing demand for voice, content and application services, with internet technologies paving the way to new service offerings and revenue streams for the operator. Tecnotree's full-IP, redundant and expandable architecture delivered a modern call completion solution that inherently supports newer services such as Visual Voicemail.

Mr Amilcar Safeca, Unitel CTO, explained, "Tecnotree's references, commitment and agility to meet our current and future needs were the key criteria when deciding to over to Tecnotree's solution."

Flexenclosure builds data centre in Chad

PREFABRICATED DATA CENTRE specialist Flexenclosure has completed construction of a new data, communications and colocation centre for Millicom, which operates as the Tigo brand across Africa and Latin America.

The facility, a US\$6mn investment, is a 374m² combined communications and data centre for both telecommunications and data colocation services. Built in the Chadian capital N'Djamena, the new technical facility is a full turnkey eCentre implementation. eCentre by Flexenclosure is a custom-designed, prefabricated modular data centre building that is fast to deploy, energy efficient and easy to expand.

This is the first prefabricated data centre ever to be built in Chad and Flexenclosure has taken on complete turnkey responsibility for delivery of the entire project, including the eCentre building itself and all the site infrastructure around it.

The facility will provide for all Tigo Chad's data requirements and will support an IT power load of 400kW. The colocation white space area is fully open with no pillars, thus maximising Millicom's flexibility to configure the space to accommodate privately hosted tenants of different sizes. And as demand grows, the building itself can also be expanded to double its initial capacity in such a way that future expansion work will not impact on-going operations.



Flexenclosure prepared Chad's first modern data, communications and colocation centre in Vara, Sweden

To ensure the highest security procedures are followed, the facility has a strict on demand access protocol. It is fully protected with 24/7 CCTV, biometric access and a fully automated intelligent system capable of automatically warning staff of any imminent issues.

African policymakers urged to meet Internet demand

THE INTERNET SOCIETY has called for the adoption of policies and frameworks that expand access and create greater demand for the Internet during the 4th annual Africa Internet Summit (AIS) in Gaborone, Botswana. Urging policymakers to grasp the opportunity offered by the expansion and growth of the Internet across the continent, the Internet Society will advocate for greater collaboration by all Internet decision-makers in creating an accessible, trusted Internet that benefits all Africans.

"Africa sits at a tipping point for Internet expansion and the continent is poised to help drive growth of the global Internet. But to make the opportunities for social and economic gains a reality, it is paramount that the right policies are in place," explained Dawit Bekele, Africa regional bureau director for the Internet Society. "Policymakers have a critical role to play in creating an environment that enables investment in Internet infrastructure and ensures that the Internet is used to address Africa's development challenges."

The Internet Society also spotlighted digital trailblazers during a "Connected Women in Africa" panel session. The session explored how to get more women involved in developing and using Internet technology across Africa, as well as highlighting women who are already bringing about significant change through their work with the Internet. Kathy Brown, president and CEO of the Internet Society, led a panel discussion that featured women voices including Agang K Dithlago, co-founder of The Clicking Generation, and Dorcas Muthoni, a computer scientist from Kenya who founded a software company that is now a leading e-Government and business software services firm in East Africa.

Nigerian police use new mobile technology to enhance security

SECURE IDENTITY SOLUTIONS group **HID Global** announced at ID4Africa, held recently in Kigali Rwanda, that it is working with Nigerian technology company **Media Concepts International Limited** to deploy mobile IDs on Nigerian citizens' smartphones using the new HID goID platform. The Nigerian Police is moving from paper documentations of vehicular records to e-documentations in order to create and maintain a central database for all vehicles using uniquely encoded and machine-readable smart cards along with the new and innovative mobile IDs.

Media Concepts International Limited has in fact partnered with HID Global to address complex government-to-citizen identification programmes throughout Africa. However, in Nigeria, mobile IDs will be issued by the nation's police force through the Police Biometric Central Motor Registry (BCMR) vehicle registration card programme, which provides real-time access to vehicle/vehicle owner information via credentials and mobile readers powered by Seos technology supplied by HID Global. The Nigerian Police BCMR is a biometrically-enabled, real-time information system designed to enhance the reliability and effectiveness of policing.

"The Nigerian Police are pioneers in first-class global policing, leading the way in Africa in the adoption of mobile IDs and creating a differentiated reputation for the police as well as the country as a whole," said Babatope M Agbeyo, CEO of Media Concepts International Limited.

"Over the years, the Nigerian Police have continually invested in e-policing technology, especially with the Police BCMR in line with the global security trend. We are proud to help Africa set a new standard for IDs on smartphones that countries around the world celebrate and emulate."

The Nigerian police are launching the programme to offer citizens a secure and convenient mobile ID option. Citizens can apply for a mobile ID at the time of vehicle registration. Once registration is complete, issuance of the mobile ID to a citizen's smartphone is almost instant, which bridges the gap between registration and receipt of the physical card.

The Nigerian Police will be issued smartphones as mobile readers to verify a vehicle owner's ID and at the same time gain real-time access to reliable accident, crime or insurance information on the vehicle. The

readers will sit in a specially designed cradle to accommodate the citizen's biometrics stored on the card or mobile ID. Media Concepts International Limited and HID Global designed the programme so that this new offering would be integrated directly into Nigeria's current enrollment process, allowing a seamless migration to mobile IDs.

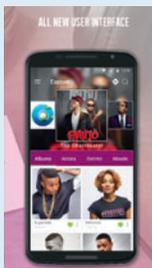
The new BCMR mobile IDs use the HID goID platform, which delivers the secure infrastructure to allow citizen IDs to be safely provisioned to and authenticated on a smartphone. Rapid issuance enables the citizen to take instant possession of their vehicle registration and is particularly convenient if the citizen has more than one vehicle, as multiple IDs can be carried together on one smartphone.

The goID platform enables instant over-the-air credential provisioning and streamlined access to cloud-based government information services.

All transactions related to issuing, managing and presenting mobile IDs using smartphones are secure and trustworthy with goID, ensuring that transactions are conducted in a closed-circuit environment protected by end-to-end encryption.

Mooditt updates app for Nigeria's music market

INCUBATED BY **MAHINDRA Comviva**, the Nigerian music streaming app **Mooditt** has released its latest version with improved features. The new Mooditt 2.0 music app comes with a visually pleasing and highly fluid user interface (UI) but one of the app's key offerings is its first-of-its-kind music cataloguing by moods. This unique dashboard feature was designed especially for Nigerians who have an



The success of Mooditt as a content platform reveals a growing sub-culture of content consumption over mobile in Nigeria

has recorded over 500,000 music downloads and was ranked No.1 music app in Google Play Store for eight months in a row. It has reported two million unique sessions, 32mn page views, 2.5mn songs streamed with an average seven minutes spent per Mooditt app user.

The application is able to dynamically change the streaming quality of the song depending on the network bandwidth available to ensure uninterrupted and seamless music experience to the consumers. The service allows users to create and share playlist and also download songs and ringtones for listening offline, wirelessly. The app offers the user the ability to search directly for tracks, artists, albums and browse music by genres.

eclectic taste in music including Hip Hop, Highlife, R&B as well as religious music depending on their mood at any given point of time. Mooditt 2.0 music app's improved algorithm classifies songs on the basis of various mood selections which makes it easy for the users to browse through Mooditt's content repository and enjoy songs of their favourite artists blending with their mood at any given time.

Mooditt is a high-quality multi-media mobile application streaming service with a rich suite of local catalogue-based digital music content. The app

Sunil Maharaj Kumar, head of D2C business at Mooditt, said, "The expansion of regional music brands and increase in smartphone user-base has been the key growth drivers for digital music in Nigeria, increasing its consumption exponentially."

Internet.org uses SES' customised broadband platform and services to connect

SATELLITE OPERATOR **SES** has signed a satellite broadband deal with **Facebook** to provide high-speed broadband connectivity services to Sub-Saharan Africa. This agreement supports Facebook's Express Wi-Fi programme, which is part of the social media network's Internet.org initiative to connect the world.

Facebook, the world's largest social media network, will deliver high speed broadband connectivity using three SES satellites - Astra 2G, Astra 3B and Astra 4A. In addition, SES is providing Facebook with customised SES Enterprise+ broadband services.

SES designed a highly tailored service utilising its satellite, data centre and implementation services with integrated features such as security, protocol enhancement, and hosting. The solution includes **Gilat Satellite Networks' X-Architecture** platform that will enable Facebook's local African partners to deliver internet services to underconnected and unconnected communities using Facebook's Express Wi-Fi access product.

"We are excited about the opportunity to partner with SES and Facebook on this worthy initiative to bridge the digital divide," said Ron Levin, director strategic accounts at Gilat. "The turn-key solution provided to Facebook is based on expanding SES base with Gilat's most advanced X-Architecture for SkyEdge II-c platform to deliver a scalable and optimised satellite-enabled broadband solution in Africa."

Ferdinand Kayser, chief commercial officer of SES, said, "Our new data network, SES Plus, highlights the strengths of SES as a network operator. We pride ourselves on working with our customers to design and deliver customised and differentiated products that enable them to excel in their markets. An agreement such as this with Facebook, where we designed a whole new customisable, flexible and scalable solution, is another step SES has taken to satisfy the fast expanding broadband connectivity market in Africa."

De l'Internet des objets et des réformes dans les télécommunications

LA DERNIÈRE ÉDITION du rapport annuel de l'UIT sur l'évolution de la réglementation des TIC dans le monde Tendances des réformes dans les télécommunications 2016 décrit et analyse les problèmes que rencontrent actuellement les régulateurs du secteur des TIC, mais aussi les perspectives qui s'ouvrent à eux, à l'heure de la prolifération des services et de la



Brahima Sanou, Directeur du Bureau de développement des télécommunications de l'UIT (Photo: ITU/P Woods)

convergence des plates formes et au moment où les opérateurs de réseau préparent leurs infrastructures en vue de l'arrivée prochaine de technologies fortement consommatrices de données, qu'il s'agisse de la 5G mobile ou de l'Internet des objets (IoT).

L'édition 2016 de cette publication de l'UIT présente les vues d'un grand nombre d'éminents experts qui aideront les régulateurs, les analystes du secteur des TIC et les journalistes techniques. La commercialisation de nouveaux biens et services TIC entraîne de profonds bouleversements socio-économiques. Même si de nombreux avantages sont à en attendre, selon le rapport, un certain nombre de problèmes restent à résoudre pour préserver "l'égalité des chances pour tous", considérée comme

essentielle pour la concurrence et l'innovation. Ce rapport, dont le thème est "Mesures d'incitation réglementaires visant à concrétiser le potentiel du numérique", souligne qu'il importe, plus que jamais, d'avoir une réglementation souple, par petites touches et ne privilégiant aucune technologie, qui stimule la croissance du marché tout en protégeant les

droits du consommateur et encourageant l'arrivée sur le marché de nouveaux concurrents.

"Pour concrétiser toutes les potentialités de l'économie numérique, les décideurs et les régulateurs ont un rôle fondamental à jouer dans la création d'environnements politiques et réglementaires favorables à l'essor des nouvelles technologies. Cette 16ème édition des Tendances des réformes dans les télécommunications est centrée sur les mesures d'incitation réglementaires visant à concrétiser le potentiel du numérique, ce qui, à mon avis, est conforme au but ultime des régulateurs, qui est de servir les consommateurs", a affirmé Brahim Sanou, Directeur du Bureau de développement des télécommunications de l'UIT.

SES et l'initiative Internet.org

OPÉRATEUR DE SATELLITES SES a conclu avec Facebook un accord pour du haut débit par satellite afin de fournir des services de connectivité à haute vitesse et à large bande en Afrique sub-saharienne. Cet accord soutiendra le programme Express Wi-Fi de Facebook, qui fait partie de son initiative Internet.org visant à connecter le monde.

Facebook fournira une connectivité à haute vitesse et à large bande en utilisant trois des satellites de SES : Astra 2G, Astra 3B et Astra 4A.

« SES dispose des solutions et des satellites en mesure de satisfaire la demande de Facebook de permettre et fournir une connectivité à large bande pour Express Wi-Fi », a affirmé Ferdinand Kayser, CCO chez SES.

Africa is DVB-T2 ready

Best solutions for extending Digital TV networks

"Tunisia, Morocco, Algeria, Tanzania, Kenya, Mali are watching TV by means of the cutting edge Egatel's technology"



TV TRANSMITTERS GAPFILLERS

WHET® Wideband High Efficiency Transmitters

WHET series features a market - leading energy efficiency technology, providing broadcasters with a highly cost efficient solution. The compact and customized design leads to new possibilities of configurations, saving space in the emission sites.

Egatel

www.egatel.es



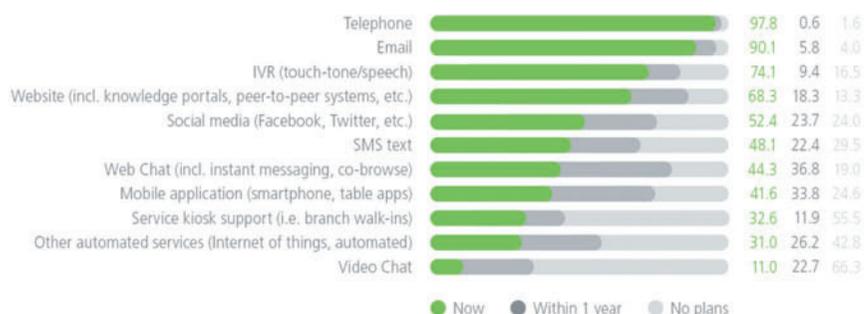
Dimension Data says digital customer experience needs more development

ACCORDING TO RESEARCH published by **Dimension Data**, in the 19th edition of its annual Global Contact Centre Benchmarking Report, organisations are unclear about who owns, oversees, and manages the digital channels in their contact centres. That's because there's a lack of management focus which impacts the effectiveness of the design of their digital solutions, and by consequence, how customers engage with their businesses. This year, 1,320 organisations across 14 industry verticals in 81 countries in Asia-Pacific,

Australia, the Americas, Middle East & Africa, and Europe contributed to the research.

"While telephone interactions in the contact centre are managed, tracked, and quality controlled, the same performance rigour isn't always applied to digital channels," explained Rob Allman, Dimension Data's group principal director, customer experience and collaboration. "This can lead to an inconsistent and degraded customer experience across a brand or services company."

Services supported by contact centre



Average of **9 channels** for most by 2017

Mobile app offerings up **61%** from 2015

Automated services emerging as a dark horse game changer

What services can your contact centre support, now and in the future?

n | 1319

La stratégie numérique de l'Egatel en Afrique

SOCIÉTÉ ESPAGNOLE SPÉCIALISÉE dans la conception, le développement et la fabrication de systèmes RF conçus pour diffuser des signaux TV analogiques et numériques, **Egatel** possède une stratégie prioritaire en Afrique, en travaillant dans plusieurs pays mettant en place leurs réseaux télévisés numériques (DVB-T/T2).

Après une première expérience au Maroc avec la **SNRT (Société nationale de Radiodiffusion et de Télévision)**, Egatel travaille maintenant en Algérie pour **TDA (Télédiffusion d'Algérie)** avec la fourniture et l'installation des deux projets attribués, qui comportent des transmetteurs numériques de 600 W, 300 W et 50 W ainsi que des équipements auxiliaires.

En Tanzanie et au Kenya, Egatel a fourni ses transmetteurs numériques à rendement élevé comme éléments de projets clef en main, comprenant aussi des systèmes d'antennes, des filtres ou des combineurs, des protections électriques, etc., et elle travaille avec les installations en cours dans le premier cas et elle débute les travaux dans le second cas.

Egatel est en train de déployer un réseau TV en Tanzanie pour **Sahara Media Group**, une chaîne nationale privée et un opérateur, ainsi que pour APD au Kenya, une société espagnole agissant comme maître d'œuvre principal de **KBC (Kenyan Broadcasting Corporation)** dans un grand projet comportant 10 nouveaux sites.

Orange investit dans Africa Internet Group

L'OPÉRATEURS DE TÉLÉCOMMUNICATIONS **Orange** a annoncé sa prise de participation dans **Africa Internet Group** pour un montant de 75 millions d'euros, aux côtés d'**Axa**, **Goldman Sachs** et des investisseurs historiques, **MTN Group**, **Millicom** et **Rocket Internet**. Il y a aussi un ensemble de partenariats stratégiques entre les filiales des deux groupes, Avec Orange, **Jumia** offre la possibilité aux entreprises de commercialiser leurs produits et services sur internet auprès de la classe moyenne africaine émergente. Les autres services proposés par Africa Internet Group comprennent notamment une place de marché e-commerce (**Kaymu**), un site de livraison de nourriture (**Hellofood**), d'hôtellerie (**Jovago**) et des sites de petites annonces généralistes (**Vendito**), immobilières (**Lamudi**), d'emploi (**Everjobs**) et de véhicules (**Carmudi**).



L'usine d'Egatel lors d'un FAT avec TD

“The ultimate aim must be to deliver a compelling customer experience that seamlessly blends the digital and the physical worlds, but success in this regard will only come with a whole new level of enterprise-wide collaboration that encompasses the entire CxO value chain.”



Jyoti Lalchandani, group vice president & regional MD, Middle East, Turkey & Africa, International Data Corporation (IDC)

- Jyoti Lalchandani

vice president/regional managing director for the Middle East, Africa, and Turkey, International Data Corporation (IDC)

“From providing the world with global broadband and in-flight entertainment to the delivery of ultra HD services, satellites continue to feed the worldwide thirst to be connected, and satellite companies continue to deliver groundbreaking new services designed to further connect the world for decades to come.”

- Tom Stroup

president, Satellite Industry Association (SIA)

“A holistic digital transformation strategy, which considers the digital workforce along with the business model, process and customer channel dimensions, will be imperative for organisations wishing to remain relevant in the next 10 years.”

- Wayne Houghton

director of growth implementation solutions, Frost & Sullivan Africa

“With continued infrastructural growth and a vast landmass, the market potential for satellite and GSM-based communication technology in Africa is extremely large.”

- Kevin Eborall

chairman, Skygistics

“Distributing reliable yet cost-effective power to IT equipment is of upmost importance to network and data centre managers.”

- Alberto Zucchinali

data centre solutions and services manager, Siemon EMEA

“We, the ICT stakeholders, need to work collectively and collaboratively to ensure that the benefits of ICTs are maximised and equitably distributed.”

- Shola Taylor

secretary-general, Commonwealth Telecommunications Organisation (CTO)

“As organisations evaluate their cloud options, they should assess a vendor’s security certifications, access management controls, encryption, and intrusion testing protocols.”

- Arthur Goldstuck

managing director, World Wide Worx

“Making adequate use of both licensed and unlicensed spectrum bands is essential to meet data demand and provide end users with the best possible mobile experience.”

- Neville Meijers

vice president of small cells, Qualcomm Technologies



AFRICAN.

We can help grow world-class business out of Africa.

We believe in the ambition and potential of African business. It's why we've built Africa's largest fibre infrastructure and provide an award-winning satellite network, capable of keeping any enterprise connected, protected and competitive at all times. Because we are not just a telecoms company.

We are your technology partner.

LIQUID
TELECOM

Building Africa's digital future

How Facebook will use space to connect African communities

The continent is on the verge of a satellite revolution, according to experts, and some countries have already started prepping for launches

IF ALL GOES according to the plan, the launch in August 2016 of the AMOS-6 communications satellite aboard the SpaceX Falcon 9 rocket could be a major milestone in Africa's satellite telecommunication by bringing up to two million rural African subscribers online.

Last October, the Facebook and the French satellite company Eutelsat entered into an initiative designed to bring to bring low-cost Internet access to Africa's rural areas. The partners have leased AMOS-6 from the Israeli company Spacecom for up to five years with an option to extend the contract by two years. The satellite has Ka-band capacity and the two partners have divided the estimated US\$95mn cost to 2021. Facebook, in April, leased lower Ku-band capacity on three in-orbit SES satellites that will provide Facebook's initial Wi-Fi connectivity in sub-Saharan Africa. By the end of this year, the combined service will reach 14 countries in western, eastern and southern Africa.

The AMOS-6 arrangement is being seen as a possible stepping stone to Eutelsat's larger Ka-band satellite in which Facebook could also be a partner. This satellite, which is designed to cover 30 African nations, is scheduled for launch in 2019. Max Kamenetsky of Facebook's *Internet.org* says the company's investment in satellite connectivity for Africa will answer the basic question - will people in poor rural areas pay for access to Internet data? He said, "If we were to bring Wi-Fi to community aggregation points where people are paying between US\$1 and US\$3 per month to connect, will people actually use this?"

According to Dr Dawie de Wet, CEO of Q-KON the South Africa-based specialist technology company, with the development of Ka-band based high throughput satellites (HTS) the satellite industry in Africa is about to undergo even greater monumental change. Satellites with the type of specification of the EchoStar XVII satellite with Jupiter high-throughput technology that now covers North America with 60 spot beams will start entering the African domain in late 2016 and 2017. The satellite has well in excess of 100 Gbps of capacity – enough to deliver high-speed Internet service to rural areas.

AMOS-6 satellite has Ka-band capacity and Facebook and Eutelsat have divided the estimated US\$95mn cost to 2021

In regions like South Africa, Angola, Nigeria and East Africa, the rollout of Ka-band frequency is opening up the consumer space by heightening interest in VSAT services. Kevin Viret, business development director for Africa at UAE-based and Africa-focused satellite communications firm Yahsat says that established operators have already been forced to introduce new services to keep ahead of competition. The satellite services company is prepping for the launch of its third satellite - the Al Yah 3 - in Q1 2017. Once launched, the Al Yah 3 will effectively extend 'YahClick' to 19 new African markets. Viret says the intention is to back up its existing global IEC Telecom Group partnership with local partners, those that understand the dynamics of local businesses.

Liquid Telecom is also expanding its satellite communications presence in Africa with the announcement in April of a major broadcast



The Amos-6 satellite (Photo: Spacecom)

deal across Africa using the Eutelsat 7B satellite. The satellite will service Liquid Telecom's new broadcast requirement for DTH services across the African continent. At the same time, it will connect a growing number of enterprise customers located in areas where fibre is not available. The provider has been granted the exclusive rights for major sporting events including English Premier League free-to-air and the NBA League.

Scott Mumford, group managing executive of Satellite and VSAT at Liquid Telecom, said, "Broadcast still plays a massive part in the satellite business and we are pleased to have secured this important contract, which will allow the launch of a new large scale broadcast offering."

Meanwhile, in May Nigeria took a major step forward in its satellite communications with a US\$6mn 15-year deal reached between Nigerian Communications Satellite (NIGCOMSAT) and the Belarus National System of Satellite Communications and Broadcasting (Belintersat). Strikingly, it is a deal which puts the African country – rather than its European partner – firmly in the driving seat. The antenna for Belintersat's KU and C bands will be located in Nigeria's capital city of Abuja and NIGCOMSAT will offer and monitor the payloads on the band. Abimbola Alale, managing director of NIGCOMSAT, said, "Within the next 15 years, we shall be monitoring their payload and at the same time sending the information on real-time to Belarus as they have a ground station there. NIGCOMSAT started this business before them. We have the experience as we have been here in the last 10 years."

It is clear that Africa now stands on the verge of a satellite telecommunication revolution the success of which depends on the investment choices now made to bring it to fruition. Dawie de Wet outlines three possible scenarios: Satellite network operators expand vertically and make the core network investments themselves; satellite network operators enter global joint venture programmes and seek partners that are established in the Internet and broadband landscape, ie, the Eutelsat-Facebook partnership; and Africa forms 'satellite giants' who are prepared and capable to make the required investment and take the end-user service directly to market. All three may well have their 'pros' and 'cons' but at least as important to Africa's internet starved rural areas will be prompt and decisive action. ©

Nnamdi Anyadike

Notes on sustainable service, from the carriers' carrier

Chris Wood, CEO of WIOCC, contemplates the commercial drivers extending African access to the connected world

WIOCC CEO CHRIS Wood met with Communications Africa/Afrique recently to discuss Africa's increasing adoption of information and communications technologies (ICTs), to relate his experience and understanding of user demand for reliable, high-capacity bandwidth, and speak about developments in submarine cable and terrestrial capacity.

In the sense that it is regarded as 'the carriers carrier', WIOCC offers affordable, reliable connectivity to more than 500 locations in 30 African territories. Its effective operating assets include approximately 55,000km of terrestrial fibre and 40,000km of submarine fibre-optic cable. Its network extends from Africa to 100 cities in 29 countries in Europe and to more than 700 cities in 70 countries globally.

However, there is more now to WIOCC. Chris Wood has overseen an evolution of the business, through investment in its own network expansion and also in complementary operations. WIOCC now gives an impulse to enterprises and economies. It motivates nations on the cusp of digital culture and digitised growth. Over the last couple of years, the initiation of connectivity to, through and within Somalia, via the EASSy cable and an initial service delivery partnership with Dalkom Somalia. He has since witnessed a doubling of operational capacity every six months in Somalia, with most other Somalian operators also now connected to EASSy. WIOCC now sees 10Gbps of capacity into Somalia - a nation with almost no connected profile a few years ago - and expects to see double that capacity by the end of 2016. He said, "We have played a key role in the development of the economy of Somalia, by enabling customers at the residential level and at the corporate level to get on the Internet and start to become a part of the connected world."

Investment and expansion

Since its formation in 2008, WIOCC has grown beyond EASSy. As Chris Wood acknowledges, "Over the last five or six years, we've invested in cable systems to provide connectivity not just to Southern Africa but East and Central Africa as well - and to various places on the West African coast."



Chris Wood, CE, WIOCC

Expansion into new markets has been entirely consistent with a sustainable approach to business. As Chris Wood puts it, "We need to ensure that we deploy capital in the right areas around Africa. We need to be sure that every dollar we spend on capital investment is in the right place"

So, WIOCC identifies private sector demand, and collaborates with public sector entities, to connect companies and communities. Specifically, WIOCC has facilitated exponential increases in traffic in countries such as South Africa, Zimbabwe, Mozambique and Botswana, as well as Somalia. Critically, it has sought to respect, adapt to and work within regulatory frameworks in each nation it serves.

Where WIOCC provides capacity, it has worked to maximise the potentials of ongoing developments in African ICT ecosystems - particularly with respect to the deployment and management of terrestrial fibre networks, to bring the connected world to hitherto unconnected nations. Mr Wood said, "We have seen in recent years the development of terrestrial networks in multiple countries, taking capacity from the coast into the major cities, away from the coast into land-locked countries."

The WIOCC CEO views Liquid Telecom's extensive fibre network, for example, as complementary to WIOCC's submarine business, adding value to operators' service portfolios by enhancing reach for forward-

thinking African businesses. He said, "We see ourselves as an enabler for other companies to target the enterprise market and residential markets."

Chris Wood advises that the next major step forward in African ICT entails the delivery of local access networks in land-locked countries. Indeed, work is already underway to open up Africa's inner territories to the connected world. He said, "We are seeing a lot of growth in countries like Malawi, Zimbabwe, Zambia and DRC."

Enterprise and competitive economy

At least in part, Africa's emergence into the connected world is not only driven by expansion into newly-connected countries. There is also the need for multinational businesses to accommodate the continent within globalised investment portfolios. As Chris Wood said, "Over the last several years, the basic infrastructure has been built. Getting the basic infrastructure was the precursor to enabling entrepreneurs to take off. We have then seen a large number of small businesses pop up, which have made a big impact in Africa, which could not have been there without the infrastructure. Now, with prices going down and capacity going up, what we will see over the next couple of years will be big businesses, starting to treat Africa as part of their global network. Previously, Africa would have been an 'add-on' to their global networks, because they did not have the same network access to Africa as to elsewhere. Because big businesses are now treating Africa as an integral part of their networks, global telecoms companies such as Sprint and AT&T and Verizon are now looking at building points of presence, PoPs, in Africa, where previously this did not work for their business models."

Mr Wood added that a key factor in the sustainable growth of African ICT infrastructure is the relationship between price and volume. Africa does not have the scale for growth that has been seen in the densely populated markets of India and China. In no way can African ICT sectors expect to work with near-infinite numbers with respect to subscriber numbers, for example. The price components and competitor offerings in any African market must be finely balanced throughout the value chain.. ©

Innovating and expanding data centre operations

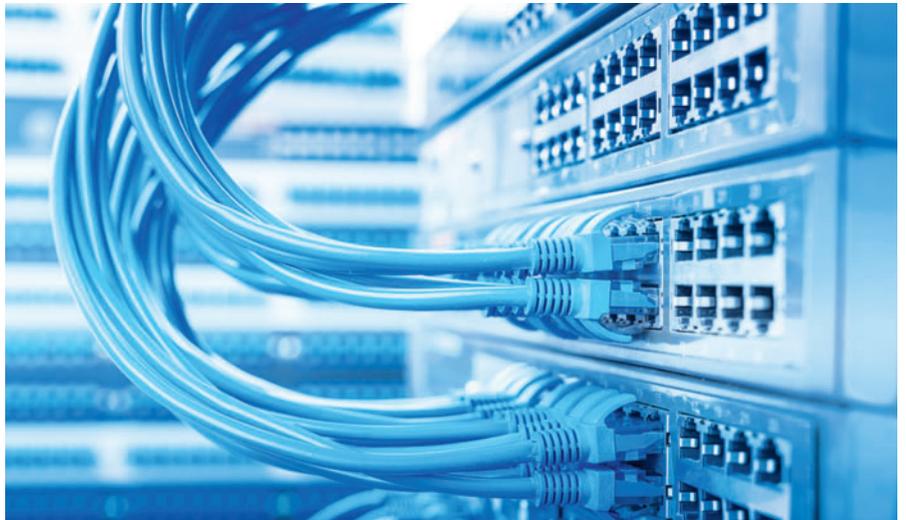
As cloud-based services proliferate in both the public and private sectors, so the means of managing traffic becomes more sophisticated

FOR YEARS AFRICA'S data centre industry has lagged behind the rest of the world. Dogged by an unreliable power supply; latency sensitive data service issues; and reluctance by multinational companies like Google and Microsoft to establish their presence, the development of online services on the continent has suffered accordingly. Latency-sensitive data service provision has long been problematic. In 2014, Seacom whose submarine cables connect Africa to Europe and the Middle East estimated that 90 per cent of African internet content was hosted elsewhere. This one factor alone is historically responsible for holding back the speed of transmission in Africa, particularly for high quality streamed data.

But services such as e-government, is growing rapidly and market conditions for Africa-based data centres is improving. The Cisco Global Cloud Index predicts that through 2017, the Middle East and Africa will have the highest cloud traffic growth rate (57 per cent CAGR), followed by Asia Pacific (43 per cent CAGR) and Central and Eastern Europe (36 per cent CAGR). And the provision of latency-sensitive data service is now changing rapidly. Even the problem of inadequate power supply is being effectively tackled. African data centres are increasingly relying more on power distribution units (PDUs) to provide the total energy consumption measurements per port. This enables a client to be billed for the power that is used by his equipment and eliminates many billing-related issues.

The growing data centre industry

Although the rise in data centres is led by South Africa – Lex van Wyk, chief executive officer of Teraco told Communications Africa/Afrique that data centre growth on the continent over the next five to ten years will be “an estimated 100 per cent+, with South Africa in the vanguard” - a host of new players are also springing up elsewhere in Africa. These include Nigeria's MainOne and The Liquid Telecom Group's East African Data Centre based in Nairobi, which are stamping their mark. From Ghana to Mozambique, Kenya and Uganda, data centres are popping up all over Africa and the coming years promise to be exciting.



Data growth in Africa over the next five to ten years is projected to be 100 per cent

"As technology deepens with investments in last-mile infrastructure, effective regulation and increased sector participation, the cloud and data centre landscape in Africa is expected to grow significantly." - Funke Opeke, chief executive officer, MainOne; and Temitope Osunrinde, marketing operations supervisor, MainOne

For the purposes of this article Communications Africa/Afrique sought out the views of a number of key players in Africa's data centre industry, including The Liquid Telecom Group, MainOne and Teraco. Dan Kwach is general manager of the award-winning East Africa Data Centre - part of The Liquid Telecom Group – that was the first custom-built data centre in the region and the largest on the continent outside of South

Africa. He sees a swathe of new data centres under construction in the regional hubs of Nairobi, Johannesburg and Lagos underpinned by Africa's transformation to an online economy.

“Businesses such as banking and insurance are realising that data analytics is part of their business key success and investing more in technology hardware in the data centre. International global content providers are also moving or caching their data closer to Africa as they look to the huge growth opportunity of capturing Africa's fast growing young tech savvy population to be their users. Companies such as Netflix have recently moved to Africa with big data centre deployments as part of their recent global launch,” he observed.

Commercial environments

Growth is unlikely to be confined to the major centres and data centres are growing at a rapid rate in every African country. Over the next five to ten years, he said, “The factors for determining the potential market size will be population, economic growth and sensible regulatory environment. Phase one will be data centres in capital cities and commerce hubs but we will see continuing growth to second, third and outlying cities with new data centre investments.”

The only like possible impediment to this growth would be in, “some tightly regulated

countries with draconian freedom of information laws [which] will stifle their own growth in this market and their economic growth as a result.”

And the technologies are improving to cater for this rise in demand.

“The equipment that fills our data centres is getting to higher and higher densities,” he said.

However, this requires forward thinking on the electrical power capacity that is provisioned. “In our data centres we take care of the power backup and smoothing using generators, voltage stabilisers and UPS, all deployed in a fully redundant configuration. Thus our customers don’t have to think about ‘African Power’ conditions. The environment for most consumers is improving slowly, or worsening severely as we have seen in South Africa. This means that data owners will look to commercial data centres as their trusted partner, instead of trying to maintain their own power plants,” he said.

Data centre development

In West Africa, MainOne is establishing itself as a major player in the sub-region. Funke Opeke, the company’s chief executive officer, and Temitope Osunrinde, its marketing operations supervisor, spearhead a company that is playing a ground-breaking role in the data centre landscape in Africa. Its Data Centre subsidiary, MDX-I’s Lekki Data Centre is the largest in West Africa, and is currently the region’s only PCI DSS, ISO 27001 and 9001 certified data centre. MDX-I has also received the Frost and Sullivan award for Providing Advanced Data Centre Infrastructure in West Africa and is Tier III certified by the Uptime Institute.

“West Africa promises the greatest growth in Data Centre development, due to improved internet connectivity, through circa 5 subsea cables and growing terrestrial fibre infrastructure,” Funke and Temi observed.

After South Africa, two of the countries hosting the highest number of data centre facilities - Nigeria and Ghana – are in the west and MainOne sees this sub-region as key to growth on the continent. “West Africa promises the greatest growth in Data Centre development, due to improved internet connectivity, through circa 5 subsea cables and growing terrestrial fibre infrastructure,”

Funke and Temi observed. Nigeria has been hit hard by the ongoing oil crises, which MainOne argues has forced enterprises to take more stringent measures to mitigate the collapse in revenues.

“Outsourcing business process functions is a proven way of reducing operating costs, and we expect companies to take advantage of this and transfer their costs to better equipped locally present data centre companies to better serve in-country customers,” Funke and Temi said. “As technology deepens with investments in last-mile infrastructure, effective regulation and increased sector participation, the cloud and data centre landscape in Africa is expected to grow significantly. Fuelled by a host of new mobile phone applications developed by software engineers across the continent, an innovative and IT savvy culture is flourishing across Africa.”



Africa is entering the data centre landscape

Innovations include mPesa’s revolutionary mobile money technology and eCommerce sites like Konga, Wakanow and Hellofood. And as access increases and costs reduce in Lagos, Port Harcourt and other parts of Nigeria, MainOne expects more innovative and locally relevant business models, from the likes of CCHub, Andela, Meltwater, Hackerspace, among others. Over the next five to ten years, technologies will have moved on apace.

“Organisations must take advantage of innovative data centre strategies including use of more power efficient technologies, poised to drive down Power Utilisation Effectiveness (PUE) and options of alternative power. We should expect to see smarter power infrastructure and grids and high performing and resilient broadband technologies,” they said.

“Intelligent PDUs now provide real-time power consumption data while reliably delivering power to critical IT equipment. Data Centre operators also make use of modular power units, which allow companies to scale up their power utilisation in tandem with the racks available, a Use as you Grow model that ensures power maximisation. These modular units are also hotswappable, which means that

“Businesses such as banking and insurance are realising that data analytics is part of their business key success and investing more in technology hardware in the data centre.” - Dan Kwach, general manager, East Africa Data Centre

these units can be safely connected and disconnected while the computer is powered on and running, without shut downs.”

The MainOne executives continued, “Also, intelligent building management systems (iBMS) and Data Centre Infrastructure Management systems (DCIM) can also monitor power growth and facilitates monitoring of the operational and energy performance. Finally, in the security arena, we are seeing the deployment of multi-factor access control systems, threat detection systems for networks and systems, security incident management systems and other state-of-the-art technologies required to ensure that customers data is secure.”

The company sees a workload transition from the traditional in-house and outsourced data centre models to a service subscription model, such as virtualised cloud servers, and more bespoke cloud solutions. “We plan to take advantage of the huge demand for cloud solutions to offer the whole gamut of services, from Infrastructure as a Service (IaaS), to Platform as a Service (PaaS), to Software as a Service (SaaS), among others. We currently offer only IaaS but we plan to scale up quickly to meet our customer requirements.”

MainOne is not the only company to be angling for a slice of Nigeria’s cloud IT infrastructure market that according to the International Data Corporation (IDC’s) Worldwide Quarterly Cloud IT Infrastructure Tracker accelerated by 21 per cent in 2015 to reach in excess of \$32 billion. There are some top 10 operators in Nigeria including: 21st Century Technologies, Vodacom Business, Computer Warehouse Group (CWG), MTN Business Lagos Datacenter and Rack Centre, which last December won the 2015 Data Centre Dynamics Award for Europe, Middle East and Africa (EMEA) region in the Data Centre Impact Award Category area.

Rack’s award represented the first time a company in Africa had won the Data Centre Dynamics award for EMEA. Commenting on the win Ayotunde Coker, managing director of Rack Centre, said, “It shows that the African Data Centre industry is emerging and we are delighted to be at the forefront of it.”

Data centre cabling considerations

Choosing the right cabling infrastructure is essential to handling the continued growth of data and bandwidth requirements in the data centre environment

LARGE ORGANISATIONS ACROSS East and West Africa are taking part in today's digital economy to an ever increasing extend. The availability of high performance data centre facilities has become critical to achieving future growth and profitability. These facilities must not only allow for quick and efficient transmission of data for processing and storage but also accommodate the support for the growing demands of Big Data being driven by the Internet of Things (IoT).

Data centre cabling infrastructure must therefore deliver reliable, low-latency, high bandwidth connections between a variety of active equipment at the edge and within switch-to-switch backbone links to the core and storage area network (SAN). For the cabling infrastructure to serve as the reliable and invaluable foundation, the right choices must be made from day one.

Infrastructure on the edge

At the edge, where switches connect to active equipment, standards-based category 6A is ideal for supporting a variety of architectures, including top of rack (ToR), middle of row (MoR) and end of row (EoR). With support for all current BASE-T applications up to 10 Gb/s and autonegotiation, category 6A cabling affords a longer lifespan and higher return on investment.

Another option is point-to-point cabling via short preterminated small form-factor pluggable twin-axial copper cable assemblies such as SFP+, QSFP and other twinaxial cable assemblies. While these assemblies support low power and low latency, which can be ideal for supercomputing environments, their short reach limits use ToR configurations. They also do not support autonegotiation and therefore must be upgraded when active equipment is upgraded.

With switch-to-server connection speeds continuing to push beyond 10 Gb/s, ISO/IEC is working on next generation cabling to support upcoming IEEE 802.3bq 25 and 40 Gb/s Ethernet (ie 25GBASE-T and 40GBASE-T) over balanced twisted-pair copper cabling characterised to 2 GHz. This builds on 10GBASE-T technology and is intended for operation over 30 metres of future ISO/IEC class I cabling constructed from category 8.1 components and class II cabling constructed from category 8.2 components. This will ensure interoperability and backwards compatibility, plus support a broader range of architectures than direct attach twinaxial connections that are limited to about seven metres.

Another future option is the IEEE 802.3by standard currently under development, which will define 25 Gb/s operation over up to 100 metres of multimode optical fibre cabling and up to five metres over two pairs (ie one 'lane') of twinaxial cable. This standard is expected to support switch-to-server connections at the edge with SFP28 direct attach cable assemblies and may be ideal for migration to higher speeds for those currently using SFP+ or other cable assemblies in ToR configurations.

Backbone links to the core and storage area network

Backbone switch-to-switch data centre deployments, where speeds are evolving from 10 to 40 and 100 Gb/s for Ethernet-based networks, and from 8 to 16 and 32 Gb/s for Fibre Channel-based SANs, are best served by multimode optical fibre. While 40GBASE-LR4 and 100GBASE-LR4 that



Data centre managers must select cabling media to ensure support for business growth

support up to 10km over singlemode fibre is another option for the data centre, singlemode transceivers remain more costly than multimode.

One consideration for multimode fibre backbone links is staying within optical insertion loss budgets, which is essential for ensuring proper transmission of data signals between switches, both in higher speed Ethernet and Fibre Channel applications. The use of specially qualified low loss MTP connectors and fibre cable deployed for switch-to-switch connections in the data centre is therefore becoming essential.

Future industry standards may result in a new wideband multimode fibre that expands the capacity of multimode fibre for operation over a range of wavelengths to support WDM technology. Unlike current proprietary 40 Gb/s duplex fibre applications, this new fibre will be a standards-based, interoperable technology that will be backwards compatible with existing multimode fibre applications. It is expected to support duplex 40 and 100 Gb/s fibre links using 10 or 25 Gb/s channels on four different wavelengths.

Proof point

Standards-based category 6A cabling or higher makes the most sense for today's switch-to-server connections in the data centre, with optical fibre in backbone links to the core and SAN. This was exactly the combination chosen by MainOne in Nigeria, West Africa's largest TIER III co-location data centre. More than 2,400 fibre links using 1,200 pairs of multimode (OM3) fibre and 1,200 pairs of singlemode (OS2) fibre were installed for the backbone infrastructure, with best-in-class copper cabling to connect servers and work area outlets to access switches. ☉

Stefan Naude RCDD, technical manager for Siemon in Africa

Vers une meilleure analyse des données d'intérêt maritime

Autour de la connaissance de la situation maritime, et de différentes agences maritimes nationales

ASSURER LA POLICE en mer et l'exploitation en toute sécurité des ressources maritimes nécessite, entre autres, l'analyse continue des données d'intérêt maritime collectées auprès de diverses sources ouvertes (open source) et leur partage au niveau régional, en coordination avec les administrations nationales.

Dans le cadre du projet européen CRIMARIO, vingt-six participants de Maurice et des pays riverains de l'Océan indien (Comores, Kenya, Madagascar, Malaisie, Mozambique, Seychelles, Somalie, Yémen) ont pu développer leurs compétences en matière de visualisation et d'analyse des données d'intérêt maritimes et partager leurs expériences.

Analyse des données maritimes

Les Etats se doivent d'assurer la sûreté et la sécurité maritimes dans leurs eaux mais également en haute mer. L'échange d'informations entre les différentes administrations (Transport, Marine nationale, Police, Environnement, Douanes, Pêche, etc.) est l'un des éléments clés contribuant à ces objectifs. La coopération régionale entre les pays voisins en constitue un autre.

Cette analyse est partagée à la fois par les États côtiers de l'océan Indien et les partenaires internationaux, notamment l'Union européenne qui a lancé divers projets dont le projet CRIMARIO (programme Routes maritimes critiques); ce projet a pour but de promouvoir la culture de la connaissance de la situation maritime (maritime situational awareness) en développant le partage de l'information et le renforcement des capacités techniques et humaines d'analyse de cette information. CRIMARIO soutient également les initiatives régionales, telles que le Protocole de Mombasa.

La session de formation qui s'est déroulée du 25 au 29 avril 2016 à Mombasa (Kenya), est la deuxième contribution de CRIMARIO au renforcement du savoir-faire régional en matière d'analyse et de partage des données d'intérêt maritime. Elle complète la première session organisée à Mombasa en février dernier.

Vingt-six participants, provenant de différentes agences maritimes nationales, se sont entraînés à la visualisation et à l'analyse des données provenant de sources SIA (ou AIS



L'analyse continue des données d'intérêt maritime collectées (Photo: Fotolia/mirceadobre78)

en anglais - Système d'identification automatique est un système d'échanges automatisés qui permet aux navires et aux systèmes de surveillance de trafic d'identifier et de localiser les navires en échangeant des données avec d'autres navires proches, des stations AIS et des satellites). Ils se sont également entraînés à l'analyse statistique à l'aide d'un tableur électronique.

Les participants ont appris à utiliser QGIS, un système d'information géographique (SIG), libre de droit, qui permet de visualiser, produire et analyser les données sur des cartes très précises. A l'issue de cette deuxième session, ils sont maintenant en mesure de mieux visualiser les données d'intérêt maritime, et de conduire des analyses afin d'identifier des tendances. Les participants de Maurice venaient de la garde-côte nationale, alors que d'autres participants venaient de centres de partage d'information initié par le Code de conduite de Djibouti. Grâce à cette deuxième formation pratique dans le cadre du projet CRIMARIO, ces spécialistes de l'information maritime ont approfondi leurs aptitudes à l'analyse des données d'intérêt maritime. Ils se sont entraînés sur les données de la piraterie de l'année 2012, et les données

de navigation en Océan Indien de l'année 2015.

En outre, comme la piraterie a fortement diminué au cours de ces dernières années, il est important que les centres de partage de l'information aient une valeur ajoutée opérationnelle, ce qui passe par un approfondissement de leurs compétences en analyse globale du domaine maritime.

Le protocole de Mombasa

Quatre pays, hébergeant des centres de partage d'information et de formation maritimes (Djibouti, Kenya, Tanzanie, Yémen) ont initié le Protocole de Mombasa qui vise à consolider le cadre de coopération existant (le Code de conduite de Djibouti), définir les règles de gouvernance des centres de Djibouti et du Yémen et proposer un mécanisme de gestion durable à long terme.

Enfin, le Protocole de Mombasa œuvre pour conclure des accords de partage d'information entre les Etats riverains de l'Océan indien, les encourageant à aller au-delà des seules données de la piraterie. CRIMARIO soutient cette initiative ainsi que toute autre initiative ou mécanisme facilitant le partage de l'information et une meilleure connaissance du domaine maritime. ©

Investing in critical adoption and application

Industry pundits have been predicting steady growth in the adoption and use of TETRA for secure communications scenarios in the Middle East and Africa



Airbus Defence and Space utilises TETRA technology

PREDICTIONS ARE ALL too often tinged with degree of uncertainty, but when TETRA and Critical Communications Association (TCCA) CEO Phil Kidner speaks, the industry usually takes note. Back in September 2014 he was very clear about how TETRA was expected to progress in the MEA region in the years ahead. He said at the time that the MEA was a ‘vibrant market’ with more than ‘half a million TETRA users’ and that significant progress was being made in regional trials to assess the suitability of LTE. He added that the number of users of the technology was set to increase, further demonstrating that, “TETRA remains the foundation to build upon, both for new and for existing critical communications users.”

And if Kidner’s views were not enough to put a smile on the faces of regional TETRA players, independent analyst and leading TETRA expert, Thomas Lynch, now director at the critical communications group for global research at IHS took a look into his own crystal ball. He predicted that industrial, transportation and utilities segments would all experience ‘double digit growth’ in the use of TETRA over the next five years. He added that this would build on over 70,000 shipments of TETRA devices in the MEA region that had taken place in 2013. As for Kidner’s words about trials, Lynch added a dimension to this by saying that the projects to

trial and utilise LTE already underway in the region were addressing not only the public safety sector but also oil & gas and transportation sectors.

Intelligence in the market

Talking to Communications Africa/Afrique, some 18 months after those double-digit predictions, Thomas Lynch was happy to confirm that his predictions were on track. He drew some latest TETRA stats from IHS’ Mobile Radio Intelligence Service, which provides figures for the whole mobile radio market addressing terminals, infrastructure and, in his words, “pretty much everything you need to know about LMR”.

He said, “Our base year, 2015, is the year we last looked at TETRA in MEA and on which we base our latest projections; these lead us to believe that in 2016 there will be 650,000 users of TETRA in the MEA region.”

He indicated that it was actually a ‘fantastic’ year for TETRA in these markets with significant growth and the involvement of some of the key players in the space, like Motorola, Sepura and Airbus.

He said, “Overall it is still a pretty positive market. The growth of TETRA last year means there were lots of new users on TETRA networks and whilst we can see there are projects for LTE, these combine both LTE and TETRA - it’s

not one size fits all. Africa and the ME is still a very buoyant TETRA market.”

Investing in solutions

Such investment going on in TETRA equipment and infrastructure strongly suggests the technology has considerable longevity across the region; would those investing in it be happy to see its demise anytime soon?

“Not by a long shot,” Lynch confirmed. “That doesn’t mean they won’t use LTE on top or alongside TETRA. Of course they will,” said Lynch, “especially where the money is available. These markets want the high-end technology, especially in the ME where security is the crucial application right now and in which TETRA has already proven itself as a very secure and reliable communications medium.”

According to IHS’ Lynch, South Africa currently has the largest TETRA user base in Africa with almost 70,000 users in 2016. In Africa’s aerospace and airport sector, where WiMAX technology has had a major role to play in recent years, Lynch said that he could see TETRA making progress in this area and that WiMAX was not the total solution for that sector. He added, however, that LTE would definitely be a consideration in the African market alongside TETRA applications and other players outside the TETRA fold, such as

Huawei, Nokia and ZTE are already playing in the Africa market and will continue to do so.

He said, "Public Safety will continue to be the lead application for TETRA and LTE in Africa but transportation is also a big opportunity for TETRA."

African utilities and the energy sector, in particular, where SCADA (Supervisory Control And Data Acquisition) is used by a number of agencies for remote monitoring and control with TETRA as its bearer, also presents major opportunities for the technology for many years to come.

Some Southern African TETRA specifics

Currently, SA operates a major PS TETRA network operating in the 380MHz-400MHz band, with other surrounding Southern African nations having also embraced TETRA.

In the Western Cape, the SAPS network has 15,000 users and provides coverage for the Cape Metropolitan Area with infrastructure provided by Motorola at 14 sites. In the city of Cape Town itself there are a further 15,000 users with 32 Motorola infrastructure sites. At Cape Town Airport, an undetermined number of users rely on TETRA provided at two sites by Airbus Defence & Space (DS) Secure Land Communications. In Gauteng Province, Motorola TETRA infrastructure at 68 sites provides the service for 35,000 subscribers,

with a further 8,500 users supported by Rohde & Schwartz TETRA infrastructure. In Johannesburg Rohill infrastructure at 13 sites supports some 500 users.

In neighbouring Botswana, PS coverage for the police force is provided along the main A1 route by Motorola with 27 sites supporting some 3,000 users. The office of Botswana's President also uses TETRA for its security and close-protection activities. The country's Jaweng Diamond mine - the eighth largest diamond mine in the world with an annual average output of 12-15mn carats per annum but with reserves that make it the richest diamond mine in the world - also uses TETRA

infrastructure provided by Motorola at five sites to provide services to 1,500 users. The Goedgevonden coal mine in north-west SA, also uses TETRA infrastructure provided by Motorola at five sites to provide service for 1,000 users.

Over the border in Namibia, the Namdeb diamond mine also uses TETRA provided by Motorola infrastructure at 13 sites supporting 1,400 users. The Namibian Government in Windhoek also uses infrastructure provided by Artevia at 16 sites to support 1,000 TETRA users in the capital and when en route to and from the airport. ©

Tim Guest

Wine region's TETRA reinforcements

AT TIME OF going to press, Airbus Defence and Space has just announced that it will equip police and firefighters in the Stellenbosch Municipality with P8GR pagers as well as TH1n, THR9Ex and THR880i radios over the next five years. According to the company, the mission-critical radio terminals will enable PS personnel to communicate more safely and efficiently over an area that covers about 830sqkm. Markus Kolland, head of sales for Europe and Africa at Airbus DS Secure Land Communications, said, "Stellenbosch's order is important for us as Africa is the future continent for secure professional mobile radio technology."

He added that Stellenbosch's administration chose different TETRA terminals for each PS service, the fire brigades adopting the P8GR and THR9Ex and traffic police the TH1n. Other departments will use the THR880i. The TETRA P8GR pager enables secure two-way communication between the control centre and operational units, offering all essential TETRA features for alerting, such as group calls. The slimline TETRA radio TH1n is the thinnest and lightest TETRA terminal in the world, and the robust THR9Ex can be used in hazardous, explosion-prone environments.

Hytera showcases oil & gas solutions in Ghana

PROFESSIONAL MOBILE RADIO (PMR) solutions provider Hytera showcased its latest digital two-way radios and oil & gas solutions at the 2016 Ghana Oil and Gas Summit 2016, held recently in Accra.

Hytera attended the two-day event together with its local distributor ACT-ICT Ghana. The company displayed its radio portfolio and innovative applications in the expo. Customised radio communication solutions provided by Hytera can be used in various situations, such as oil exploration, on & off shore oil & gas sites management.

One-stop solutions offered by Hytera have rich functions and features, such as high-level encryption, flexible dispatching, Geo-fencing, man-down alarm, GPS tracking and so on. The quality of the firm's products and solutions drew numerous visitors during the Ghana summit.

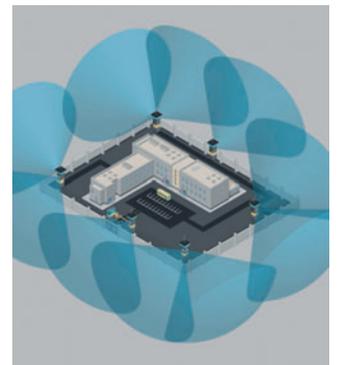


Cobham achieves a first in spiral antennas

A SUPPLIER OF advanced, ultra-reliable integrated systems for avionics, radar, surveillance and Satcom applications, Cobham Antenna Systems has launched the FPA-0.7-2.7R/2319, the first in a new range of high power, directional spiral antennas.

The FPA-0.7-2.7R/2319 offers high power, high gain and circular polarisation within a compact, low profile, rugged housing. It is suitable for multi-band communications as well as cellular countermeasure and security applications. The low profile housing means that this antenna can be used to replace much larger and more expensive, Log-Periodic, Horn or Conical spiral antennas and also be used in situations where height/profile is critical.

The FPA-0.7-2.7R/2319 covers the frequency range 700MHz to 2.7GHz and has a beamwidth of 60° x 60°. It has a peak gain of 10dBiC and has been designed to handle up to 150W (with the potential of operating efficiently at much higher power). The combination of high power and high gain means that a very



significant Effective Isotropic Radiated Power (EIRP) can be generated to increase signal strength to overload any hostile system at greater distance.

The narrow beamwidth helps to ensure that the disruptive signals are targeted where they need to be while reducing the effect on friendly areas. Providing circular polarisation ensures that the antenna will 'couple' with any polarised linear signal, giving more chance of disrupting hostile systems.

The high power spiral range currently includes four products covering 0.4 - 6.0, 0.7 - 2.7, 1.7 - 6.0 and 2.0 - 5.9 GHz.

Innovations and innovators in equipment and services

The latest machines, devices, software and suppliers at NAB, the 2016 global broadcast showcase in Las Vegas



TRADER SHOWS LIKE NAB, IBC and their various regional equivalents used to figure high in the calendars of broadcast channel managers and senior engineers. Less so now that the main stories can often be found online, filed by eager reporters on a daily or even hourly basis. Diligent Communications Africa/Afrique readers will therefore already know that the 2016 NAB Show (Las Vegas, April 18-21) was dominated by increasingly affordable 4K cameras and, perhaps less predictably, so called 'virtual reality'. Head-worn video displays allowing individual viewers to choose whether to look left or right, up or down. It is a nice concept even if hitherto confined to video games. I first tried one some 20 years ago at a games arcade in London, in the UK. It proved a memorable experience because the attendant had difficulty removing the display from my head after the event.

VR headsets are becoming seriously inexpensive which is good but are still seriously low resolution which is bad. Most of the VR demonstrations at NAB used a 1920 x 1080 resolution mobile phone as the display device, delivering approximately 1000 x 1000 pixels to each eye. A million of anything sounds generous but a million pixels in a regular square mesh is far below human visual resolving power so the effect is like viewing the world as a coarse mosaic. One exhibitor

integrated a 4K Samsung phone into its headset, displaying a more impressive 2000 x 2000 pixels per eye. Even then, pixilation was visible on bright areas of the image.

This is very good news for an industry keen to promote not just 4K but 8K television formats. Better still, Samsung is talking about starting work on 11K displays.

Traditional flat-panel screens seen from a metre or more away do not demand such high resolution but VR using head-worn close-up displays emphatically does. VR will be an interesting niche to track over the next three to five years, both in 2D and, if I dare mention it, 3D.

NAB offered interesting insights into the ways in which broadcast technology is developing over the long-term. There were several presentations at the event, which served as indicators of current and future industry progress.

IP and scalable video performance

NewTek Inc president Andrew Cross and colleague Stephen Bowie addressed the issue of IP and scalable video performance. In a jointly-prepared presentation, they observed, "Video over IP represents one of the most fundamental and far-reaching transitions that our industry has ever seen. It will have far more profound impact at all levels of production than mundane factors such as resolution and frame-rate that have often

preoccupied us previously. Unlike SDI and other video-specific cabling, what makes IP so different is that infrastructure already exists in almost every building in the world, fibre connects these all together and cable, radio and satellite bring connectivity to even the most remote places on the planet."

In order to accommodate the need to work within existing infrastructure and the fact that allowing people to innovate and enable software approaches to multi-stream live video over IP without license fees, NewTek launched its NDI initiative. Solutions such as ASPEN and SMPTE 2022 take a more traditional broadcast approach, but these probably require infrastructure upgrades.

And IP's bi-directional nature makes it a superior offering over traditional video communications systems in other ways. By eliminating constraints on device input and output counts, it enables intelligent resource usage, and multiplies available content and sources exponentially.

As Cross and Bowie note, "IP offers spatial and temporal scaling far beyond any other current technology. We also considered the inevitability of the shift from specialised solutions to general purpose infrastructures. IP's adoption is driven by the unstoppable momentum of consumer economics. Doing so, in turn, positions us to take full advantage of the amazing tools that consumer markets have built (and will yet build) for our own ends."

Topics and tips for live IP production centres

Mike Ellis of the BBC delivered a advisory presentation on live IP production centres. According to Mr Ellis, “The broadcast world has grown up with a number of bespoke standards designed specifically around its needs. For example, HD-SDI specifies everything from the number of pixels in the image and the sampling rate of the audio right down to the impedance of the cable used to carry the signal. As we have moved from SD to HD to full-HD to UHD, the SDI standard has had to be re-implemented all the way from the top to the bottom to support the new format, thus ‘SDI’ today is actually a suite of more than thirty vertically-integrated and largely non-interoperable standards.”

Moving the production process toward an IP-based solution will enable the flexibility needed to evolve underlying infrastructure over time rather than revolutionising architecture with a “big-bang” approach every few years. It is even better if ‘standard’ network equipment can be used rather than ‘video-specific’ or ‘audio-specific’ variants, so that there are significant IT cost advantages.

As Mr Ellis noted, “The potential advantages from moving toward an IP-based production environment are manifold, including:

- **Flexibility to support emerging content standards:** (different picture and sound formats as well as different content formats such as 360-media and non-linear content) with a common infrastructure
- Improved support for remote working, allowing teams to work together regardless of geography
- Migration to commodity IT hardware instead of expensive, bespoke equipment.

To achieve this, however, a number of challenges still need to be addressed, including:

- Maintaining the technical quality of the content
- Securing the content from malicious or accidental abuse
- Delivering acceptable levels of reliability and resilience

- Developing the techniques to make use of the technology as simple and intuitive as the SDI- and AES-based solutions – the IP equivalent of a patch-panel
- Developing the tools and techniques required to quickly identify and rectify failures

According to Mr Ellis, “The industry also needs to build the skills base available to it. We can no longer afford broadcast engineers who know nothing about networks any more than we can have network engineers who know nothing about broadcasting.”

High dynamic range

Saurabh Mathur and Erik Reinhard of Technicolor spoke at NAB on the theme of high dynamic range. Their presentation included the idea that the “deployment of HDR video services will involve upgrades to all currently available media delivery mechanisms, including (live) broadcast, Internet streaming, physical media (Blu-Ray), satellite and cable distribution” and that “HDR content can be captured using a camera, or can be computer-synthesised”, as “VFX production adds computer-generated content to previously captured footage” and “capture devices are rapidly becoming more powerful, with the likes of Arri, Red and Sony marketing cameras that produce around 14 to 16.5 claimed f-stops of dynamic range”. In practice, several f-stops are lost due to noise.

Controlled equipment upgrades

Upgrading to an HDR display is not always necessary. Expect to see a mix of SDR and HDR devices co-existing for the foreseeable future. Distributors will be required to simulcast SDR and HDR versions of the same content, unless some form of a backward-compatible distribution scheme is deployed. Backwards-compatible solutions allow the same stream to be played back on SDR and HDR devices.

According to Mathur and Reinhard, “Traditionally, there is no control over the illumination in the home, but now colourists and directors have even less control as to how

their material is displayed and enjoyed. Conveying the director’s intent is therefore becoming more difficult as more high-end displays come onto the market. As a result, there is a need to apply some form of display-specific re-grading somewhere along the chain of processing. In addition to dynamic range management, this may involve colour volume processing. Consumer-side processing would be a good way to serve highly capable consumer displays in the interim while the remainder of the video pipeline is being updated, and fresh HDR content is in the making.”

4K/8K HDR broadcasting

Yukihiro Nishida and colleagues at NHK used NAB to provide an update on 4K/8K high dynamic range broadcasting. He said, “In Japan, we are going to launch 8K/4K HDR television broadcasting via satellite in 2016. The specifications for HDR have been included in a series of standards for ultra high definition (UHD) television broadcasting. We have adopted two HDR TV systems: Hybrid Log-Gamma (HLG), as specified in ARIB STD-B67, and Perceptual Quantizer as specified in SMPTE ST 2084.

“Among key devices for the success of 8K broadcasting are HEVC decoders for receivers. NHK and Socionext have jointly developed the world’s first HEVC decoder LSI for 8K. Socionext is also developing various components necessary for fabricating 8K/4K receivers. NHK and Sharp have jointly developed the world’s first 8K LCD TV capable of displaying HDR pictures.”

Next year at NAB

Taking place next year from 22-27 April, NAB Show will again cover the latest practices and solutions. In 2017, the media and entertainment industry will demonstrate technological innovation to extend content creation and management in digital ecosystems. ☺

David Kirk



It's time for advertisers to become 'au fait' with French speakers

The growth of digital for francophone audiences in Africa, what advertisers can learn about their behaviours, and how they can use this insight to target key markets

AMONGST THE MANY springtime celebrations, there is one which is little known to the general public, but nevertheless close to the hearts of French speakers living overseas: la fête de la Francophonie. Every year cultural events are staged worldwide to celebrate the richness and vibrance of French-speaking across the five continents. Participants in dozens of cities as diverse as Oslo, Abidjan, Los Angeles, or Tokyo, can join and enjoy movie projections, theatre plays, music concerts, book fairs, word games, and plenty more festivities, all united through their love for the language.

A matter of style

With English deeply-rooted as the primary language in the global business landscape, culture is the main incentive to study and learn French for non-native speakers today. France is the most visited country in the world, it is world leader in luxury goods, with a strong reputation for style, good food and fine wine. In the Soft Power rankings compiled by PR firm Portland, in association with Facebook and research company ComRes, the country ranks third in the fields of culture - behind the US and the UK - and first for engagement with the global community. According to Ipsos Affluent Survey 2015, a third of high-income Europeans practice at least two foreign languages and 36 per cent of them enjoy watching foreign channels. Importantly, French is the second most widely known language outside of Francophone countries (France, Switzerland, Belgium, Luxembourg), with an overall penetration of 19 per cent. It ranks highest in Southern Europe, noticeably Italy with 38 per cent of French-speakers in the affluent population. And in English-speaking countries it remains the primary foreign language learned. For advertisers seeking educated, cultured individuals, then, primary and secondary French speakers should be a key demographic.

For instance, the research shows that people who use French as a secondary language, are more likely to hold masters degrees and to travel frequently: 19 per cent made six or more international air trips in the past year vs 13 per cent for the total survey universe. They also enjoy higher than average personal income, and are more prominent in top business positions (C-suite).

Community and culture

The cultural appetite of the French-language community is confirmed by the Ipsos survey, with higher than average visits to cinemas as well as to museums and art galleries amongst foreign speakers. Interest for French culture and lifestyle extends well beyond the Francophone community, with a large population of French speaking audiences in Asia and the

Middle East for example.

However, the largest growing French-speaking audience which is fuelling interest from advertisers is Africa.

The Paris-based Organisation Internationale de la Francophonie (OIF) estimates that 212mn people around the world are born and bred speaking French, with 55 per cent of them living in Africa. For demographic experts, the continent is expected to account for more than half of the population growth over the next three decades. If the education targets are met, the French-speaking population could treble and reach 650mn by 2060 according to OIF.

Still the main demographic hotspot will be Nigeria, currently the seventh largest country in the world but with a population which at current rates is expected to grow the fastest according to the UN. As a result, it could overtake the US as the third most populated country by 2050!



Franck Buge, board member of the inTV Group and research director at TV5Monde

The combined effects of a rise in population and income power will fuel the appetite for consumer goods and household equipments throughout Africa. According to Celia Collins, Managing Director at Carat Johannesburg, many global and large regional marketers – like P&G, Coca-Cola, General Motors, Woolworths, Old Mutual, Diageo, Peugeot – who are targeting and expanding through the development and building of major production plants, will continue to invest heavily into their advertising on the continent.

This is why at TV5Monde and France 24 we have seen a 70 per cent increase between 2011 and 2015 in spend on sponsorship and advertising from African advertisers, with notable brands being Castel Beer and GSK, along with banks and government institutions. They are using international channels like ours to reach African audiences as there are strict regulations in Africa and there is no advertising on national stations. International channels provide a way around these issues and a direct route to affluent French speakers across the globe.

Using international media campaigns (rather than multi-national campaigns that target multiple countries via a number of national channels) can also be more cost effective because there are fewer buying points to deal with and less creative is required (see www.intvgroup.org for a useful guide on planning international campaigns).

As the influence and spending power of French speakers increases, it seems it's time for advertisers to say 'Vive la Révolution' and embrace the opportunities for reaching Francophones. ©

Franck Buge, board member of the inTV Group and research director at TV5Monde

SES Platform Services and K-NET collaborate on digital switchover and satellite channels for West Africa

A SUBSIDIARY OF satellite operator SES, SES Platform Services (SES PS) has strengthened its partnership with K-NET, an ICT and Telecoms platform services company based in Ghana, to create a joint venture. The new partnership will contract SES capacity, SES PS's and K-NET's services, and aim to bring high picture quality content to the homes of millions of viewers by strengthening the direct-to-home (DTH) platform and also providing digital terrestrial television (DTT) services via SES's prime orbital position at 28.2 degrees East.

“We have built a robust DTH platform, and delivering content in consistently high-quality is a top priority for us.”

- Richard Hlomador, chairman, K-Net

The joint venture will use SES's high-powered satellite capacity, K-NET's highly-efficient teleport services and SES PS's reliable video platform services. This partnership will offer a unified bouquet of high quality free-to-air (FTA) and free-to-view (FTV) channels, from all over West Africa, as well as some popular international channels, to millions of viewers in the region.

The partnership will ensure that consumers, especially in Ghana where 98 per cent of satellite households are serviced by SES satellites, receive newer and higher quality viewing formats and also have access to connected services when they become available.

Wilfried Urner, CEO of SES Platform Services, said, “We are proud to be K-NET's partner of choice. We are at the forefront of the provision of FTA and FTV channels in the sub region and driving further DTH penetration in various West African countries. The partnership will

further accelerate the globalisation of SES's video business, increase our channel growth and establish us as a world-leading next generation video and media service provider.”

Richard Hlomador, chairman of K-Net, added, “We have worked with SES since 2001 and are pleased to be able to extend our partnership with SES Platform Services. We have built a robust DTH platform, and delivering content in consistently high-quality is a top priority for us. This makes SES Platform Services the ideal partner of choice.”



SES Platform Services and K-NET are working together to provide quality satellite channels for West Africa audiences

CTO Secretary-General calls on African countries to meet their digital obligations

IN HIS OPENING address at the Digital Broadcasting Africa Forum 2016, held recently in Lagos, Nigeria, the Secretary-General of the **Commonwealth Telecommunications Organisation (CTO)**, Shola Taylor called on African countries to meet their obligations from treaty agreements they have signed up to for ICTs.

“The region should put greater effort at meeting obligations from treaty agreements that they sign up to and in this case, they must accelerate the completion of the digital switchover process. Among other things, they must address the key challenges of funding, adequate regulatory frameworks consistent with new digital multimedia services, as well as the need for effective coordination with their neighbours,” said Mr Taylor.

Mr Taylor also called on African countries to better value spectrum as a public good. “One obvious lesson from this process is that with continued advances in radio transmission technologies, we increasingly realise how valuable spectrum is as a finite resource, and regrettably also, how undervalued it has been in some parts of the region. So, whenever possible, while it is countries' sovereign right to use spectrum as they see fit, it is our view that it must be made available on sound economic grounds first, including for the broadcasting sector itself,” Mr Taylor added.

Speaking about the purpose of the event, Mr Taylor said that it was aimed at reviewing the current state of digital migration in Africa and reflect on emerging trends in digital broadcasting and their likely impact on the continent's broadcasting sector and on its economic development. To provide practical support to the region on spectrum valuation, Mr Taylor also announced a series of activities in support of member countries in the region, including a workshop to take place in August in South Africa on spectrum auctions and a forum on spectrum management to take place in November in Cameroon.

BON Cloud debuts license-free Chinese content for African broadcasters

A CHINA-FOCUSED GLOBALLY integrated content archive, launched to serve Asian broadcasters in 2014, the **BON Cloud** media platform is now available in Africa. Built as a one-stop-shop international media solution for producers, publishers and broadcasters, BON Cloud boasts an active database of more than 6,000 international media professionals downloading, re-editing and re-purposing BON Cloud created assets every day, resulting in the production, to date, of more than 4,200 short videos.

“The purpose of BON Cloud is to provide access to fresh, professional China-related content to content acquisition professionals, editors, and producers, across Africa's 54 nations, and license - free,” explained Ash Bowkett, VP, international business development at BON Cloud. “Across Africa, audiences and industry alike are showing increasing interest in China, whether as a strategic development partner, for international trading purposes, or as a holiday destination. We are strongly positioned as the only non-news China-content provider source for Africa.”

While the **Associated Press** and **Bloomberg** already source culture and business content and footage from BON Cloud, hundreds of television broadcast stations and websites around the world also access the platform when they require a China story. BON Cloud is currently being used by traditional and digital broadcasters to:

- Locate broadcast-ready video content
- Obtain media packages for reproduction
- Add extra multicultural segment value to the broadcast output
- Directly utilise mainland China-based production services

Autour de la souveraineté de l'Etat tunisien

Avec Eutelsat, la Tunisie étend la diffusion de son nouveau bouquet gratuit de télévision par satellite

L'OPÉRATEUR EUTELSAT COMMUNICATIONS a signé un contrat pluriannuel de location de capacité avec l'Office National de la Télédiffusion (ONT) tunisien sur le satellite Eutelsat 7 West A pour diffuser en clair un bouquet gratuit de télévision. Ce bouquet est dès à présent accessible aux foyers équipés en réception satellite en Afrique du Nord et en Afrique de l'Ouest.

Un pôle audiovisuel de référence

Cette location procède de la volonté de l'ONT de consolider l'offre de chaînes tunisiennes actuellement diffusées en Afrique du Nord. L'ONT a ainsi regroupé une dizaine de chaînes existantes au sein d'un seul et même bouquet satellite, à la position 7/8° Ouest, position phare pour l'audiovisuel dans la région.

Une offre de chaînes étendue à l'Afrique de l'Ouest

A travers ce bouquet, la diffusion actuelle de ces chaînes va être étendue à l'Afrique de l'Ouest. Par ailleurs, les foyers d'Afrique du Nord et de l'Ouest équipés d'une parabole pointée vers 7/8° Ouest pourront bénéficier d'une qualité d'image en progression et d'une navigation facilitée à travers les chaînes.

Nôomèn Elfehri, Ministre des Technologies de la Communication et de l'Economie Numérique, a déclaré : « Le lancement de ce projet national traduira la souveraineté de l'Etat tunisien dans le domaine de l'audiovisuel. Un très grand nombre de téléspectateurs va pouvoir apprécier la variété et la qualité des contenus proposés par les chaînes tunisiennes. »

La diffusion des programmes

Créée en 1993, l'ONT est une Entreprise publique à caractère non administratif, doté de la personnalité civile et de l'autonomie financière et placé sous la tutelle du Ministère des Technologies de la Communication et de l'Economie Numérique. Sa mission est d'assurer la diffusion des programmes radiophoniques et télévisuels et ce par la création, l'exploitation, l'entretien et l'extension des réseaux de diffusion de ces programmes, le contrôle et la protection de la qualité de

la réception, la conduite des études et recherches sur le matériel et les techniques de radiodiffusion et de télédiffusion, la promotion et la coopération avec les organismes techniques internationaux et étrangers et en coordination avec les institutions nationales concernées.

Il diffuse actuellement 9 chaînes appartenant à la radio tunisienne (centrales et régionales) sur les réseaux de modulation de fréquences et sur les ondes moyennes. A partir de 2011, et avec la libération du secteur de l'audiovisuel en Tunisie, le nombre de chaînes radios privées autorisées s'est multiplié. Pour y répondre, des réseaux de diffusion de ces programmes en FM ont été installés et on dénombre à présent 21 radios privées.

L'extinction de l'analogique

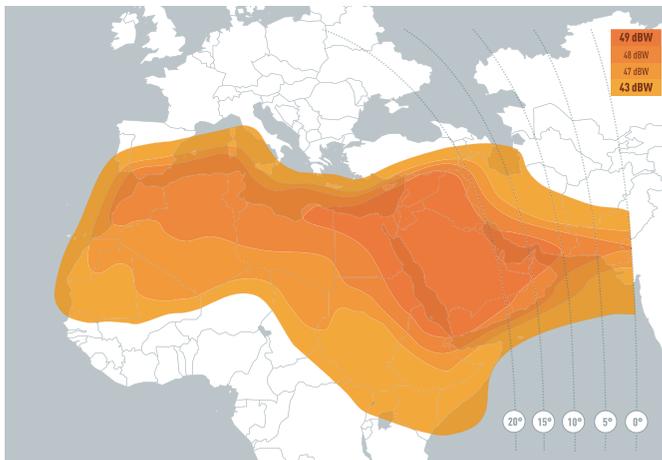
Pour garantir un passage à la TNT et l'extinction de l'analogique (prévue mi 2016) un plan de transition a été mis en place, l'ONT diffuse actuellement 9 chaînes tv privées à titre expérimental.

Pour assurer l'ensemble de ces services, un effectif avoisinant 600 personnes et une centaine de sites d'émissions et de réémissions sont répartis sur tout le territoire. Les sites de diffusion principaux sont reliés entre eux et au centre de distribution et de contrôle de l'image, du son et des données appelé centre nodal de Tunis, par un réseau FH de grande capacité et d'une longueur de 4000 km environ.

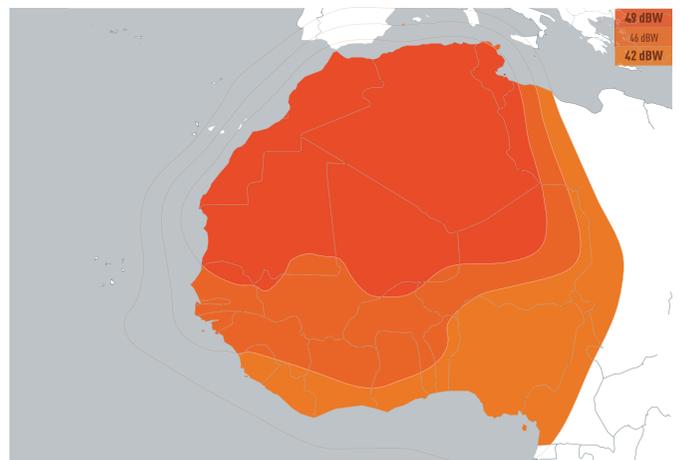
Une collaboration renforcée entre Eutelsat et l'ONT

Dhaker Baccouch, Président Directeur général de l'ONT, a ajouté : « En faisant le choix du satellite Eutelsat 7 West A, nous faisons bénéficier les téléspectateurs d'une meilleure qualité d'image sur un nombre de chaînes qui a vocation à croître. »

Michel Azibert, Directeur commercial et du développement d'Eutelsat, a ajouté : « Ce nouvel accord de l'ONT avec Eutelsat vient renforcer les capacités satellitaires que l'ONT a déjà déployées sur trois de nos satellites, Eutelsat 12 West B, HOT BIRD et Eutelsat 36B, pour des services allant du rapatriement de reportage à la diffusion audiovisuelle à destination du grand public. »



Middle-East/North African Ku-band coverage of EUTELSAT 7 West A



North-West African Ku-band coverage of EUTELSAT 7 West A

'Despite economic turbulence, there's a hunger for power'

Ann Brown, managing director of FG Wilson, speaks with Communications Africa on how the company went on to become one of the firebrands in the genset industry today

Communications Africa (CAF) tell us a bit about the history of FG Wilson?

Ann Brown (AB): We were founded in 1966 by Fred Wilson. A true entrepreneur, Fred saw opportunity for generator sets amid the economic chaos of the early 1970s, and in the 1980s, under the leadership of his son Tom, FG Wilson was among the first to bring mass-scale production to generator sets, launching self-contained generator sets, which were simple to buy, operate and easy to install.

They say it's important to be in the right place at the right time but equally important is how you act when you see that opportunity. Both Fred and Tom had the vision and the willpower to make the most of the position they were in.

CAF: What changes do you see coming in the generator set industry?

AB: Certainly over the last five to ten years, we've seen engines become more environmentally friendly and efficient and that has helped to drive down the cost per kVA of generator sets which has been good for customers.

Twenty years ago if you'd asked us about industry structure, we'd probably have said that the industry was likely to consolidate, with two or three big global players, operating with economies of scale occupying the greater part of the world market and the rest of the business fragmented into many smaller players. Yes, today there are a handful of global generator set brands, of which FG Wilson is one, but there has also been an explosion in the number of regional players, packaging locally, and riding on the reputation of the engine brands which they package into their products. These local packagers can be very cost-competitive and it's given customers more choice.

But in the next five to ten years, we see customer expectations rising in terms of product quality, performance and support. It's going to be common across all industries. The mentality of price-is-everything and sell-and-forget will always be there in a part of the market but overall we see expectations rising.

CAF: Is this where you are putting emphasis?

AB: Yes very much. It's about more than just putting metal together.

Since 1990 we've installed 600,000 generator sets with a total installed capacity of almost 90GW – more than the total installed mains electricity capacity of a country like the UK. In Africa, we've installed over 130,000 units with a total capacity of over 12GW, double the total installed mains electricity capacity of Nigeria. With that number of machines operating across the world, we take no risks with quality or performance. Assembling a generator set isn't difficult, which is why we're seeing many new players today. The real value comes in the testing and validation before a product launch. We don't accept engine performance data without validating it ourselves in the environmental conditions which our products will see. When someone buys one of our products, we can safely say that wherever it will be operating, it will have been tested for that environment.

Also important is the way a generator set is sold. We have worked tirelessly to grow and develop a global network of over 300 distributors who offer automotive industry levels of service starting with product selection through to installation and a lifetime of support. They're



FG Wilson managing director Ann Brown

trained by us and supported by our parts system which stocks over 11,500 parts and delivers three million parts a year, not only for our current products but also for legacy products.

Product testing, validation, establishing dealer channels and support are more difficult to do well and over the last 50 years we believe we've invested more time and resources in all of these than most other generator set brands.

The generator set industry isn't living on an island all on its own. More and more it's feeling influence and behaviours from other industries. We all expect more from what we buy. And that is going to drive change and scope for new products and services.

CAF: You mentioned the environment earlier. Does renewable power enter into your plans?

AB: It's certainly in our thinking. Today in terms of cost per kVA, flexibility and responsiveness, there's no better source of standby power than a diesel generator set. However, our parent company Caterpillar has entered the microgrid market and is actively selling integrated systems where you might have solar panels, batteries, wind turbines and generator sets all linked and capable of powering remote settlements. In regions like Africa and Asia, this has huge potential.

CAF: And you see great potential for the generator set industry?

AB: Yes, definitely. All of us in the industry are feeling some economic turbulence right now, but there will always be a growing and insatiable need for electric power. As the world goes more digital, we're going to see exponential growth in demand for electric power and for systems which act as standby for mains failure. ☺

Keeping telecoms talking

Spanish genset manufacturer Himoinsa has a range of gensets dedicated to the telecoms industry that have been making their mark in Africa

OFTEN LOCATED IN isolated and difficult-to-reach locations, telecom towers and their operations have to rely on backup power systems such as gensets, to ensure the vital services they supply can continue unabated. The remote nature of these towers can mean that the period between engineer visits can be long and therefore the power systems they rely on need to be efficient with a reduced reliance on maintenance.

Speaking to *Communications Africa* at Middle East Electricity, an annual power industry trade fair held in Dubai earlier this year, Agustín Rodrigo, network development manager at Himoinsa, said, “We have a specialist range for the telecommunications sector, featuring high-capacity fuel tanks and maintenance of up to 1,000 hours. We can reduce the customers’ expenses, because if you’re using a genset in a remote place, the most expensive factor is sending an engineer to maintain that machine. The labour and the cost of transporting that labour to the remote places that many of these towers are located in Africa can be quite high.”

Himoinsa’s telecom range of gensets feature GPS systems to ensure that the machines can be located at any time, as well as fuel level alarms and remote management and remote control features, enabling the operator to record real-time data and generate reports about each power systems’ operation.

In order to meet the unique demands of gensets for the telecoms sector, especially in Africa where access can often be tempered by a lack of road infrastructure and difficult climatic conditions, Himoinsa has introduced a number of Hybrid Power Solutions (HPS).

The HPS 1500DCV and HPS3000DCV hybrid generator sets feature variable speed engines, which Himoinsa has said would guarantee a 40 per cent fuel consumption savings when compared to a standard generator set. Both models also offer a 20 per cent fuel saving when compared to other fixed-speed hybrid generators sets available on the market, according to Himoinsa.

“If the conditions are dry and very hot, we use lithium batteries that can work in temperatures of up to 55°C, and we can also add a small air conditioning unit inside the genset to help keep the interior cool,” explained Rodrigo.



Photograph: Himoinsa

The latest genset models from Himoinsa’s telecom range help to reduce maintenance time and are able to overcome difficult climatic conditions

The canopies of Himoinsa’s gensets include an internal lining of rock wool, offering added protection and soundproofing, and all of its gensets have been rated IP23 and have undertaken water testing under European regulation IEC60529.

“For our hybrid telecoms range we have developed our own electronics, and through the DC generation we can directly charge the batteries,” said Rodrigo. “Under the canopy there is a renewable energy box into which we can connect 9 kW of solar PV panels. Everything is managed by our own designed and manufactured control system.

“Another thing that makes the difference between our competitors and ourselves is the variable speed engine. We are using a Yanmar engine, but with a variable speed. When we are charging batteries we have different demands for power, and that is dependent on the charge of the batteries. A standard genset runs at fixed speed, but with our system we are managing the RPM of the engine in order to achieve the same fuel consumption between 2-15kW. It stays consistent, so we are saving fuel and costs.

“We are using Yanmar engines, which are very good, heavy engines, with high efficiency, and we’re using our own canopies that feature high-quality paint, insulation, waterproofing and corrosion protection – everything inside the canopy is well protected,” Rodrigo noted.

“The remote control and monitoring means we can help engineers save time as they are aware of the problems before they get to the machine,” Rodrigo stated. “And these gensets can be monitored from anywhere in the world, no matter where they are located. If you are a company operating throughout Africa, you can have a monitoring centre in one location from where you can send instructions to an engineer in Kenya, in Nigeria or in South Africa with information on the repairs that may be required to the genset.”

“The cost of transporting labour to the remote places that many of these towers are located in Africa can be quite high.”

Also for the communications sector, Himoinsa offers generators for applications in data centres, with the company’s technology installed in a number of data centres worldwide. The company said its gensets offer superior reliability and uninterrupted power – vital when keeping data in these facilities protected and accessible, and ensuring power supply is continuous. ☺

Tapping the mobile money market potential

By managing risks of fraud effectively through human skills and processes, operators can attract a bigger customer base in the continent

ACCORDING TO THE World Bank, the number of unbanked individuals dropped 20 per cent between 2011-2014. However, despite this, a huge 38 per cent of the global population is still without a bank account. With so many unbanked, the recent industry developments in mobile money have been key for operators in developing regions, enabling them to bring the concept of a bank to those who have not previously had access.

Similar to going to a bank to take out money, a mobile wallet gives users the ability to remove all of their savings and take them on the go if needed, or to transfer this money to relatives all over the world. Mobile money provides huge opportunities to unbanked people, giving them access to vital financial services, and is steadily gaining momentum across large numbers of developing regions. In sub-Saharan Africa, the initiative has gained rapid traction, with the region being the only one in the world where more than 10 per cent of adults have a mobile money account.

Despite mobile money's many advantages fraud is rife, meaning that operators in Africa still have a lot of work to do to protect vital revenues.

The challenges for operators

Some of the biggest issues surrounding mobile money in developing regions such as Africa stem from operators using legacy systems and processes, which have traditionally not included the necessary tools to regulate fraud, coupled with increased risk of highly sophisticated hackers. Mobile money, like voice or messaging, requires processes, tools and opportunities to monitor and regulate its services, and regulatory bodies can prove invaluable in helping to prevent fraud and protect revenue. While regulatory bodies exist in most African regions, there are still a few countries such as Somalia, Sudan and Libya, which are less regulated, or which opt not to enforce regulations, making it much easier for fraud to run rife.

Fraud issues are further compounded by the fact that a large number of operators in the region lack the necessary tools to identify fraud. Instead, human skills and processes are needed to combat this issue, and since

fraudsters are becoming more advanced, it is more important than ever that operators adapt their approach and deploy fraud management software to underpin human efforts.



Mobile money provides huge opportunities to unbanked people, giving them access to vital financial services, and is steadily gaining momentum across large numbers of developing regions (Photo: WorldRemit Comms/Flickr)

On the other hand, being a less mature market also makes mobile money potentially lucrative to telecoms providers in the region. However, while providing these opportunities, market immaturity can also be a contributing factor in driving high instances of fraud. For example, technical limitations can lead to increased exposure to fraud. Unlike banks, mobile operators often have less experience of processes, making them an easy target for fraud schemes and revenue loss. Instead, mobile services today rely on agents. They start acting like branches of banks, with operators starting to provide cash-in/cash-out payment transfers, similar to how traditional banks and agents provide a service to the end-customer. So to put money into their wallet, users need to go to a dealer to pay-in/out, subject to commission. Many mobile money services also transfer to the dealer and then lose out on the commission. To compete, they now need to focus on finding alternative ways to make commission e.g. transactions to increase commission.

From an international point of view, many less mature operators have low fraud prevention procedures in place. In a bank, for example, a regular bank employee will have limited access to customer data, depending on their role within the organisation. This behaviour is not standardised within many operators, and many examples of fraud related to mobile money comes from internal fraud, with fraudsters able to take money from different accounts and drain the money that is there. This happens as the oldest risks were not assessed, and since this service lacks margins compared to other services, the risk is much higher.

Mobile data: business opportunity

When fraud risks are managed effectively, mobile money presents a huge opportunity for both operators and the huge swathes of the population that are currently unbanked. In particular, regions with a lower GDP than Western nations, where the majority of people have a bank account, afford operators the opportunity to offer Value Added Service, while simultaneously driving benefits for subscribers.

However, for mobile money to reach its full potential it is vital that operators tackle fraud head on. If we take into account the billions of dollars of fraud taking place worldwide, its clear operators are losing vast amounts of valuable revenue and are at risk of inadvertently linking themselves with fraudsters and fraud scandals. In Africa, and in any region looking to maximise the success of mobile money, operators must therefore ensure that they first define rules and controls, and introduce software and structure processes to effectively mitigate risks and protect the bottom line. ©

Luís Moura Brás, senior professional services manager, fraud management, WeDo Technologies

Having joined the company at day one, Mr Brás has held several roles in WeDo Technologies' Product Development and Systems Integration teams. Prior to this, Mr Brás worked at the mobile operator Optimus, gaining 16 years' experience in the telecommunication industry.

Mettre la puissance des nouvelles technologies au service du développement

DES PARTIES PRENANTES des pouvoirs publics, de la société civile et de l'industrie se sont réunis récemment pour élaborer des stratégies propres à aligner les objectifs de connectivité à l'échelle mondiale, définis à Tunis lors du **Sommet mondial sur la société de l'information (SMSI)** organisé par les Nations Unies, sur les 17 Objectifs de développement durable (ODD) fixés par les Nations Unies, en vue de mettre à profit le potentiel de transformation des technologies de l'information et de la communication (TIC) afin d'accélérer le développement socio-économique dans le monde.



1 800 délégués du monde entier pour un seul but: transformer le monde grâce aux TIC

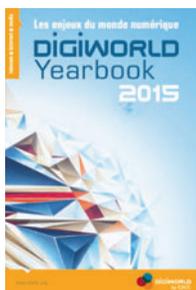
Plus grand rassemblement annuel à l'échelle mondiale de la communauté des "TIC au service du développement", le Forum du SMSI est une tribune mondiale unique en son genre et un élément à part entière du processus permanent du SMSI. Il est essentiel de fournir un accès aux TIC équitable et financièrement abordable, en particulier pour les pays en développement et les populations marginalisées, en vue de parvenir à édifier une économie numérique véritablement inclusive. Le SMSI est le cadre dans lequel les TIC sont véritablement mises au service du développement, des groupes de multiples parties prenantes du monde entier s'y retrouvant pour échanger des bonnes pratiques et créer des partenariats fondés sur la collaboration.

Le Forum est accueilli par l'UIT et organisé conjointement avec l'UNESCO, la CNUCED et le PNUD, en étroite collaboration avec les Nations Unies et d'autres institutions.

Le grand débat de l'internet et des médias

LE DIGIWORLD YEARBOOK s'est imposé depuis plus de quinze ans comme le rapport incontournable du think tank IDATE DigiWorld, qui, chaque année, présente une analyse des dernières évolutions que connaissent les marchés des télécommunications, de l'internet et des médias, et identifie les grandes tendances au niveau mondial et les scénarios pour le futur. À cette occasion, il organise un débat de prospective sur les tendances clés qui structurent l'économie numérique:

- Digital economy & Internet 2025 : La confiance comme accélérateur ou frein de la nouvelle économie numérique ?
- Télécoms 2025 : Quelle place pour les (opérateurs) télécoms dans la transformation numérique de l'économie ?
- Télévision 2025 : Sommes-nous en train de vivre l'avènement d'un marché mondial de la vidéo et de la télévision ?



ADVERTISERS INDEX

Company	page
ABS Global Ltd	7
Egatel	13
F G Wilson Engineering Ltd	5
Intelsat.....	2
Kirloskar Oil Engines Ltd.	36
Liquid Telecommunications.....	16
MEASAT Satellite Systems Sdn Bhd.....	9

La solution de paiement sécurisée pour les places de marché Internet

LEMON WAY EST un Paypal européen. En Afrique, il a déjà 700.000 clients locaux recrutés à travers 1.500 agents. Nous allons dupliquer la même recette sur une dizaine de pays africains rapidement.

À travers son API, Lemon Way offre une technologie de pointe en matière de paiement. Mais au-delà de son expertise technologie, Lemon Way vous offre une multitude de services complémentaires en terme de réglementation et de gestion.

La solution de paiement de Lemon Way contrôle le boarding de vos nouveaux marchands lors de l'entrée en relation, contrôle vos flux de paiement, sécurise les fonds non distribués et les cantonne sur un compte approprié. Elle bénéficie d'une expérience en Crowdfunding Prêt, en Crowdfunding Equity, et en Crowdfunding don ou récompense.

Acceptez de multiples moyens de paiement. Sécurisez vos paiements avec le 3D Secure sélectif. Lancez vos innovations mobiles dans le paiement pour Smartphone, le paiement en un clic avec mémorisation du numéro de carte bancaire, fluidifiez vos parcours de paiement avec notre technologie.

Les équipes de Lemon Way répondront à votre demande en vous demandant la formule la plus adaptée à votre activité. Ses services de paiement sont utilisés sur des sites Internet de eCommerce, des sites Internet de cagnottes et de cadeaux communs, des sites Internet de billetterie, de paiement de services entre particuliers, sites de petites annonces entre particuliers, ainsi que les nouveaux business liés à l'économie sociale et solidaire et à la nouvelle économie qui invente le futur : co-voiturage, location de voiture entre particuliers, co-location, paiement contre remboursement, paiement mobile par téléphone, Crowdfunding prêt, Crowdfunding don, et Crowdfunding Equity.

Subscription Form

I wish to subscribe to COMMUNICATIONS AFRICA for 1 year (6 issues) starting with the next copy.

NAME POSITION

ORGANISATION

TELEPHONE..... FAX

ADDRESS

COUNTRY.....EMAIL:.....

SIGN HERE IF YOU WISH TO RECEIVE REGULAR COPIES OF COMMUNICATIONS AFRICA (SUBJECT TO QUALIFICATION)

Email:Date

Please tick the most relevant box(es)

NUMBER OF EMPLOYEES IN YOUR ORGANISATION:

- 1 - 49 50 - 99 100 - 249
 250 - 499 Over 500

YOUR JOB TITLE/FUNCTION

- Corporate Management
 Government Executive
 General Management
 Technical Management
 Others, Please specify

YOUR INVOLVEMENT IN YOUR ORGANISATION

COMMUNICATION POLICY (Please tick all that apply): Do you:

- Initiate/plan communication strategy
 Evaluate/select suppliers
 Authorise purchase of equipment or services

YOUR BUSINESS

- 17 Communication service providers
 18 PTT/telephone organisation
 19 Network operator
 20 Broadcast (TV, radio)
 21 Government telecoms ministry
 22 Communication equipment manufacturer/supplier
 23 Communication service users
 04 Industry
 06 Financial services/banking
 24 Defence
 10 Transportation (airlines, railways etc)
 01 Government departments (not telecoms ministry)
 16 Other, Please specify

Other readers who do not meet our terms of condition and who are not in Africa may subscribe at the following rates:

- 1 year US\$124, £63, €93, N3500, KSH2200, R228
 2 years US\$211, £107, €158
 3 years US\$280, £142, €210

I enclose a cheque for payable to "Alain Charles Publishing Ltd" together with this form.

Please invoice me/my company.

Please charge to my credit card

Amex Visa Mastercard

Card number:

□□□□ □□□□ □□□□ □□□□

Expiry date: □□/□□

Security Code: □□□

(Please note that we will debit your account in sterling).

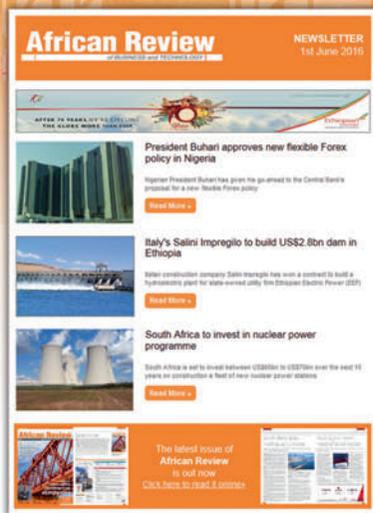
Signature:

African Review

of BUSINESS and TECHNOLOGY

Serving business leaders across Africa

For over half a century, **African Review** has been putting thousands of sellers in touch with buyers across Africa. They know that the magazine can reach the largest number of decision makers in business and government, targeted by a business magazine with an audited circulation.



Sign up for the **FREE**
fortnightly e-newsletter on
africanreview.com

Circulation claims independently
verified by ABC audit



**Alain
Charles
Publishing**
Serving the world of business

MENA Tel: +971 4 448 9260
ASIA Tel: +91 80 6533 3362
USA Tel: +1 203 226 2882
EUROPE Tel: +44 20 7834 7676

e-mail: post@alaincharles.com
web: www.alaincharles.com
www.africanreview.com



CONNECTING AFRICA



Kirloskar Green Gensets

POWER THAT YOU CAN DEPEND ON - ANYTIME, ANYWHERE

Testimony to the in-built excellence of Kirloskar Green Gensets is provided by the fact, that there are over 85,000 of them helping keep telecom towers across India up and running round-the-clock. Tried, tested and proven in one of the largest mobile telephony markets in the world, there are another 4,000+ gensets deployed in similar applications across Asia, Middle East and Africa. Obviously, when it comes to reliably keeping people and businesses connected around the world, Kirloskar Green Gensets have few equals.

Advantage user

- Largest selling genset brand in the 5 to 625 kVA range
- Reliable and complete power solution
- Sales, spares and service network across Africa
- High powered performance
- Unmatched fuel economy
- Easy and low maintenance
- Long lasting
- Low noise and vibration levels

DISTRIBUTORS

Ethiopia

Ultimate Motors PLC, ummarketing@ethionet.et

Ghana

West Africa Agro-Tech Company, rakesh@waatco.com

Malawi

HISCO House, mahesh@hiscohouse.com

Nigeria

Bhojsons PLC, pra1234@yahoo.com

South Africa

Kirloskar Engines South Africa (PTY) Ltd. kirloskarsa@tiscali.co.za

Sudan

CTC Group-Digitech Electro-Mechanical Business / Unit (DEM)
yahya.gasim@ctcgrupltd.com

Tanzania

Incar Tanzania Ltd., gm@incartz.com

Zambia

SARO AGRO Industries Ltd., amin@saroagri.co.zm

Head Office: Kirloskar Oil Engines Ltd. Tel: +91 20 66084424, Email: Milind.Panadare@kirloskar.com

Kenya Office: Kirloskar Kenya Ltd. Tel: +254 20 6536632, Email: rspatil@kirloskar.co.ke,

South Africa Office: Joburg Industrial Trading SA (PTY) Ltd. Tel: +27 (0) 115536900, Email: kirsons@kirloskar.co.za

'Kirloskar', 'Kirloskar Enriching Lives', 'Kirloskar Green Chilli Power Ideas' are trademarks owned by Kirloskar Proprietary Limited.



KIRLOSKAR
GREEN
POWER IDEAS