

ISSUE 50 | APRIL 2016

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MIDDLE EAST



THE EYE IN SPACE

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What a Show!

Welcome to the April edition of *SatellitePro ME*. Boy, what a month it has been. This year's CABSAT was beyond phenomenal. Not only did I have the opportunity to see live satellite feeds of 4K content, but also look at some of the most markedly changed ground equipment for HTS satellite feeds. This year, the satellite section of the show was concentrated in a single area, which made it easy for both industry folk and myself to easily manoeuvre through the halls. In its 22nd year, the regional exhibition has only gone from strength to strength, beginning as a Middle Eastern show for the broadcast and the satellite industry, to a show that spans the entire MEASA region.

With the dumping of capacity in Africa, and consistently falling prices, some operators confessed they were even operating at a loss. Others meanwhile felt that since the market is large enough to cater to, there could be areas where a profit could be turned. I personally feel that this issue is one that should be addressed with immediate effect, and if need be a committee of operators set up, to discuss pertinent issues in the region, and at least consider selling capacity at a minimum price. After all, none of us want to see a bird that we put in the sky for nearly a quarter billion dollars, only to witness it operating at a loss.

In other news, the Earth observation satellite industry is certainly on an upward swing, with applications ranging from monitoring crop yield, to oil & gas plants and even oil leaks in the sea. Other operations include military and civil defence scenarios as well as disaster management. Read on in our feature on page 10 of the magazine.

I wish you a wonderful April. As always, I'd love to hear your feedback and comments on this issue of the magazine. Please send me an email or call the number in the panel on the left.

Clayton Vallabhan
Editor

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"Oil spillages and the effects of ocean currents can be monitored from space and combined with information from weather models"
Anthony Baker, CEO, Global Satellite View
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"Today there is a lot of anxiety about security risk, because even if you use a VPN you are still using the internet, which means you are still passing through a lot of POPs"
Diederik Kelder, SVP, Leosat
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Information

November 2016

Summit: 10am - 4pm / Awards: 7pm - 10pm

www.broadcastpromeawards.com

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Paving the Path

In March, the Global VSAT Forum (GVF) Summit programme was once again featured at CABSAT. The Summit, direct from the exhibition floor, provided show exhibitors and visitors with challenging and dynamic debates

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The Eye in Space

Satellite imagery of the Earth has many applications, from civilian crop monitoring and oil & gas field monitoring, to disaster recovery and even military intelligence gathering. We look at how the technology has changed over the years



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It's a Wrap

The 22nd CABSAT opened at the Dubai World Trade Centre with more than 950 exhibiting brands from over 60 countries, spread across the fields of broadcast, satellite and entertainment content sectors from the Middle East, Africa and South Asia

SatEvents

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Singapore Beckons

CommunicAsia2016 is taking place at the Marina Bay Sands in Singapore from 31 May to 3 June 2016, and will draw close to 1,840 companies from around the region. As a prime exhibition for APAC, the show will offer insight into opportunities in the region.



SatGuest

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Is LEO the Next Big Thing?

Diederik Kelder, SVP, Corporate and Business Development at Leosat, a newcomer in the satellite industry, speaks about how the upcoming company will be able to bridge the gap between fibre and satellite connectivity for data backhaul

GBI joins Amsterdam Internet Exchange programme

GBI has joined the Amsterdam Internet Exchange (AMS-IX), one of the largest peering platforms in the world. This makes GBI an official reseller of AMS-IX.

On the occasion of the agreement, Amr Eid, Chief Commercial Officer of GBI, said: "Joining the AMS-IX Partner Programme allows us to provide more enhanced capabilities to our customers in the Middle East region who are seeking efficient interconnectivity options and better network infrastructure expansion."

Mark Cooper, CCO of AMS-IX, said: "We are very happy that one of the largest network operators in the Middle East has joined our Partner Programme." Cooper added: "GBI can offer its customers high-quality access to AMS-IX and at the same time help us to increase the diversity and size of our ecosystem."

+ www.gbiinc.com

+ www.ams-ix.net



L-R Mark Cooper, CCO, AMS IX, and Amr Eid, CCO, GBI.

COBHAM TACTICAL COMMS REBRANDS AS DTC

The company formerly known as Cobham Tactical Communications and Surveillance (TCS) today announced that it has formally adopted Domo Tactical Communications (DTC) as its new company name. Its broadcast subdivision is now called DTC Domo Broadcast.

The change follows an announcement on 15 January 2016 by former parent company Cobham Plc that it had sold TCS to Marlin Equity Partners, a private equity firm based in Los Angeles, California.

DTC Domo Broadcast Sales Director JP Delpont said, "This is an exciting opportunity that will significantly enhance our products and services. We operate independently under Marlin ownership and are well positioned for internal and external growth. Our customers remain our highest priority and all existing support and communication channels not only remain intact, but will be significantly enhanced under our new ownership."

+ www.domotactical.com

DATAMENA APPOINTS ABOU MUSTAFA AS NEW VP

Datamena has announced the appointment of Abou Mustafa as Vice President. This change comes in response to the expansion of datamena platform's customer base, and aims to strengthen the bonds with du to provide a new range of managed services and business solutions. Abou Mustafa's appointment ensures this seamless alignment in his joint role as the Vice President of datamena, as well as Enterprise Managed services at du.

+ www.du.ae

+ www.datamena.com



MEASAT ANNOUNCES EDMUND KONG AS NEW CTO

MEASAT has announced the appointment of Dr Edmund Kong as the company's CTO. Kong will focus on developing MEASAT's long-term technology strategy. He will be responsible for understanding technology trends in the satellite and communication sectors, and for developing opportunities for MEASAT. Kong will also be working on new satellite procurements.

"We are delighted to welcome Dr Kong to our senior leadership team," said Paul Brown-Kenyon, MEASAT's CEO. "His technical knowledge, industry expertise and years of aerospace experience will be invaluable in ensuring MEASAT continues to innovate and remain at the forefront of the communications industry across the region."

"This is an exciting time for the communications and broadcasting industries, with technology change creating many new challenges and opportunities," said Kong.

+ www.measat.com

Orange replaces Mobinil brand in Egypt

» Orange has announced its launch in Egypt. As of today, the Orange brand replaces the Mobinil brand. Egypt is the latest subsidiary of the Orange Group to adopt the Orange brand and is the Group's largest operation in terms of customer numbers (33.4 million customers at the end of December 2015), contributing over 27% of its revenues for the Middle East and African region.

Stéphane Richard, Chairman and CEO of Orange, commented: "Egypt is a vibrant market and we are delighted to bring the Orange brand to this important market on this momentous day in our history. Today Orange is a mobile operator in Egypt, but we want to be much more than that in the future."

"We want to be a true digital player and help the Egyptian economy and its people to draw the benefits of the digital age."

Yves Gauthier, CEO, Orange Egypt, said: "We are part of a truly international group with all the backing that brings. In addition



to benefiting from group-wide synergies and know-how, we are adopting the Orange strategy to place the customer experience at the heart of what we do, so that we can deliver on our promise 'to connect our customers to what is essential in their lives'. Today is a proud day for our employees, who have worked hard to get to this moment, and we hope our customers share our pride."

+ www.orange.eg

YAHSAT SIGNS MOU WITH IEC TELECOM AFRICA

Yahsat has signed a Memorandum of Understanding (MoU) to explore the possibility of new joint opportunities with existing partner IEC Telecom in Africa. The agreement comes ahead of Yahsat taking delivery of its third satellite, Al Yah 3.

The launch of Al Yah 3 in Q1 of 2017 will see the entry of the company's satellite broadband product, YahClick, into 18 new African markets, almost tripling its presence across the continent and covering 60% of Africa's population.

Commenting on the MoU, David Murphy, Yahsat Chief Commercial Officer, said: "We are pleased to be in discussions with IEC Telecom on developing our current relationship and strengthening our presence in Africa. We will look at potential ways to build on our long and valued history with IEC Telecom, which dates back to the pre-launch of our second satellite, Y1B, in 2012."

+ www.yahsat.ae



Exhibitors and visitors networking at the Capacity Middle East show.

CAPACITY ME DRAWS TELECOM CROWD; DEALS SIGNED

The 11th annual Capacity Middle East was held 1-3 March 2016 at the Grand Hyatt Dubai. Proudly supported by the largest wholesale carriers in the Middle East, the event was the largest yet, with 1,365 senior telecoms executives from more than 420 companies representing 70 countries in attendance.

This year, attendees had even more opportunities to meet face-to-face with key contacts, with over 20 hours of networking opportunities and a brand new live-chat service added to the online meeting app, MeetMe.

During the event, Afghan Wireless Communications Company (AWCC) selected Cataleya to deploy its Orchid One session and application management service across its network.

Zain Group also acquired a strategic stake in Lebanon-based Foo, which operates in mobile applications development in the region.

+ www.capacitymedia.com

Yahlive most popular sat broadcaster for Farsi speakers

Yahlive has revealed that the company is the most popular satellite broadcast provider for Farsi-speaking viewers across the Middle East and southwest Asia, according to a new research report published by international media, brands and communication advisory company Ipsos Connect. The report found that not only does Yahlive enjoy the largest market share of satellite broadcasters in the Farsi-speaking community across markets, the share is in fact growing, with customers proving extremely satisfied and loyal to the programming.

Commenting on the latest research, Ammar Baranbo, COO of Yahlive, said, "Yahlive enjoys an impressive retention rate of 88% across Farsi-speaking communities, who are found in multiple markets including Tajikistan, Afghanistan, Kurdistan and the UAE. The show of loyalty for Yahlive programming is the highest in the industry."

www.yahlive.com



Ammar Baranbo,
COO, Yahlive.

INMARSAT PENS DISTRIBUTION DEAL WITH GLOBAL BEAM

Inmarsat has announced the signing of its first UAE distribution partner for its L-band communications services. Global Beam Telecom, headquartered in Dubai, is a fixed and mobile satellite communications solutions provider with more than 12 years' experience in the satellite market throughout the Middle East, Africa and parts of Asia.

"The signing of Global Beam Telecom is a critical step in our plans for growth in the region," Paul Gudonis VP, Enterprise, Inmarsat, said.

www.inmarsat.com



Abdullah Sulaiman, CEO, Global Beam,
and Paul Gudonis, VP, Enterprise, Inmarsat.

DETASAD AND INTELSAT EXPAND CONTRACT FOR KU-BAND

Under the multi-year contract, DETASAD will leverage Ku-band services via Intelsat 15 at 85° East and Intelsat 20 at 68.5° East, to guarantee access to the highest levels of broadband connectivity for its enterprise customers. DETASAD incorporates Intelsat's satellite services into the largest financial transaction networks in the region, supporting a very large number of Automated Teller Machines (ATMs) located throughout Saudi Arabia.

"We partnered with Intelsat to complement our existing telecom infrastructure, as Intelsat's satellite solutions have a strong track record of seamlessly and securely connecting broadband networks across a vast area," said Adel Al Gidawi, CFO, Detecon Al Saudia (DETASAD). "Intelsat and DETASAD have been in the VSAT business together since 2003. Throughout our relationship, Intelsat has proven to be a strategic and trusted partner."

www.detasad.com.sa

www.intelsat.com

LEOSAT APPOINTS DIEDERIK KELDER AS SVP

LeoSat Enterprises has announced the appointment of Diederik Kelder as Senior Vice President, Corporate and Business Development. In this role, Diederik will be responsible for all business development activities at LeoSat.

Diederik has over 20 years' experience in the satellite communications industry, which includes working for a number of the most prominent satellite operators in the areas of strategic planning, commercial planning and business development. Prior to joining LeoSat Enterprises, Diederik worked at SES, where as VP Business Development, Asia he led a series of initiatives including partnerships and space and ground asset development. In addition, Kelder has previous experience of working for a new satellite start-up. As VP Business Planning, he set up and rolled out New Skies Satellites' strategy, business planning and revenue forecasting functions and was a core team member on corporate transactions.

www.leosat.com

OSN and Eutelsat pen deal for HD and UHD channels

» OSN is ramping up capacity on the powerful EUTELSAT 8 West B satellite operated by Eutelsat Communications. Additional capacity at the Middle East's flagship TV neighbourhood will support more expansion for OSN, including new HD channels and the introduction of Ultra HD services.

OSN will take advantage of the additional capacity to introduce Ultra HD services that will bring the most cutting-edge TV experience to viewers in the Middle East, offering true immersion with an image quality four times richer than Full HD. OSN also plans to ramp up its HD offer, with eight new channels announced recently and



Michel Azibert,
Deputy CEO,
Eutelsat.

several new premium and exclusive channels to be launched soon.

Michel Azibert, Eutelsat Deputy CEO and Chief Commercial and Development Officer, said: "Following the launch in August last year of the powerful EUTELSAT 8 West B satellite, this contract marks a new milestone in the growth story of the most popular satellite TV neighbourhood in the Middle East. We are honoured to celebrate 10 years of collaboration with OSN and are committed to furthering our longstanding presence."

+ www.eutelsat.com

+ www.osn.com

SAMACOM FIRST TELEPORT IN THE ME TO GET WTA CERTIFICATION

Du's Samacom Teleport is the first teleport in the Middle East to achieve provisional certification under the World Teleport Association's (WTA) recently launched Teleport Certification Programme. The du Samacom teleport was also ranked among the top ten independent teleport operators globally by the WTA.

Located in Dubai, du Samacom Teleport is in an ideal location for satellite visibility, covering five continents and enabling near global coverage. This world-class facility serves both regional and international customers.

The teleport currently serves more than 300 TV channels and 25 DTH platforms

on main satellite systems such as Nilesat, Arabsat, Hotbird, Intelsat and YahSat, as well as a dedicated HD platform. It offers a fully redundant playout system with multi-language subtitling, dynamic graphics, SMS and video quality checks.

At the heart of video services, du Samacom Teleport connects du's various POPs in Dubai with the rest of the world. The solution combines du's broadcast local video fibre network with third-party media networks that reach the most relevant content hubs in a reliable and efficient manner.

+ www.du.ae



Du's Samacom teleport based in Dubai, UAE.

COMMUNIC INDONESIA TO DEBUT IN JAKARTA THIS AUGUST

Communic Indonesia, the Communications and Information Technology Exhibition, will be held for the first time at the Jakarta International Expo, Indonesia, from 31 August – 3 September 2016.

Set to be a ground breaking event for the ICT industry in Indonesia, this inaugural edition of Communic Indonesia will gather exhibitors from Asia and beyond. This event will be the ideal platform for ICT professionals to connect, network, peruse the latest technologies, as well as share and impart industry knowledge.

Broadcast Indonesia 2016 is the go-to event for the film, TV and entertainment industries. Event attendees will gain wide exposure to the broadcasting and digital multimedia & entertainment, enterprises and telecommunication industries at this one-stop event.

Also part of the programme will be the Indonesia ICT Summit. The Summit will feature more than 120 speakers over four industry trend-aligned tracks and multiple technical masterclasses to disseminate latest trends and present immense networking opportunities.

The Jakarta International Expo, Kemayoran, is a purpose built exhibition centre making it Indonesia's premier exhibition venue.

+ www.communicindonesia.com

STN wins award at the Teleport Awards

» The World Teleport Association (WTA) has presented STN with an award for the best Independent Teleport Operator. The 21st annual Teleport Awards for Excellence took place during an exclusive luncheon at SATELLITE 2016. The awards are presented each year to organisations and individuals in the teleport industry whose achievements have been deemed exceptional by the international trade association and its awards committees, made up of industry

members from across the globe. STN commented that it is honoured to receive such a prestigious award from such a respected association, committees and industry members. The company also expressed its gratitude to all who voted for them and the entire team at STN thanked the industry for this award, as it is held in the highest regard.

+ www.stn.eu



STN's teleport in Slovenia.

THURAYA LAUNCHES IP COMMANDER CERTIFIED TO IP66

Thuraya has announced the launch of the IP Commander, a robust voice and data terminal that provides reliable broadband access.

Purpose-built for military, government, civil defense and emergency response teams, Thuraya IP Commander is engineered to enable mission-critical voice and data connectivity in minutes, however remote the location.

Thuraya IP Commander is simple, quick and easy-to-install, and capable of withstanding tough physical environments. It is also dust and water resistant.

Independently tested, IP Commander is certified to IK10 and IP66 standards, making it the most durable and dependable product in Thuraya's portfolio



of satellite communication products.

Randy Roberts, Chief Innovation Officer, Thuraya, said: "Thuraya IP Commander is a vital terminal built for the military and emergency response professionals. IP Commander is the only MIL-SPEC vehicular terminal capable of achieving streaming IP speeds of up to 384kbps as well as user-definable asymmetric streaming functionality."

+ www.thuraya.com

GBI APPOINTS AMR EID AS ACTING CEO



Gulf Bridge International (GBI) has announced that its Board of Directors has nominated and appointed Amr Eid as Acting CEO, effective immediately, in addition to his role and responsibilities as Chief Commercial Officer.

Abdulla Al Rwaili, Executive Vice Chairman and MD, GBI, said: "Amr Eid has been nominated by the Board of Directors in recognition of his sound accomplishments. Amr Eid will focus on leading GBI through its progressive growth plans spearheading the company's transformation and will enforce GBI's positioning as a global multilayer services provider."

Amr Eid brings 23 years of experience in telecommunications industries.

+ www.gbiinc.com

EUTELSAT CROSSES BROADCASTING 6000 CHANNELS

The threshold of 6,000 channels broadcasting via Eutelsat's satellites was crossed earlier this year with the launch of OSN First HD – Home of HBO, a new channel broadcast by OSN, the leading Pay-TV network in the Middle East and North Africa. In honour of this landmark Eutelsat presented a Special Award to OSN at this week's Cabsat event in Dubai.

OSN First HD – brings world-class series from the HBO stable at same time as the US.

Mark Billinge, OSN's CTO, said: "With this Award from Eutelsat we are also celebrating a 10-year relationship during which the Middle East and North Africa broadcast landscape has transformed into one of the most vibrant in the global television business. The launch of OSN First HD – Home of HBO reflects our strategy to raise the bar in sound and image."

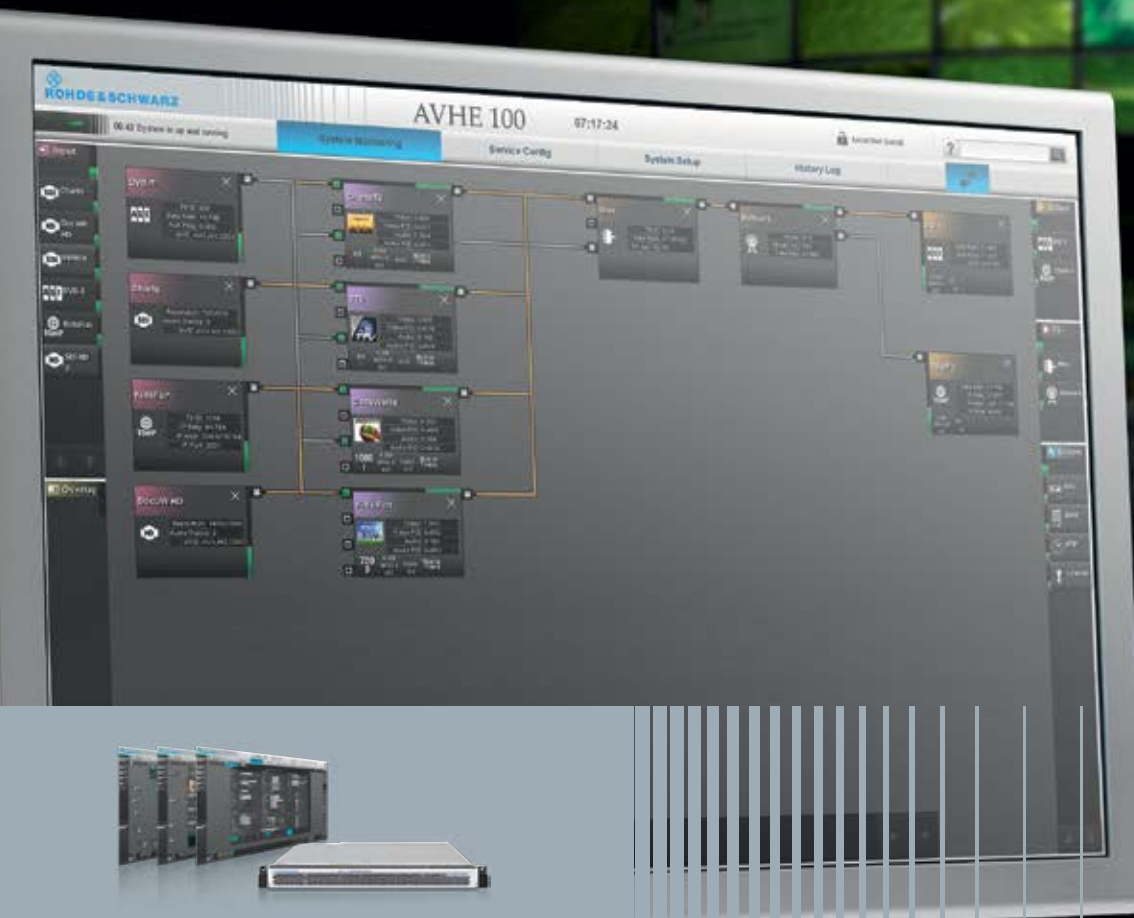
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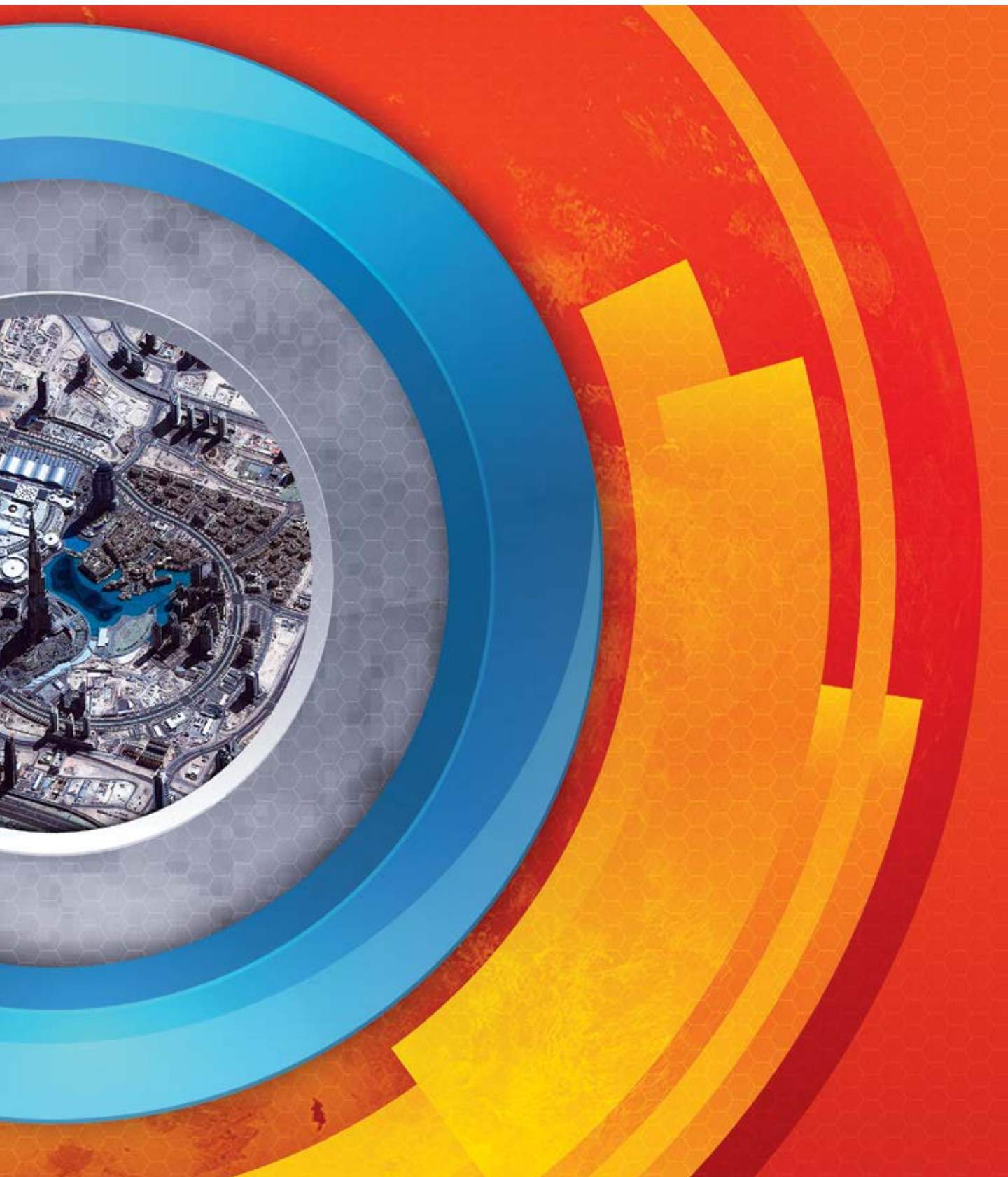
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THE EYE IN SPACE

Satellite imagery of the Earth has many applications, from civilian crop monitoring to disaster recovery and even military intelligence gathering. We look at how the technology has changed over the years



If you took the photo sensor from your mobile phone and attached it to a telescope, you would have the beginnings of the optics for an Earth observation satellite. This approach was the foundation of the NASA Phonesat programme. Of course the full implementation is a little more complex: you will need a radio link to Earth to download the pictures from space and a command and control channel to shoot the picture.

Anthony Baker, CEO at Global Satellite View, says the first Earth observation satellites were spy satellites from the Cold War era, which used Kodak photographic film to record images and recovered the film from space by parachute once the satellite was de-orbited.

"In this digital age, these satellites have evolved to be the size of a minibus, with a mass around 2,800kg, and cost hundreds of millions of US dollars. More recently, the economics of access to space have changed. Launch prices are reducing, and commercial off the shelf (COTS) technology is being used and adapted for use in space. Using this COTS technology for the satellite optics and avionics has allowed satellites to be designed and built faster and cheaper.

"This has permitted tens of satellites to be launched at a time; now satellites the size of a shoe box, aka cubesats of mass starting at around 5kg, can snap photos of the Earth. This year we anticipate that the whole

"Using this COTS technology for the satellite optics and avionics has allowed satellites to be designed and built faster and cheaper"

ANTHONY BAKER, CEO, Global Satellite View

world will be photographed virtually every day. Progress is being made with fridge-size satellites weighing around 200-400kg that can produce images comparable to their larger brothers, with colour photographs and videos. Small satellites such as Dubaisat have been around since 2009, but now with a revolution in the access to space, small satellites are available and affordable to every nation. Companies like Global Satellite View are establishing a presence in the Middle East to offer entities an independent capability for access to these technologies," explains Baker.

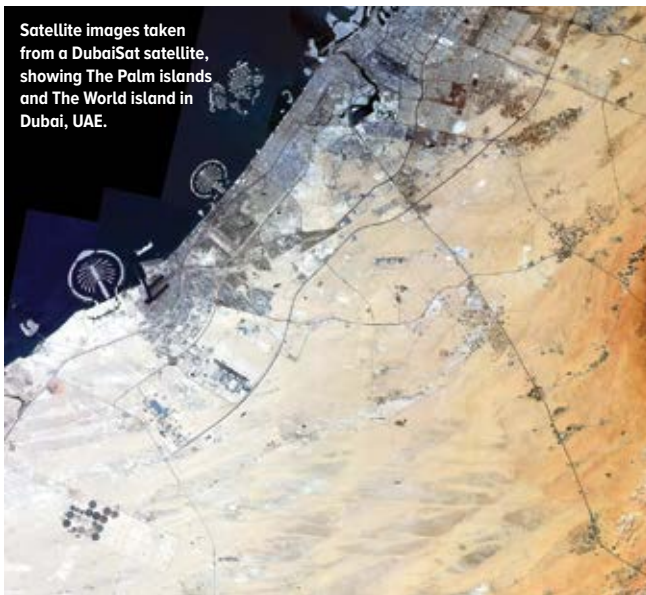
Earth imaging satellites orbit about 600-800km above the Earth and take images of the Earth through the payload, which is the camera on-board the satellite. There are both active and passive cameras. MBRSC's DubaiSat 1 and 2 use a passive camera. This works very similarly to the human

eye, where the images are formed in the back of the eye, so it's basically the sunlight that is reflected from the Earth from any object, and that creates an image in the camera, through visible bands and invisible bands. Active cameras have an active signal generated from the satellite that is sent to any object, which reflects back to the camera to form images on-board the satellite.

Baker says that billion-dollar scientific instruments like the Hubble Telescope are applying the technology to deep space exploration. The principles remain the same: the closer you are to an object, the better the view. A key component to the clarity of the picture is resolution, measured by what size of ground object is represented by one pixel in the photographic frame. Early systems like Landsat (1978-2013) had a resolution of 15-30m per pixel, whereas the highest resolution available commercially today is 31cm. To achieve a good resolution, low Earth orbiting (LEO) satellites at around 400km altitude (the International Space Station (ISS) is at around 415km) are preferred. Unfortunately, any closer to Earth is too close to the outer reaches of the atmosphere, which would drag the satellite towards the Earth, where it would burn up.

"LEO satellites appear to move relative to the user and are only visible for 10-15 minutes at a time. Although they circle the Earth around 10-16 times a day, they may not

Satellite images taken from a DubaiSat satellite, showing The Palm islands and The World island in Dubai, UAE.





return back to the same point on Earth for days. To overcome this irregular viewing, the more sophisticated satellites are agile in that they can steer their telescopes at any point on Earth within their view to track a target. While the smaller and simpler satellites may be less agile, operators can afford to launch many more satellites in constellations such that the revisit interval can be multiple times per day. The evolution of Earth observation satellites is analogous to that of a mobile phone, almost every year there is an improvement in price and performance.

"GSV is working with vendors to push the boundaries of this technology for our customers who want the best of all features: resolution of 1m with colour photographs and video images, the night vision offered by radar technology (SAR), the high revisit time so multiple images can be taken each day; we believe that within a few years, all of this will be available for \$1m per satellite. At which point, we can imagine not only governments can afford such technology, but also companies and richer individuals who value an independent source of images."

Delving further into the subject, Adnan Al Rais, Business Development and External Relations Manager at MBRSC, says: "Over the last few years, technology has been evolving rapidly for Earth imaging. In terms of the resolution, there is a lot of improvement. In the early days, the cameras could capture

images around an area of 80m, but now we are talking about within a range of a few centimetres, and this is from a satellite that is 600km above the Earth. Other technologies like the download speeds during a certain pass and the amount of data that could be captured on the satellite have also improved dramatically. What was previously a transmission of only a few kbps is now up to Mbps and even Gbps, during a pass over the Earth station."

DubaiSat 1 is an Earth observation satellite that was launched in 2009 and has an optical payload. This provides imagery at around 2.5m of resolution, for both visible bands and invisible bands. The visible bands are RGB, and the invisible band is infrared. The second satellite, DubaiSat 2, is also an Earth observation satellite launched in 2013, and its payload is able to

"What was previously a transmission of only a few kbps is now up to Mbps and even Gbps, during a pass over the Earth station"

ADNAN AL RAIS, Business Development and External Relations Manager, MBRSC

take images at the resolution of 1m. This is a significant improvement on DubaiSat 1.

Usage and applications include geographic information systems to update base maps and environmental applications for water, air and land which could be used to monitor water quality and vegetation. In addition to this, through Earth observation imagery and satellite data, the operator can also detect a leak from pipelines, be they on land or in water. On land, this is done through optical imagery, but for pipelines underwater, radar technology is used. For discovering oil too, radar technology is used on satellites equipped with the right payload.

Newer satellite constellations allow regular monitoring of remote pipelines and also provide information on the potential build-up of threats near the pipeline. Some synthetic aperture radar (SAR) technologies can detect millimetre changes of movement over a period of months. This can be useful to detect the effects of oil and gas extraction on the deformation of the ground surface. This has already been applied to earthquake monitoring and to the construction of infrastructure where unexpected settlement has occurred.

"Oil spillages and the effects of ocean currents can be monitored from space and combined with information from weather models to predict its direction of travel and dispersal. Other applications

are monitoring of illegal construction, waste disposal management and urban planning,” according to Baker.

Furthermore, DubaiSat’s satellites can take images of a disaster-stricken area every three to five days. MBRSC monitors the news, and when a disaster takes place, it can send the satellite over the area to monitor the situation.

As far as acquisition of the data stored on the satellite, the Earth station can access that during the next pass, which could be anywhere from an hour to five days, depending on the position of the satellite.

“The satellite passes over our ground station between four to five times a day, throughout a 24-hour cycle. Whenever this happens, we download the data immediately and after a few hours to process the data, we send it to the end user. Our missions are pure scientific and civilian missions.

“We have also contributed internationally through the UN committee for the peaceful use of outer space. We provide our imagery to nations that have been affected by natural disasters, like when we sent our images during the tsunami that affected Japan in 2011. Earth observation is also extensively used in the oil & gas industry, for instance the development of oil plants in certain areas. If there are new projects, they can be monitored by satellite imagery, even if you need images to cover a huge area. DubaiSat 1 is capable of taking images of a single scene of an area of 12km x 12km,” explains Al Rais.

According to Baker, the distinction between the different applications of Earth observation data is blurring.

Once large swathes of images were only required to monitor macro events such as forest fires, deforestation and climatic effects, but today details are required on disasters for optimising relief supplies, determining the causes of forest fires and supplying regular updates of evolving events.

“GSV is investigating the use of video footage from space to be used in news reporting; the first images of breaking news could be provided from space, and the aftermath and long-term monitoring will continue from space. Examples extend from the delivery of humanitarian aid to the monitoring of the growth of refugee camps,” says Baker.



Adnan Al Rais, Business Development and External Relations Manager, MBRSC.

“GSV is investigating the use of video footage from space to be used in news reporting; the first images of breaking news could be provided from space”

ANTHONY BAKER, CEO, Global Satellite View



Anthony Baker, CEO, Global Satellite View.

Military, Defence and new Applications

Military satellites are of different types, with varying technology meant to serve missions during warfare and intelligence gathering. Earth observation data has long been used for security and surveillance, but with heightened alertness to threats, governments are seeking early warning of events and activities across the region to be better prepared and able to take pre-emptive actions.

“Military systems are specialist instruments. They are secure and privately controlled, so the data remains secret and the nature of the observed target is concealed. Typically the instruments are very high resolution, and agile and accurate to track targets which leads to a high-cost satellite, usually with infrequent revisit times. However, GSV believes there is a place for commercial solutions to complement the military systems; the commercial solutions provide vast quantities of readily available data that offer a regular and cost-effective first view of a target. The military sensor can then be used if further investigation is required,” explains Baker.

Other applications include food and water security, paramount in the region. Monitoring these from space can yield knowledge of supply line disruptions and the health of crops. Image data can inform farmers when to water, fertilise and treat for pest control.

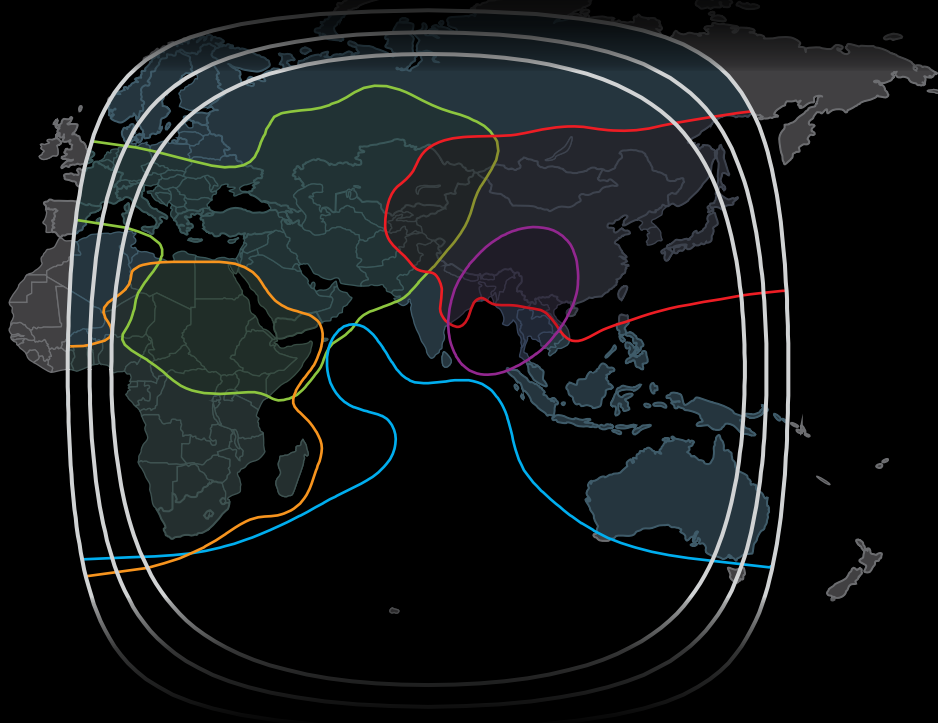
“The higher satellite revisit times of small satellite constellations enable assets to be tracked, such as ships, and commodities such as oil storage tanks, etc. The lower pricing of these systems, combined with ease of access, will create a market for new applications.

“On the footsteps of the small satellite revolution will be the use of advanced analytics to interpret this big data into information. While traditionally trained staff at the ground station plucked information from fuzzy pictures using their accumulated experience, today change detection and image recognition is more likely to be performed with new algorithms and cloud computing. Artificial intelligence algorithms using machine learning being trained by crowd sourcing enthusiasts on the internet, allowing the AI machines to process the vast amounts of data in a fraction of the time,” concludes Baker. **PRO**

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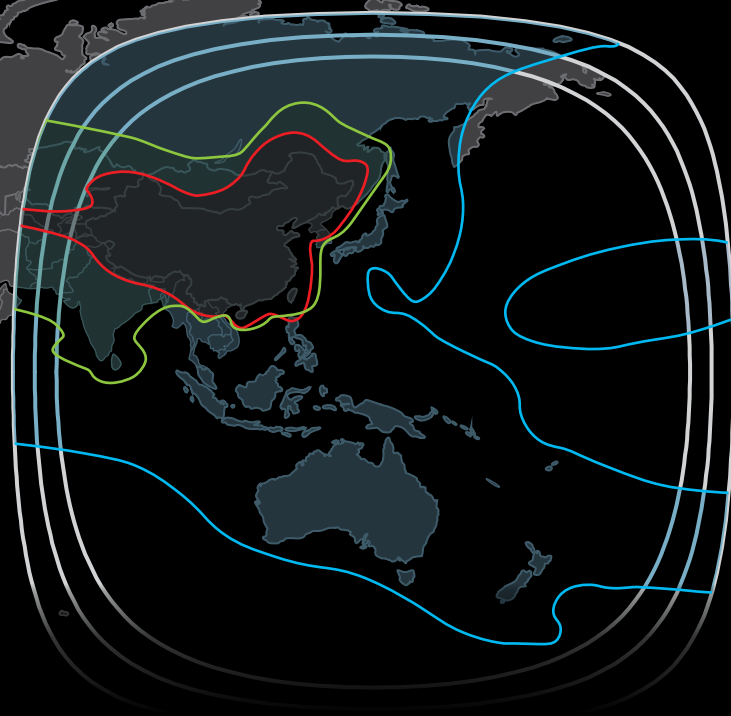
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Singapore Beckons

CommunicAsia2016 is taking place at the Marina Bay Sands in Singapore from 31 May to 3 June 2016, and will draw close to 1,840 companies from around the region. As a prime exhibition for APAC, the show will offer insight into the opportunities in the region and introduce new technology offerings





IDC has predicted that by the end of 2017, 60% of the APAC region's top 1,000 enterprises will have digital transformation at the centre of their corporate strategy. Bringing together global leaders as well as emergent players providing the technology and innovations enabling digital transformation of businesses and cities all around Asia, CommunicAsia2016, EnterpriseT2016 and BroadcastAsia2016 will be held from 31 May to 3 June 2016 at Marina Bay Sands Singapore.

Major tech trends that are the pillars of today, and tomorrow's smart cities and smart enterprises such as the Internet of Things (IoT), smart technologies, cybersecurity, big data analytics, mobility, TVEverywhere and many more, are represented by more than 1,840 global companies at the events.

"Smart cities and enterprise development have moved from concept to application, with our everyday lives becoming smarter and more mobile. In line with the growing importance of IoT and smart cities building amongst businesses in the region, CommunicAsia2016, EnterpriseT2016 and BroadcastAsia2016 have gathered the biggest names in technology and innovation that are driving rapid digital transformation in Asia, and around the world. At the latest installation of NXT cluster @CommunicAsia, participants will see a

significant focus on IoT and smart cities, with exhibitors showcasing next-generation intelligent and intuitive solutions that will enable businesses to become smarter, more connected, more equipped and future-ready to harness the opportunities arising from Asia," says Victor Wong, Project Director of Communication Events at event organiser Singapore Exhibition Services.

Transforming the enterprise

Enterprises across Asia Pacific remain positive about the opportunities that digital transformation and technology bring. In Singapore, a recent survey by ISCA found better technology adoption to be a key focus area for businesses to enhance productivity and innovation. In addition, a recent PwC report found that 1 in 5 firms (22%) think that the region will be transformed by the likes of robotics, connected sensors and more.

Making their debut at CommunicAsia2016, Microsoft will be showcasing a host of solutions to aid in the transformation of smart enterprises. "We are excited to participate at CommunicAsia. With more than two billion devices connected to the cloud every day, it is estimated that our mobile-first, cloud-first world is producing at least 2.5 quintillion bytes of data every day," says Justin Spelhaug, General Manager, Marketing and

Operations, Microsoft Asia Pacific.

"This incredible volume of data is the value currency in the digital economy. Forward-thinking businesses realise that the ability to analyse data and garner real-time insights is increasing their revenue streams and giving them a competitive advantage. With businesses now having the opportunity to collect and monitor data through the Internet of Things and powerful analytic tools, trusted, secure and hyper-scale cloud capabilities have become all the more necessary to bring greater advantage to data analytics. Leaders across businesses in Asia need to consider the security and compliance position of their cloud vendors, to protect customer data and ensure they stay in control of their own data."

Spelhaug added, "The solutions we are showcasing at CommunicAsia empower organisations to focus on their digital transformation journey, to stay competitive through expediting data analysis and ensuring trust in the cloud."

Transforming our cities

From Singapore's Smart Nation Initiative and Indonesia's Digital Economy development to the Smart Cities mission in India, hyper-connectivity and digital transformation have fuelled governments and enterprises in their take-up of smart

"In Singapore, a recent survey by ISCA found better technology adoption to be a key focus area for businesses to enhance productivity and innovation. In addition, a recent PwC report found that 1 in 5 (22%) think that the region will be transformed by the likes of robotics, connected sensors and more"



A conference session at CommunicAsia2015.



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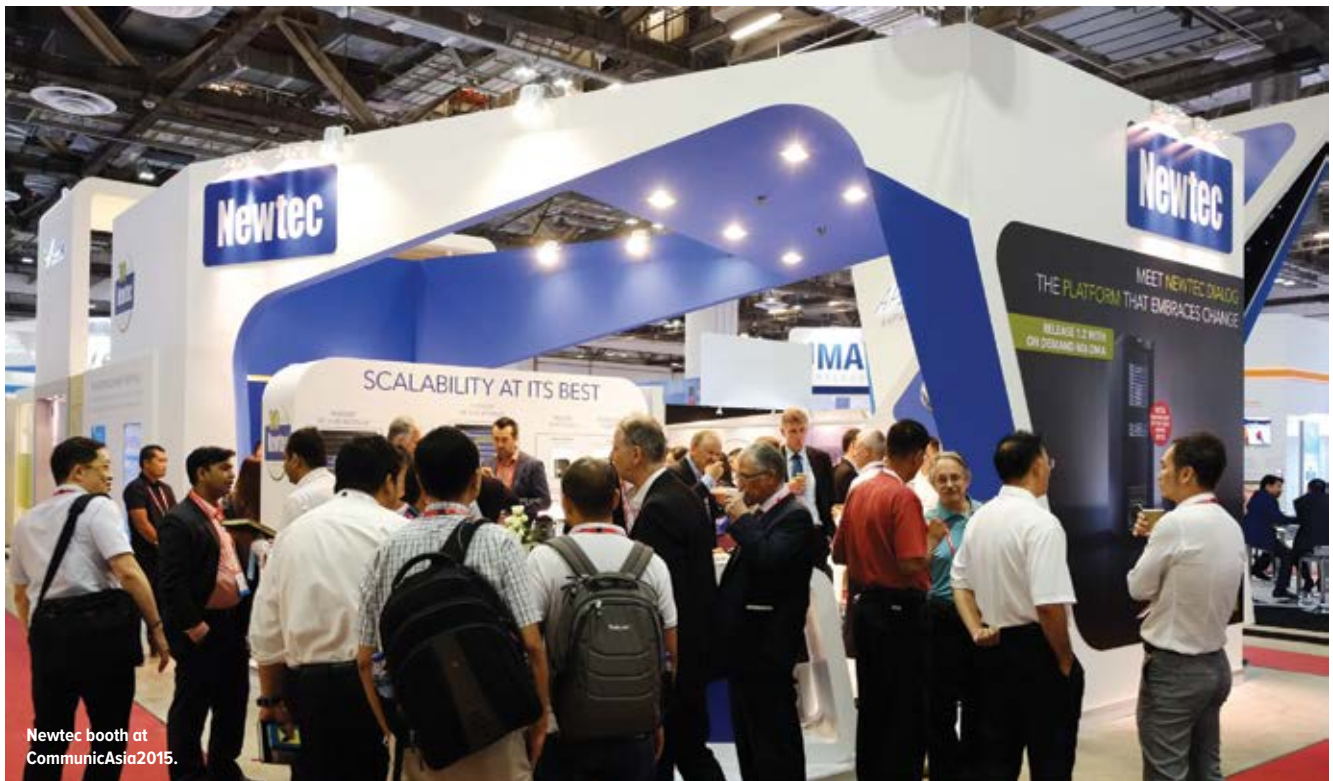
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technologies around the region. With the Asia Pacific IoT market forecasted to reach \$79.3 billion by 2020, nations and businesses are now aggressively tapping this opportunity to be more productive.

Greenwave Systems, leaders in the global IoT space, will also be making their inaugural appearance at CommunicAsia2016. Jim Hunter, Chief Scientist and Technology Evangelist, Greenwave, says, "The IoT industry is growing exponentially as the number of connected devices in the household, enterprise and city multiplies, enabled by the ability to remotely control these devices using cloud-based applications and wireless technology. As IoT permeates every aspect of consumers' lives, the data that these IoT devices generate will revolve around keeping people healthier, saving resources (money, materials and time), and improving the quality of life, and we are thrilled to showcase the connected future at CommunicAsia2016."

Transforming media

Content is now on demand and at consumers' fingertips, with active Asia

"With more than two billion devices connected to the cloud every day, it is estimated that our mobile-first, cloud-first world is producing at least 2.5 quintillion bytes of data every day"

JUSTIN SPELHAUG,
General Manager, Marketing and
Operations, Microsoft Asia Pacific

Pacific OTT video subscribers reaching 494 million last year. With the entry of disruptive players like Netflix in Asia Pacific, coupled with today's increasingly demanding consumers, the broadcasting industry now faces new challenges in OTT, digital media asset management, video delivery, TV monetisation strategies and more. Imagine Communications, a veteran exhibitor at BroadcastAsia's growing TV

Everywhere! Zone, will be showcasing the latest solutions in IP transformation. "BroadcastAsia is a pivotal part of our annual calendar, and Imagine Communications has been attending this show for many years, as it provides the ideal platform to discuss the changing trends and technologies with the key industry leaders from across the region," says Joe Khodeir, Senior Vice President, Asia Pacific for Imagine Communications. "At this year's show, we will be demonstrating some of our next-generation video infrastructure, advertising systems and workflow management solutions that will help media companies transition away from legacy, proprietary hardware to IP-enabled, software-defined and cloud-virtualised environments and provide the freedom to grow, change and adapt as and when they are ready." Khodeir adds, "We recognise that our customers have existing capital investments to be respected, and we are here to help them deliver compelling, commercially successful content today while developing a strategy to make the transition to an IP-enabled, software-defined future." **PRO**



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Paving the Path

In March, the Global VSAT Forum (GVF) Summit programme was once again featured at CABSAT, drawing key satellite industry figures



GVF Satellite Summit in full swing at CABSAT 2016.

The Summit, direct from the exhibition floor, provided show exhibitors and visitors with challenging, dynamic, debate and illuminating insights from industry, U.N. agencies, analysts, associations, and solutions developers.

The GVF Satellite Hub Summit @ CABSAT 2016 was presented over two days and was held in association with PAKSAT, and with the sponsorship support of SES, and also featured the kind participation of the International Telecommunication Union (ITU). Some 30 speakers contributed to the Summit, addressing eight key themes from the top of the current satellite communications industry agenda.

Martin Jarrold, the Chief of International Programme Development at GVF, chaired the event which built successfully on more than 10 years of GVF programmes embedded with the annual CABSAT portfolio of conferences and meetings. In particular, amongst recent GVF Summits presented at CABSAT, the 2014 GVF Summit programme was filmed by a documentary production team from the Qatar-based broadcast news and current affairs channel, Al Jazeera. The 2014 GVF event was wholly focused on the subject of satellite interference and the filmed Summit content was prominently featured in the Al Jazeera documentary which was transmitted in May 2015, to coincide with the 150th Anniversary of the foundation of the International Telecommunication Union.

On the second day of the GVF Satellite Hub Summit @ CABSAT 2016 the programme featured the English language version of the documentary, which is now available on YouTube and may be viewed by clicking on: <https://youtu.be/StgkKCTpGYA>. The documentary added to the already high-quality content across the various programme themes and this content is also now available online at <https://gvf.org/gvf-satellite-hub-summit-cabsat>.

The eight key themes covered in the Summit programme were as follows:

- MENA's Satellite Broadcast & Telecoms: Overview of an Evolving Market Environment
- Spectrum: Satellite and the Outcomes of the 2015 ITU World Radiocommunication Conference



Martin Jarrold, Chief of International Programme Development, GVF.

"One of the most significant challenges in the mobile services market is achieving scalable, flexible backhaul, particularly as markets move to 4G networks which are forecast to need to support 1,000 times more data traffic by 2020"

- High Throughput Satellites: Leveraging Advancing Technologies for Innovative Services – Mature, Evolving & Emergent Markets
- Constellations for Connectivity: A New Dawn for Low Earth Orbit Solutions?
- From Niche to Mainstream: New Strategic Markets for VSAT with Communications-on-the-Move
- Ensuring an Interference-Free World of Satellite Services
- Integrating the Digital World: Satellite, Big Data, the Internet of Things & the Cloud
- Policy, Politics and Profit: Satcom for a Dynamic Marketplace

Major inputs to three of these Summit programme themes of satellite spectrum, low earth orbit satellite constellations for connectivity, and interference-free satellite services, were provided by the ITU Radio Communication Bureau, presented by Mitsuhiro Sakamoto, Head, Space Systems Coordination Division, Space Services Department.

Sakamoto set out a detailed analysis of the World Radiocommunication Conference of November 2015 (WRC-15) which attracted 2780 participants from 162 ITU Member States, and 495 participants representing 130 other entities, including industry, attending as observers. The Conference addressed over 40 topics related to frequency allocation and frequency sharing for the efficient use of spectrum and orbital resources. His detailed presentation also set out details of the mobile broadband spectrum agenda for the next WRC in 2019.

For the global satellite industry the prime focus of 2015 was on WRC-15. This focus was led by the Satellite Spectrum Initiative (SSI) – the GVF-led consortium of other (regional and national) satellite industry associations, and supported by a wide range of stakeholders.

The SSI sought the protection of fixed satellite service access to spectrum in the C-band frequencies, and opposed a global identification of C-band for International Mobile Telecommunications (IMT). It was successful in its mission, as reflected in the world's governments resoundingly affirming a clear vision for the importance of many vital and irreplaceable services provided today over satellite and by agreeing to preserve and create new additional valuable spectrum for fixed and mobile solutions used to support services that include the expansion of access to the Internet, and the bridging of the Digital Divide.

The inter-governmental decisions in support of satellite spectrum reflected a comprehensive strategy in which the unique value proposition of satellite-based connectivity was recognised as an integral part of a portfolio of synergistic technologies, encompassing terrestrial wireless solutions.

Also contributing to the Summit panel

Delegates at the GVF
Satellite Summit, during
CABSAT 2016 in Dubai.

“The Internet access via broadband satellite future is evolving and may not be confined to high throughput technologies in geosynchronous and MEO for much longer. In 2015 OneWeb, and SpaceX, as well as LeoSat, announced separate plans to build hundreds of new satellites for LEO”



session entitled 'Spectrum: Satellite and the Outcomes of the 2015 ITU World Radiocommunication Conference' was Laith Hammad, Director, MENA, Access Partnership; Patrick van Niftrik, Vice President, Spectrum Development, EMEA, SES; Zahid Zaheer, Director, GMPCS Affairs, Thuraya; Guido Baraglia, Director, sIRG; Jawad J. Abbassi, Head of MENA, Government & Regulatory Affairs, GSMA; Dr Mohaned Juwad, Regional Director, GVF 5G Initiative, GVF.

The welcome inclusion in the Summit programme of the contribution from the GSMA, together with the participation of a representative of the GVF's 5G Initiative, was strongly indicative of the positive collaborative opportunities for satellite and mobile broadband arising out of the outcomes of WRC-15, and GVF is now vigorously pursuing these collaborative opportunities.

Satellite has always worked synergistically with other, that is to say terrestrial, technologies, including mobile

wireless. Backhaul for mobile networks is critical to ensure speed and capacity as it relates to the transport of data (and, of course, voice) from distributed network sites to the network core. In turn, for backhaul, satellite has become ever-more essential. One of the most significant challenges in the mobile services market is achieving scalable, flexible backhaul, particularly as markets move to 4G networks which are forecast to need to support 1,000 times more data traffic by 2020. The backhaul optimisation technologies used to reduce bandwidth which have been introduced cannot solve all backhaul challenges, especially as the roll-out of LTE continues. As a result there is a need for cost-effective mobile backhaul over satellite for global 3G/4G rural expansion to relieve congestion.

In addition, Sakamoto contributed to the Summit session 'Constellations for Connectivity: A New Dawn for Low Earth Orbit Solutions?' He reported that beginning in November 2014, the

ITU Radiocommunication Bureau has been receiving an increased number of coordination request submissions for non-Geosynchronous Orbit (NGSO) satellite constellations featuring a large number of frequency assignments and orbits. Also contributing to the dialogue on 'Constellations for Connectivity' was Diederik Kelder, Senior Vice President, Business Development, LeoSat Enterprises. This was a very significant event profile for LeoSat Enterprises as it was only the second occasion on which the company had talked about its plans in detail in an open forum environment.

The Internet access via broadband satellite future is evolving and may not be confined to high throughput technologies in geosynchronous and Medium Earth Orbits (MEO) for much longer. In 2015 OneWeb, and SpaceX, as well as LeoSat, announced separate plans to build hundreds of new satellites for Low Earth Orbit (LEO). OneWeb, led by O3b Networks founder Greg Wyler, and

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backed by Qualcomm and the Virgin Group, announced plans to build a constellation of around 650 micro satellites to bring broadband access to the unconnected/unserved population around the world. SpaceX, backed by Google, revealed plans to build thousands of micro satellites to bring Internet connectivity all over the world too. Additionally, the LeoSat (partnered with Thales Alenia Space) planned constellation of 80-120 Ka-band satellites will provide high-speed, low-latency, broadband services worldwide, specifically for large private corporations and government agencies.

Prior to GVF's showing of the Al Jazeera documentary, the ITU additionally participated in the Summit dialogue on 'Ensuring an Interference-Free World of Satellite Services'. Sakamoto's presentation on Prevention and Resolution of Harmful Interference included a profile of the ITU Interference Resolution and Reporting System, a Radiocommunication Bureau project to facilitate communication relating to harmful interference and maintain them in a database.

As with the other two ITU presentations,

"Satellite has always worked synergistically with other, that is to say terrestrial, technologies, including mobile wireless. Backhaul for mobile networks is critical to ensure speed and capacity as it relates to the transport of data (and, of course, voice) from distributed network sites to the network core. In turn, for backhaul, satellite has become ever-more essential"

and as noted above, Prevention and Resolution of Harmful Interference is available for download in PDF format from the GVF website at <https://gvf.org/gvf-satellite-hub-summit-cabsat>, but in summary, the key messages in the ITU perspective are that the: Mechanism in the Radio Regulations to prevent harmful interference is working; Procedure to resolve harmful interference relies on Member States' Goodwill and cooperation; International monitoring system will be reinforced; Reporting of harmful interference will be more effective; and, further discussion on the issue will take place at a symposium on interference-free satellite frequency spectrum on 13-14 June 2016.

Also contributing to the dialogue on satellite interference was Mazen Nassar, Managing Director & CEO, MenaNets, and GVF Master Trainer for the MENA region; Erwin Greiling, Product & Sales Manager, Siemens Convergence Creators; Guido Baraglia, Director, Business Development & Sales, Kratos Networks; Andreas Voigt, Director, sIRG. **PRO**



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It's a wrap

The 22nd CABSAT opened at the Dubai World Trade Centre with more than 950 exhibiting brands from over 60 countries, spread across the fields of broadcast, satellite and entertainment content sectors from the Middle East, Africa and South Asia. Read on for some of the key highlights from exhibitors at the show



Intelsat touts EPIC at CABSAT



At CABSAT this year, Intelsat spoke about the launch of its first Epic satellite, but also more importantly about the upcoming launch of the second satellite at 60-degrees, which will service the Middle East region.

Jean-Philippe Gillet, Intelsat Regional Vice President for Europe and Middle East sales, said: "We have just launched our first high throughput satellite that we call Epic. The launch was in January and covers the Americas and the trans-Atlantic. We're all set to launch the second satellite in Q3. It will be operational at 60-degrees during Q4, and it is going to cover the region, as we have multiple beams around Saudi Arabia and around the Gulf area. At the same time as launching these satellites, we are also providing ground infrastructure known as Intelsat Flex, which will allow customers to get access to the satellite for all of their applications."

Gillet explained that the first thing the operator tackled was working closely with the ecosystem partners and with its customers so that they can reuse their existing equipment. For customers who have already invested in ground infrastructure, there are certain high throughput satellites that are closed network.

"Hence you can use your own teleport, and going forward you can continue to use the equipment that you have invested in with the Epic satellites," concluded Gillet.

ETL brings Stingray to show



ETL Systems showcased its new technologies in RF distribution CABSAT this year.

ETL has designed new functionality and increased benefits for a series of products, including its StingRay RF over Fibre and Dextra splitters and combiners. New StingRay models will include redundancy systems for reliability and standalone component modules, while new Dextra models have a 10MHz pass.

Ian Hilditch, CEO of ETL Systems, said: "It's our tenth exhibition at CABSAT, and we have quite a few new products on the stand and being launched. We've got a new brand of L-band over fibre equipment, which we call StingRay, which is very exciting as we're getting some very positive feedback on that."

"We also have our outdoor unit, which is an antenna mount unit, which has 4+1 redundancy systems which are new. We have also just introduced CWDM, which is a way of transporting L-band over 35km lengths, and there is also DWDM, which is for 50km and above."

The company's presence at CABSAT follows major contract wins in the region, including QSAT Communications, which ordered eight of ETL's new 10MHz pass Dextra combiner units for a multinational UAE-based telecommunications service provider's mobile VSAT systems. A 48 x 32 part populated Vortex L-band matrix with modular system splitters to provide variable gain, slope and LNB powering has also been ordered recently for a Dubai-based broadcaster.

Es'hailSat touts Es'hail 1 and new teleport at show

Es'hailSat once again exhibited at the annual CABSAT exhibition in Dubai and showcased Es'hail-1, currently transmitting high-quality, premium DTH television content from the 25.5°/26° E neighbourhood for leading channels such as Al Jazeera and beIN Sports.

Es'hailSat is also pushing ahead with plans to expand its satellite fleet, with the planned launch of its second satellite in 2016. Es'hail-2, a new high-performance satellite with sophisticated anti-jamming capabilities, will

be positioned at the 26° E hotspot position for TV broadcasting, significantly adding to the company's ability to provide high-quality, premium DTH television content across the Middle East and North Africa.

Also commissioned is its own teleport, which will be completed in 2H 2017. The new facility at a dedicated 50,000sqm site north of Doha will provide satellite TT&C and capacity management, together with a wide range of teleport services.

APSTAR talks growth potential at CABSAT

APSTAR returned to CABSAT this year, promoting all its satellites, namely APSTAR 5, APSTAR 6, APSTAR 7, APSTAR 7B and APSTAR 9.

Huang Baozhong, EVP, Sales and Marketing, APSTAR, said: "Our business is two-fold. Our broadcasting services account for nearly 35% of our revenue, and the rest is from data services. We have a very strong base of clientele for our broadcasting business, which includes many high-profile channels such as BBC, HBO, CBS and Sony Pictures, to name a few. We are very strong in Asia, and in Bangladesh almost all the TV channels use our satellite."

Baozhong explained that the Middle East market is new for the operator, and it has been in this market for only three years. With the launch of APSTAR 7, the operator is able to provide services to Middle Eastern customers, especially using its Ku-band beam, which has plenty of capacity and provides coverage over the region. So far APSTAR is mainly providing data services, but it is gradually gaining more broadcasters on APSTAR 7.

"In 2015, nearly all our US-based business was pulled from APSTAR 7. In any case we managed it very well, and have overcome



this issue. So far we have filled this gap that was left by this withdrawal. We have also accumulated a few very reliable clients like Etisalat and media companies like Abu Dhabi Media and Dubai Media.

"We have a dedicated African beam, and there are customers using our African and MENA beam for inflight connectivity. We still have some capacity that is not in use. There is a lot of competition from other operators that are dumping capacity at a very low price. Our strategy is to support our

existing customers' business arm in Africa. We will probably use this capacity in the future for clients who want to develop their business in Africa."

APSTAR considers the Middle East a core market, and so needs to be at CABSAT to reinforce this. Baozhong concluded by saying he has a very positive outlook for the future, and that the market is ideal for broadcasting as well as telecommunications, with more room to grow.

Taqnia Space extols satellite services

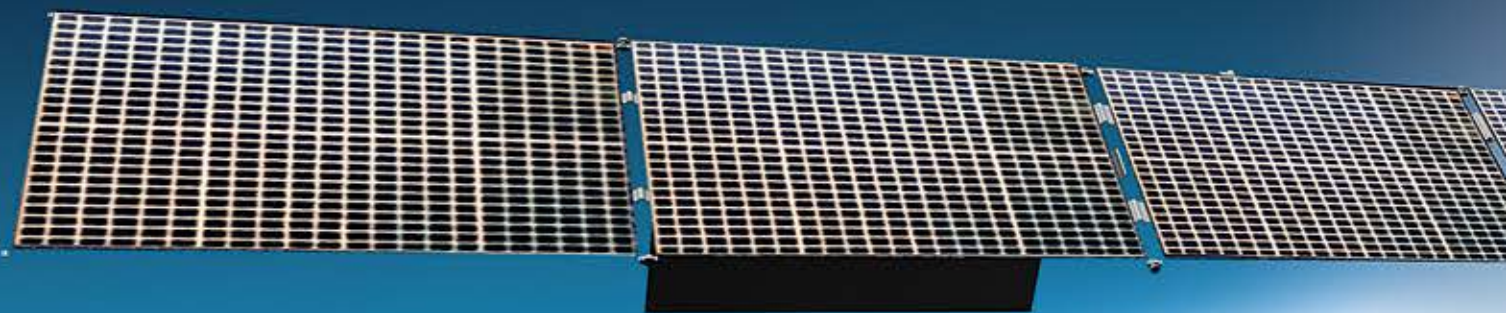
Taqnia Space was present again at CABSAT this year. The company seeks to be a major player in Saudi Arabia's innovation development ecosystem, by supporting and investing in suitable local and international R&D that fuels the growth of selected strategic technologies, for the nation's sustained economic growth. The 2020 goals and guidelines of the National Industrial Strategy (NIS) are key inputs for Taqnia's industrial development plans.

Bandar Alresayes, Business Development Manager at Taqnia Space, said: "Taqnia Space is a subsidiary of

Taqnia Holding, owned by the public investment fund. The company provides different satellite services, including broadcasting, communication services and other services like telemedicine and education. We also have a partnership with King Abdulaziz City for Science and Technology, where we work as their commercial arm, and they form the part of the company that performs R&D."

"We are here at CABSAT to market ourselves, create more exposure, search for opportunities and meet people who are interested in what we have to offer," he concluded.





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Noorsat rings in 10th anniversary

For satellite service provider Noorsat, CABSAT 2016 held special meaning as the company celebrated its 10th Anniversary. CABSAT reflected the great appetite for satellite services in the region, which is experiencing increased demand for both Direct to Home (DTH) TV and non-video services.

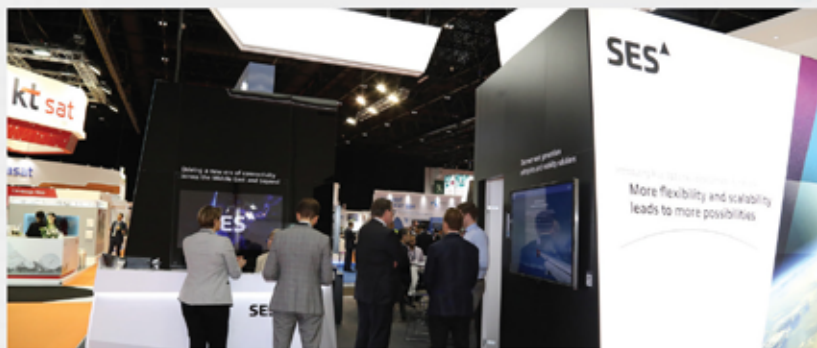
As the first privately owned satellite service provider in the Arab World, NOORSAT has achieved a great deal in the last decade, and now carries over 300 TV and Radio channels in both SD and HD quality and delivers Direct to Home (DTH) TV services to over 50 million households across the region. The company's satellite capacity and impeccable customer service is highly sought after.

"Noorsat has enjoyed ten years of steady growth", commented Omar Shoter, CEO of Noorsat. "2016 marks an important milestone in the company's development and we are using CABSAT as a platform to reflect on our journey, our history and heritage and to focus on the future at a time when there are so many exciting developments in our industry."

Since its establishment in 2006, Noorsat has gained significant market share in both the Direct to Home (DTH) TV market and other services such as Telecom, Video, Telephony and Internet services. Noorsat boasts premium capacity on the NOORSAT 7 and NOORSAT 7B satellites, both located at Badr Al Nile® at 7/8° West orbital position, and the NOORSAT 1 satellite located at Badr Al Arab® at 25.5° East orbital position, the only two hotspots that serve the Arab World.

Over the last decade, Noorsat has helped broadcasters to embrace technological developments within the sector, enabling them to make a smooth transition from SD to HD.

SES promotes SES-9 at the show



SES was once again positioned next to its partner Yahsat, at CABSAT this year. The operator was promoting the features of its new satellite SES-9, which will be primarily used for transmission to the Middle East and will also have mobility beams for maritime and aeronautical applications. The operator also showcased the advantage of using the SES fleet for operations across varied verticals.

"We have successfully launched a new satellite, SES-9, which will be at the 108.2-degrees East orbital slot. It has very good coverage over the Middle East and is structured for mobility. This shows that we

are serious about this market and addressing what the customers are asking us for. In the mobility business, when you go from one beam to another the price can change. What we are trying to do is make it easier for our customers.

"In 2017, we will launch a new Ku-band HTS satellite, which will be at 95-degrees East, and we are at CABSAT promoting our coverage and vertical offerings. There are challenges in the market, with the oil price which has affected all businesses. However there are opportunities too, there is the growth of HTS and providing end-to-end solutions," said Hussein Oteifa, GM, SES.

Norsat demonstrates Ranger series

At CABSAT 2016, Norsat showcased its portable satellite terminals, including the Ranger high-performance ruggedised satellite terminal ideal for rapid deployment, as well as its ATOM Series of block upconverters (BUC) and solid state power amplifiers, which are among the smallest, lightest and most powerful in the market.

It has an ability to be easily integrated into a variety of systems, making these products ideal for portable applications such as broadcast, airborne and comms on the move. The ATOM series is flexible and can be configured and customised to meet varying application requirements.

Norsat said that the show provides the perfect opportunity to meet customers and resellers and introduce new products into this market. It is looking to strengthen its network within this region and welcomes discussions from interested partners.

Founded in 1977, Norsat International's products and services include customised product design and development, production, distribution and infield support and service of fly-away satellite terminals, microwave components, antennas, radio frequency (RF) conditioning products, maritime-based satellite terminals and remote network connectivity solutions.

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Exterity shows IP range at CABSAT

Exterity demonstrated its complete IP video product portfolio at CABSAT this year.

The Exterity enterprise IP video portfolio enables systems integrators and consultants to easily specify and install a full end-to-end IP video system to distribute content over the corporate LAN and beyond, via WAN, Wi-Fi, the internet or a content delivery network, extending media distribution to any device connected over any network.

Colin Farquhar, CEO at Exterity, commented: "The Middle East will be home to some of the world's largest events over the next few years, from Dubai 2020 to the World Cup in Qatar in 2022, transforming the region into one of the fastest growing AV markets. Organisations in the Middle East want the highest quality audiovisual technology for their tech-savvy customers. At CABSAT, we are showing how our flexible, robust and future-proofed enterprise IP video solutions can help them provide high-quality content."

The complete product range enables organisations in multiple sectors, including education, hospitality and oil & gas, to make high-quality video content consistently available across their premises and beyond, giving staff, visitors and guests the flexibility of how and where they view the content. At CABSAT, Exterity also demonstrated its extended support for 4K and introduced features in its integrated digital signage solution.

"Exterity already works with some of the biggest brands in the region, ranging from world-renowned broadcasters, hoteliers and airports, and our discussions with integrators and end users are showing tremendous understanding of the potential of IP video," said Eleuterio Fernandes, Middle East and Africa Sales Director at Exterity.

Inmarsat presents entire range of solutions



Inmarsat was at CABSAT this year, showcasing its range of BGAN terminals and partner solutions from Hughes and Cobham. Also on display was the latest generation of the iSAT Phone 2, one of the most competitive solutions for satellite phones on the market.

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of the iSAT Phone 2, one of the most competitive solutions for satellite phones on the market. Inmarsat's GX solutions were also on display, like the maritime antenna from Intellian and the ATOM 65 antenna.

"Inmarsat was awarded a licence for services within the UAE in January. The next step for us was to find somebody who's really focused in the region. This is where signing the agreement with Global Beam Telecom has been a positive step to have access within the market. The UAE is a very important hub for our business.

"The region has been very important for our maritime business, where we've had partners like Marlink and Airbus, as well as Tile Marine and IEC. We have some very good business we are working on in the aviation market, which we hope to announce a bit later in the year. Other customers like Al Jazeera also use our BGAN services to live broadcast," said Paul Gudonis, VP, Indirect Sales, Inmarsat Enterprise.

Eutelsat promotes ME hotspot

Eutelsat's focus at CABSAT this year was to reinforce the 7/8 degree West orbital position in the Middle East.

After Eutelsat 8 West B was put into operation, the operator noticed a lot of new channels signing up for broadcast on its satellite. Other channels have been using the capacity to upgrade to HD. The company feels this is very important because it shows that its capacity can provide the technical reach to get to the right audience.

"After launch, we saw an increase of 20 HD channels and about 60 SD channels on the hotspots. This shows that the demand still exists and is still very strong. With the increase in HD as well as 4K channels,

"The challenge is to continue to be better than we are today. We want to start enhancing the quality of TV experience in the region. With this, we are working on multiscreen solutions, whereby using one



satellite dish you can watch channels on your TV as well as tablets and smartphones. We are also starting to organise programme guides for the channels on our satellite. On the data side, we have been providing broadband for schools, connectivity to oil & gas and enterprise," said Ghassan Murat, Director of Commercial Development for the MENA, Eutelsat.

Arabsat promotes its newest satellite **Badr 7** at CABSAT

Arabsat garnered a lot of visitors and customers at its stand this CABSAT, mostly due to the recent launch of **Badr 7**. The operator reiterated that it always comes to CABSAT, as it is one of the most important shows in the region for the satellite and broadcast industry.

“Our purpose of participation is to promote **Badr 7**, which was launched at the beginning of this year and will be in operation by the middle of this year. It has new technologies that spread coverage from the Middle East all the way into the ocean. This gives more opportunities to our customers to promote triple play. It's a new idea in the market and hopefully it will cover all the Arab countries, mainly the capitals,” said Wael Al-Buti, Director of Sales at CABSAT.

Arabsat has also entered South Africa, a new market for the operator where it can provide high power Ku-band coverage. This gives Arabsat more regions to expand into besides the Middle East.

“We were the pioneer satellite operator in Africa, but nowadays there is a lot of competition in that region. We are trying to



be closer to our customers and offering value-added services. We have long-term relationships with many partners, and at the same time we are also trying to maintain the pressure from the market regarding falling prices. For now we are utilising two satellites in the region, ARABSAT 5C and ARABSAT 5A, and we will continue to do this.

“We have an aggressive plan for the future, with three more satellites coming up. We also have a partnership with Taqnia, and this

will enhance our telecom offering and provide services in the region,” concluded Al-Buti.

Badr-7 is the initial sixth-generation satellite for Arabsat's fleet, providing broadcast, broadband and telecommunications services over the Middle East, Africa and Central Asia. It was launched on behalf of Airbus Defence and Space and Thales Alenia Space as part of a turnkey contract with Arabsat.

Virtel brings VSAT solutions to show



Virtel returned to CABSAT this year, looking to meet new customers as well as set up alliances with new partners in the Middle East and Africa

Bassam Hassan, Technical Manager, Virtel, said: “We are selling VSAT equipment, and are the reseller for some suppliers around the world. We are based out of Jebel Ali and are authorised to distribute VSAT equipment in the region to customers, who can then obtain satellite service through independent operators.

“At CABSAT, we are looking to find more partners and customers, as well as to strengthen ties with current clients, and increase our presence in the market.”

Gazprom shows Yamal at CABSAT

Gazprom returned to CABSAT 2016, and has been participating at the exhibition for 10 years.

According to the company, a lot of the region is covered by its Yamal satellites. Approximately 15% of its revenue is drawn from the Middle East.

"There are two satellites that operate in this region, Yamal 202 at 49-degrees East and Yamal 402 with Ku-band and the Middle East beam. With these satellites in use over the region, our purpose is to service the area. We are also looking to launch more satellites. In spite of the global economic crisis and the problems in Russia, we are going to continue to develop our international business and orbital constellation.

"As a satellite operator, we provide capacity. In Russia, we also are service providers and system integrators. Outside Russia, we do not have any offices and so partner with other service providers and teleports, where we provide capacity and services for end users in other regions," said Igor Kot, Deputy Director General, Business Development at Gazprom Space Systems.

Kot also said Gazprom comes to CABSAT because it loves to meet its current clients and feels that face-to-face communication is very important for improving cooperation. There are also other potential clients that visit the show, and with a presence at CABSAT, Gazprom attempts to cater to them as well.



Yahsat promotes new satellite launch for 2017



At CABSAT, Yahsat was looking forward to key meetings with its service partners. The operator will also be launching a new satellite next year that will go across the Atlantic and cover 17 markets across Africa and Brazil.

David Murphy, COO, Yahsat, said that the company was ensuring that it has all its partners in place so that it can sell to the end users in the region. Yahsat has also signed an MoU with IEC Telecom, which has been a partner over the last few years. It is working with IEC in a number of markets and is very well placed across Africa.

Speaking about the challenges most operators are facing in Africa, Murphy said: "We're benefiting from operators dumping capacity in Africa, because the prices are falling for the C-band, and Ku-band to a

lesser extent. However, everyone is looking for cheaper options, and we are the most affordable option around them. We did not see a lot of business from oil & gas previously, but now that the oil prices have dropped below \$40, we are looking at increased demand from sectors that we haven't seen so far. We have seen an upside as a result of this. We led Ka-band into Africa and there is not a lot of competition in that market. There is more than enough demand to outstrip the supply, so we're not seeing pricing pressure at the moment. In fact, last June we increased our prices.

"Yahlive's focus on broadcasting niche language programming took off quite well. Afghanistan is going very well, and now we have a lot of Farsi content and are in the process of starting operations in Iran."

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Is LEO the **next big thing?**

Diederik Kelder, SVP, Corporate and Business Development at Leosat, speaks about how the upcoming company will be able to bridge the gap between fibre and satellite connectivity for data backhaul

Leosat was conceived in 2013 by customers of the satellite industry. The company was formed very much from a customer need perspective. In September, when Mark Rigolle joined as the company's CEO, he started creating a team with a lot of satellite experience. In essence, he started combining the best of both worlds, people who know how to set up a satellite company, and on the other hand, the concept of Leosat needing high throughput data connections. This is something that satellite today has not been able to fully deliver, and this is what we are trying to achieve.

The coverage of Leosat's satellites is truly global. We will fly our LEOs in six orbital planes from the North to the South Pole. Compared to GEO satellites, the further north you go, the higher latitude is, the lower the look angle, so there is an area which you don't cover. With the MEO system, you're pretty much limited to 40-60 degrees latitude.

We're in the first phase of Leosat, so what we're essentially trying to do now is engage with prospective future partners and customers. We are trying to explain to the audience what Leosat is and how it can be beneficial for applications that they currently may be operating on other satellites. We will definitely have some major benefits for companies in the Middle East and Africa.

One of the first market segments that we are trying to target with our solutions is the enterprise network market. Specifically in regions like Africa, where fibre is unavailable, but also in regions where fibre is developed, you need a good high throughput, low latency, point-to-point solution. This is exactly what we offer, with throughput in the 1.5Gbps range symmetrically both up and down, which effectively means you've got 3Gbps. This



"One of the first market segments that we are trying to target with our solutions is the enterprise network market. Specifically in regions like Africa, where fibre is unavailable"

DIEDERIK KELDER, SVP, Leosat

is premise to premise, which means you can uplink from anywhere in the world, and at the other end you can deliver to another premise. This makes it just like fibre – it's easy to buy submarine cable coast to coast links, but then what do you do after the landing? This is one of the areas where Leosat comes in where it's true premise to premise.

If you take this to the next level, big corporates require a network around the world that must be secure. Today there is a lot of anxiety about security risk, because even if you use a VPN you are still using the internet, which means you are still passing through a lot of POPs and gateways. With the Leosat system, you beam up in Ka-band to 1,400km, and then the signal is laser beamed, so effectively we have an optical backbone in space and you can go anywhere in the world, until you hit the destination of delivery, where once again you go down in Ka-band exactly on the premise you want to reach.

Speaking about the huge surge in inflight and maritime connectivity, one of the things that has resulted is tremendous development in ground equipment. People are now trying to build the smallest possible phase array with support for Ka-band and Ku-band panels, with the additional benefit of fully developed smaller antennas. This is where we position Leosat, in between fibre and satellite, giving the customer the best of what fibre has to offer as well as the best that satellite can offer, and trying to develop this new space which will benefit the enterprise market.

To conclude, Leosat's satellites are not general purpose satellites. There are very specific scenarios in data backhaul where Leosat will be useful. This can include, but are not limited to, enterprise, telephone backhaul and maritime. **PRO**

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