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MIDDLE EAST

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CommunicAsia 2016

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Maritime communications advances exponentially

POINTING IN THE RIGHT DIRECTION

An exclusive look at how STN's teleport facility is rapidly evolving beyond traditional point-to-point broadcast

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www.apstar.com

SatEditorial

A Taste of Asia

Welcome to the May edition of *SatellitePro ME*. Last month I was lucky enough to visit a teleport in Slovenia that has been recognised by the WTA as the Best Independent Teleport of 2015. Among some of its other accolades is being one of the top 10 teleports around the world for the last three years. Yes, I'm talking about STN, a name that many in the industry would be familiar with.

STN's facilities are massive and the teleport operator is working on growing them even more. With customers from the Middle East and Africa signing up for services, the teleport handles point-to-point broadcast, and also offers TT&C services as well as a platform to branch into OTT services. I'm not going to give away the entire story here, so please have a look at the feature on page 10 of the magazine.

In other news, we're getting ready for yet another show, and as always, you know how excited I get during exhibitions. This time Singapore beckons and the entire team will be there in full swing for CommunicAsia and BroadcastAsia. The show is expected to draw close to 50,000 attendees this year and will run from 31 May to 3 June. Tonnes of new technology is going to be on show, and from what I understand, the focus of the show this year is on connectivity and smart cities for a smart future. Certainly piques my interest. I'd love to catch up with all of you, so for those of you who haven't already fixed a time, please drop me a line and let's schedule a quick meet-up.

I wish you a wonderful May. 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

In this edition:

Yahsat celebrates five years in space

>> UAE satellite operator Yahsat celebrated the fifth anniversary of the launch of its first satellite, Y1A, on 23 April, 2016. In 2011, the Ariane 5 rocket carrying the satellite launched from the European Space Centre in Kourou, French Guiana.

The following year Yahsat launched its second satellite, Y1B. Today, the company is on track for the eagerly anticipated third member of its fleet, Al Yah 3, which will provide high-quality broadband coverage to an additional 19 countries, including first-time entry to South America through Brazil.

Yahsat has also announced the manufacturing of its third satellite, Al Yah 3, planned for service launch in early 2017, extending its commercial Ka-band coverage to an additional 19 markets, reaching 60% of Africa's population and over 95% of Brazil's population.

+ **www.yahsat.com**

The launch of Y1A on 23 April, 2011.

OOREDOO AND ARABSAT COLLABORATE FOR SAT SERVICES

Ooredoo and Arabsat have signed a strategic partnership that will see the two companies work together to develop new satellite services for customers. They will review the satellite projects they have in progress, with a view to collaborating on technology and design, and will aim to work together on future projects.

Waleed Al-Sayed, CEO, Ooredoo Qatar, said, "Ooredoo continues to grow our global network of world-class partners in every area, as we look to increase the range and diversity of ICT services that we offer."

+ **www.arabsat.com**

+ **www.ooredoo.com**

MBRSC SHOWCASES ITS SPACE PROJECTS AT DIGAE

Representatives from Mohammed bin Rashid Space Centre (MBRSC) presented a keynote entitled "Space for man's happiness and enriching human knowledge" at the International Conference for Future Governments held at the fourth edition of Dubai International Government Achievements Exhibition (DIGAE) last month.

DIGAE was organised by the Dubai Government Excellence Programme (DGEP) of the General Secretariat of the Executive Council of Dubai, under the patronage of His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President and Prime Minister and Ruler of Dubai, from 11-13 April.

Presented by Omran Sharaf, Project Manager of the Emirates Mars Mission, and Amer Al Sayegh, Project Manager of KhalifaSat, the keynote showcased the objectives and services of the two hugely significant space projects in the UAE currently being developed at MBRSC – the Emirates Mars Mission and KhalifaSat. Sharaf and Al Sayegh highlighted the latest developments involving the two projects.

In a presentation, Sharaf addressed the importance of the space sector in the growth of the economies of other countries around the world, pointing to the experiences of major nations in this regard, as well as the technical discoveries resulting from space projects and their impact on economic growth and scientific progress.

+ **www.mbrsc.ae**

+ **www.digae.ae**

Nilesat takes Al-Manar channel off air

>> Nilesat has cut the broadcast of Hezbollah's TV station in the Shiite group's native Lebanon, according to a report by AP. This is perhaps the latest move in escalating tensions between the Iranian-backed organisation and Sunni Arab countries in the region.

Al-Manar, the official station of the militant Lebanese group Hezbollah, briefly went off air after its carrier, Egypt's NileSat, dropped the channel. Technicians scrambled to reprogram satellite receivers after the station switched its broadcast to Russia's Express satellite provider in Lebanon.

Lebanon's state news agency reported that the Egyptian satellite company NileSat informed the country's Information Ministry on Tuesday of its intention to drop Al-Manar's broadcasts, saying they "provoke sectarian strife".

Al-Manar is popular among Hezbollah supporters but widely watched by others, particularly for regional news and updates on the Syria conflict. Its political reports

Hezbollah-backed Al-Manar TV taken off air.

openly favour pro-Iranian perspectives over pro-Saudi ones. It also broadcasts cooking and exercise shows, educational programmes and documentaries.

The Arab League designated Hezbollah a terrorist organisation in March this year.

It could take days for Al-Manar to resume its transmission across the Middle East as it negotiates with various satellite providers, according to an official at the station, who spoke on condition of anonymity.

+ **www.nilesat.com.eg**

ETISALAT GROUP ANNOUNCES NEW CEO

Etisalat Group said it has appointed Saleh Adbullah al-Abdooli as CEO, as the company continues to restructure. Abdooli replaces Hatem Dowidar, who was appointed interim CEO earlier this month. Dowidar will now report directly to Abdooli. Earlier last month, ex-CEO Ahmed Julfar resigned for unknown reasons.

An international blue-chip organisation, Etisalat provides innovative solutions and services to 169 million subscribers in 18 countries across the Middle East, Asia and Africa.

+ **www.etisalat.ae**

GOMX-3 CUBESAT TO TRACK AIRCRAFT IN FLIGHT

Since its launch six months ago, a satellite small enough to fit in an airline passenger's carry-on bag has been tracking aircraft in flight across the entire globe. Built for ESA by GomSpace in Denmark, the GomX-3 CubeSat was ejected from the International Space Station on 5 October 2015, along with a Danish student satellite.

"CubeSats are based on standardised 10cm cubic units," explained Roger Walker, overseeing ESA's technology CubeSat effort. "Being small and low-cost, they make ideal platforms for rapidly flight testing experimental technologies."

"This three-unit GomX-3 is ESA's very first technology CubeSat to fly. We were able to make it operational within only 96 hours of its release from the Space Station, with a wide variety of tests taking place during the following months."

+ **www.esa.int**

+ **www.gomspace.com**

**The GomX-3 CubeSat tracks aircraft in flight.**

MHI receives order for the launch of Hope spacecraft

>> Mitsubishi Heavy Industries has received an order for H-IIA launch services from the Mohammed bin Rashid Space Centre in the UAE, for launch of the Emirates Mars Mission's (EMM) Hope spacecraft.

In order to better understand the Martian atmosphere and climate, Hope is expected to be launched in the summer of 2020 on MHI's H-IIA launch vehicle, and is set to arrive at Mars in 2021 to coincide with the 50th anniversary of the founding of the UAE. This order for the EMM is MHI's fourth overseas contract for its launch services.

The UAE Space Agency (UAESA) takes administrative and financial responsibility for the EMM, and MBRSC is responsible for leading the design and development of Hope, as well as the execution of all phases of EMM, which includes technical coordination with the H-IIA launch vehicle.

+ www.mhi-global.com
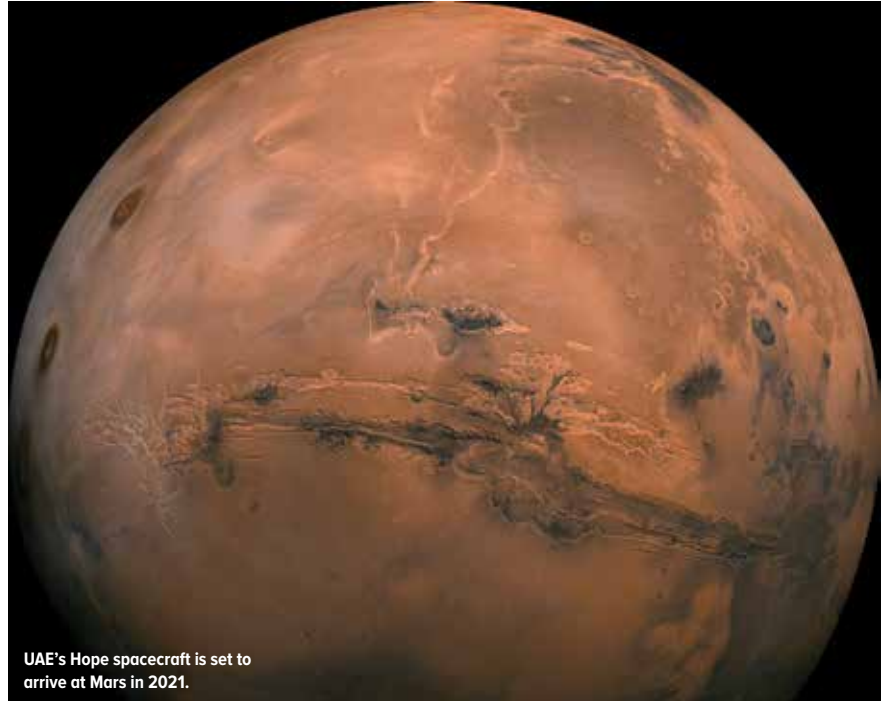
UAE's Hope spacecraft is set to arrive at Mars in 2021.

EGYPT TO BUY MILITARY SATELLITE

Egypt was set to sign $1.12 billion worth of deals with France in mid-April to purchase warships and a military satellite. The deals were signed during French President Francois Hollande's visit on April 18.

One of the expected contracts will see DCNS build four naval vessels, including two Gowind corvettes. DCNS, which is mostly owned by the French state, sold four small Gowinds to Cairo in 2014.

As part of another deal, Airbus Space Systems and Thales will jointly supply Cairo with a military telecommunication satellite.

+ www.thalesgroup.com

GLOBALSTAR AND MANX TELECOM SIGN ALLIANCE TO DEVELOP EMN

Jay Monroe, CEO, Globalstar.

Globalstar Europe Satellite Services and Manx Telecom announced an alliance to develop EMN, a new multiple technology communications system that aims to be the world's first communications service to switch between multiple cellular networks and a DtU (Direct-to-User) mobile satellite network.

Using Globalstar's Low-Earth Orbit satellite constellation, EMN is intending to be a BYOD solution that will enable users to communicate as normal with their existing devices, such as smartphones or tablets, but with ubiquitous nationwide coverage via satellite operations.

With EMN, which uses Manx Telecom's Smart SIM technology, when a user's signal level begins to weaken due to the limited reach of the carrier's coverage or disappears due to a natural or man-made disaster, connectivity will be automatically handed over to another mobile network that is in range.

If a terrestrial network is not available, network connectivity will be transferred onto Globalstar's system.

In the summer of 2016, Manx Telecom and Globalstar are targeting a trial service of FRAN involving parties from the emergency services community.

"First responders face an ever growing array of operational challenges," commented Jay Monroe, Chairman and CEO of Globalstar. "The EMN solution, incorporating our reliable satellite network, will help ensure that first responders can continuously communicate and help them perform their significant roles more effectively."

+ www.globalstar.com

MBRSC monitors ongoing change in Dubai coastline

>> MBRSC has announced the results of an analytical study to monitor the changes on Dubai coastlines during varying periods between 2009 and 2015. The study covered the natural geographical and human changes the Dubai coastline witnessed, from Al Mamzar Beach Park to the Dubai Waterfront Project and the Arabian Canal. This study classified the land attached to the coast, and identified the expansion and the partial and total erosion ratios. The study aims to calculate the length of the Dubai coast in 2015 and provide an estimated future vision of the coastline.

The study divided the Dubai coastline

The coastline of Dubai.

into eight zones (A-H) and showed partial expansion on different parts of the coast of about 6%, due to a number of vital projects taking place in the emirate, such as the completion of Al Mamzar Corniche Beach, a thousand-metre-long project; Jumeirah Bay Island, Jumeirah One Beach (1,380m) renovation project and Pearl Jumeirah; as well as the Umm Suqeim 1 and 2 Beach upgrade project, Bluewaters Island and the Dubai Water Canal project.

The also study showed the construction of a number of breakwaters in order to protect the coast from medium-high waves.

+ **www.mbrsc.ae**

NABSHOW 2016 HOSTS FIRST SATELLITE INDUSTRY FORUM

The 2016 NAB Show featured the new Satellite Industry Forum, a one-day programme produced in partnership with the Satellite Industry Association (SIA). Held Tuesday, April 19, the forum focused on the role the satellite industry plays in broadcasting and delivering high-quality video content to and from anywhere on the planet – on land, sea or in the air.

"The SATCON conference is a major component of our NAB Show New York event, and we are pleased to partner with SIA for the Satellite Industry Forum at NAB Show to further strengthen our commitment to this industry," said

Executive Vice President of Conventions and Business Operations Chris Brown. "Satellite technology continues to be a strong driver in the evolution of media, entertainment and content delivery overall."

Mark D. Dankberg, co-founder of ViaSat, delivered the forum's keynote address, titled, "The Data Revolution in Satellite Communications". Dankberg is an industry expert in aerospace, defence and satellite communications, and is the leading visionary for a new generation of high-capacity satellite systems.

+ **www.nabshow.com**

Mark Dankberg, co-founder and CEO of ViaSat.

EUTELSAT SELECTS GILAT FOR BROADBAND SERVICES

Eutelsat Communications has announced its selection of Gilat Satellite Networks to power a new range of broadband services in Western Russia. Eutelsat has selected Gilat's SkyEdge II-c hub with X-Architecture and SkyEdge II-c small user terminals to deliver broadband services using the new Express AMU1/EUTELSAT 36C satellite.

The hub will be installed at the Dubna satellite centre operated by RSCC, near Moscow. The satellite's High Throughput payload comprises 18 Ka-band beams delivering continuous coverage of western Russia, from the Arctic coastline to the Caspian Sea.

Kirill Yanchenko, General Director of the Eutelsat Networks company that will market services in Russia, said: "Our deployment of Gilat technology is a new milestone taking us closer to the commercial launch of services in July. In working with Gilat, we are putting in place a key component of a high-performance broadband infrastructure that will deliver high-quality connectivity."

"The agreement further validates our multi-application, one-platform X-Architecture as the most advanced baseband system for HTS," said Ron Levin, Director Strategic Accounts at Gilat.

+ **www.eutelsat.com**

UAESA signs pact with USSTRATCOM

The United Arab Emirates Space Agency (UAESA) today entered into an agreement with the US Strategic Command (USSTRATCOM) to share space situational awareness (SSA) services and information at the 32nd Space Symposium.

The arrangement, which will enhance awareness within the space domain and increase the safety of spaceflight operations, was formalised in a memorandum of understanding signed by Dr Khalifa Al Romaithi, UAESA Chairman, and US Air Force Maj Gen Clinton E. Crosier, USSTRATCOM Director of Plans and Policy.

"We are proud to sign this important agreement that further solidifies the bilateral UAE and US space relationship and will contribute to the protection of important assets of both countries in orbit," said Al Romaithi.

"We must be able to maintain situational awareness, act where necessary, and as stated in the 2010 Space Policy, preserve the space environment," said US Navy Adm Cecil D. Haney, USSTRATCOM commander. "Recognising an evolving and diverse space environment – and a need to preserve

access in space – it is imperative we work with and leverage our key allies and partners like the United Arab Emirates to increase situational awareness in space."

Dr Mohammed Al Ahbabi, Director General of the UAE Space Agency, said: "Today's signing comes within the context of the strategic targets of the UAE Space Agency, in terms of building and developing mutually beneficial partnerships with experienced international entities."

"This is a really important initiative between our two governments," said Crosier. "Not only does it represent a joint commitment to space safety and security, but it also represents yet another mission area in which the United States and United Arab Emirates are forging an ever stronger partnership."

SSA data-sharing agreements enhance multinational space cooperation and streamline the process for USSTRATCOM partners to request specific information gathered by USSTRATCOM's Joint Space Operations Center at Vandenberg Air Force Base in California.

+ www.space.gov.ae

Dr. Mohammed Al Ahbabi, Director General of the UAE Space Agency.

MBRSC SIGNS MOU WITH DP WORLD

Yousuf Hamad Al Shaibani, Director General, MBRSC.

MBRSC has signed a Memorandum of Understanding with DP World, aimed at developing an organisational framework on means of cooperation and coordination, and the exchange of information, scientific data and expertise, and human resources consistent with the UAE's strategy and public interest.

With the MoU, MBRSC will assess and provide current and future requirements associated with remote sensing applications and satellite images for DP World, where the Centre is competent to approve and execute the specifications, standards and the technical requirements related to the satellites of MBRSC. Moreover, MBRSC will contribute in setting DP World's need for applications related to designs for satellites under construction, as well as future ones.

Commenting on the signing of the MoU, Yousuf Hamad Al Shaibani, Director General, MBRSC, said that the signing of the MoU with a prestigious institution, like DP World, is a true reflection of the efforts made by the Centre to build bridges of cooperation between all local authorities to create an environment that guarantees the achievement of sustainable economic development.

Shaibani added: "The maritime sector is witnessing steady growth and adopting world-class competitive mechanisms, which assert Dubai's competitive position globally in the maritime field, and at various levels regionally. This has created an investment environment that has attracted various leading companies involved in the maritime industry and the maritime transport sector. Thus, we are dedicated to supporting them with high-quality satellite services."

+ www.dpworld.ae

+ www.mbrsc.ae

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Today Sky Stream has established itself as a leading provider of managed and turnkey VSAT solutions across the Middle East, North Africa and South-West Asia for customers engaged in the Marine, Military and Oil and Gas sectors. Sky Stream provides flexible solutions to meet the ever changing demands of its customers, including the design, build and operation of networks. Its state-of-the-art control centre and hubs are complemented by a highly qualified and experienced team of engineers, project managers and customer service personnel.

Extreme conditions call for exceptional connections
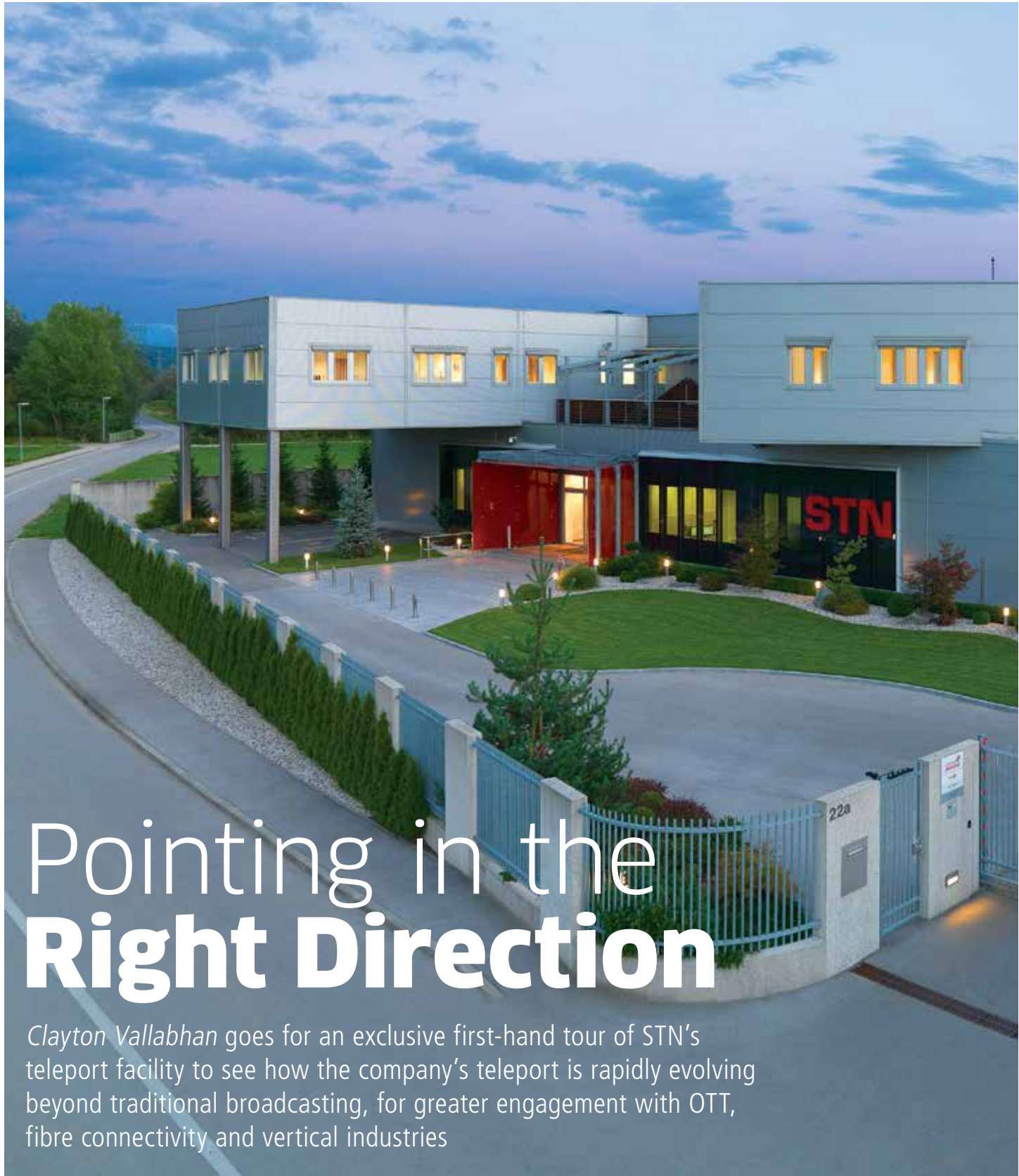
Pointing in the
Right Direction

Clayton Vallabhan goes for an exclusive first-hand tour of STN's teleport facility to see how the company's teleport is rapidly evolving beyond traditional broadcasting, for greater engagement with OTT, fibre connectivity and vertical industries

At Satellite 2016 in Washington, the WTA presented an award to STN Teleport for 'The best Independent Teleport Operator'. The WTA 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.

The teleport was also ranked in the Top 10 Fastest growing Teleports for three consecutive years in 2013, 2014 and 2015. The Middle East was STN's first major market outside of Europe. It has always been a strong market and continues to grow for the company.

"We realise as a teleport that just working with TV and radio channels is just not enough. STN not only has its PoPs in all major data centres in Europe, but is also connected with fibre networks spanning worldwide. The consumer is evolving, and we too are evolving to meet new demands. With new products, you need to assess a new direction and new development, which is what we are preparing for the long term," says Andrej Lovsin, CEO at STN.

According to Lovsin, STN is continuously exploring and developing new market regions. Currently some of the strongest areas it services include Europe, Middle East and North America, but STN has a growing market in Africa and is now in the process of growing the Far East market too.

STN strives to partner with all commercial satellite operators worldwide and last year extended its portfolio to include services for two transponders on Yahsat, with an additional one planned to start in May.

"With STN now matured into a truly global teleport, we can offer our clients extensive service solutions around the globe. These include multi-regional or single packages which are very interesting for our clients. We are now seeing clients that want to become truly global, and STN can help them achieve that. This is especially more evident with our Middle Eastern clients who are becoming more and more interested to extend their services to Europe and other regions." says Lovsin.

Lovsin believes the success of the business lies in the ability to bring a package of channels from one area and have them downlinked to a completely different area

Andrej Lovsin, Founder and CEO of STN Teleport.

"We are now seeing clients that want to become truly global, and STN can help them achieve that. This is especially more evident with our Middle Eastern clients "

ANDREJ LOVSIN, Founder and CEO, STN

or multiple areas. During his recent visit to CABSAT 2016, he says it has been reaffirmed that the direction the company is moving in is correct. It is with this enthusiasm that STN is now working on building the third phase of the teleport, so that it can prepare for new strategic service developments and projects.

Reminiscing about the growth of the company, to now being in line with a truly global teleport, Lovsin says that though the road has had a few potholes, he knew success would come eventually.

STN was established in 2004, and started off by servicing 20 channels. The teleport was

based in the city of Ljubljana, Slovenia, but within four years of operation, the facilities became too small to service the number of clients the teleport was getting on board. Understanding the potential opportunities a larger base could help achieve, Lovsin decided to move the operation to a bigger area.

"We have huge plans going forward, and have purchased new land behind the current teleport, that is the same size as what we have now, effectively doubling our space for the facility. We have also started offering new services like OTT, with other new projects in the pipe line which include TT&C.

"With the mountainous ranges and hills in Slovenia, finding the right area for a teleport seemed a little challenging at first. We needed a vast open area where we could get the best angle for satellite reach both from the East as well as the West.

"We finally came upon this fantastic location, away from the city, in Dob. This was ideal, so we bought the land and started to build STN Teleport as you see it now. In 2009 we moved to the new premises and this was the first phase of major growth for us," says Lovsin.

However three years later in 2011, STN

needed to further expand its facility and thus started the development of the second phase.

"This growth was phenomenal for us as a company, because we started with servicing about 20 channels, which quickly grew to over 650 channels that we currently manage today. With new projects coming on board, that number will reach nearly 800 channels by the end of the year," adds Lovsin.

On the July 1 2015 the company reorganised its structure and became a public limited company, and on March 1, this year Anver Anderson was announced as the company's new General Manager. Anderson brings

The antenna farm at STN Teleport in Slovenia.

with him a wealth of knowledge that he has amassed working in various verticals throughout the telecom and satellite sector.

Anderson says: "In the last eight months we've been doing a lot of targeted marketing to the people that we need to be speaking to and the people we believe need our services. We try as much as we can to guide customers, because we understand that the service we provide ensures they can reach the audience they are looking to attract.

"STN plays a crucial part in the value chain and we know we can provide every service required, technically. But we know sometimes it's not even about the technology, or satellite or the content, it's more often about subscriber values and advertising revenues, and how they drive our market.

He goes on to explain that recently STN had a customer who wanted the latest technology and said DVB-S2 was a top priority. While the technology is great, through discussion and planning with the client it was agreed that this might not really service the client for where he needs to be.

Anderson says on the beam that the customer was looking at, maybe one-third of the set-top boxes were available to receive DVB-S2. In actuality what the customer really needed was to hit as many people as he could to generate more revenue. Hence, the team at STN guided him, not away from HD in entirety, but towards more of SD to maximise his value in the marketplace.

"We are capable of carrying channels in HD and are already doing experiments with HEVC,

"We are capable of carrying channels in HD and are already doing experiments with HEVC, but we are really acutely aware of what our customers sometimes need"

ANVER ANDERSON, GM, STN Teleport

but we are really acutely aware of what our customers sometimes need, even when they don't realise it themselves. When a channel comes to us they want to get from A to B, but they don't necessarily have the technical expertise or the market information that we have, and we work with them to share that. Therefore this customer will now go with SD, but will hit many more people than he could have with HD. Once the customer has grown his revenues and advertising, he can than move to HD and we're right here to manage that transition," continues Anderson.

Speaking about Africa, Lovsin says that a lot of people complain that it is a difficult market to crack, as operators are dumping capacity there and lowering prices as a result.

"The most important thing to understand is that every region in the world has some satellites that are popular, and others that are not so popular. If you are on a popular satellite,

you give yourself higher chances to succeed. People are not going to fix 10 antennas on their roof to get every single channel. We started in Africa with SES-5, which uplinks in Ka-band and downlinks in Ku-band, covering Sub-Saharan Africa; then there is capacity on IS-20, another popular satellite in Africa. We are currently also working with some satellite owners on C- Band capacity for Africa. Therefore, it is important to correctly determine which satellites will give the client the most return for their investment. It doesn't help if you deliver a signal to a region, and the client says nobody is watching the channels."

According to him, Africa is an extremely sensitive market, definitely a market for the future, but one where you have to start correctly. STN currently operates seven transponders over Africa: four on Astra with others on IS-20 and AfricaSat.

Similarly, a lot of clients from the Middle East want to be present on popular satellites in different regions and the TV channels that beam from these positions have a lot of viewers. STN understands this and works closely with satellite providers to deliver viable solutions. Another Middle East operator that the teleport shares a very good client relationship with, is Yahsat.

"For Yahsat, we have 33 channels, out of which 23 are in full HD. More of HD is definitely coming on-board. SD will be something that will be forgotten in a year or two. In fact the progression of broadcasters towards higher definition viewing choices is so great. We are currently working on a project with a client

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HorizonSat is recognized as a key provider of satellite communications services in the Middle East, Asia and Africa. Supporting institutional clients in the fields of Telecommunications, Broadband, Corporate Internet and Broadcasting, HorizonSat attributes its success to its dedication in implementing solutions that leverage the latest satellite technologies and support through its 24/7 NOC.

To serve our clients more effectively, we have enhanced our service through our state-of-the-art teleport, Horizon Teleports, strategically located in Munich, Germany covering a look angle from 55 degrees West to 78 degrees East.

Horizon will continue to work closely with its customers, focusing on their objectives and creating solutions that ensure continued success in their mission critical applications.

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to deliver 150 channels, and four of them are in 4K, with the majority of the rest in HD.

"With this you have to understand that HD will need more capacity on the satellite, thus we have now started engaging higher compression through partnering with Elemental. The quality of this equipment is really good, and we can now offer at reduced capacity, quality of TV channels in HD. The biggest cost for TV stations is that of satellite capacity. If you can reduce this capacity, and allow the broadcaster to beam out a few more channels it really becomes a value proposition.

"We have changed a lot of ground equipment on our teleport and this is our approach for the future. We are moving forward to improve the quality of channels, and will in turn benefit clients because they can use less space for more HD channels. There are currently three projects we have that are working purely towards with this approach. Our OTT offerings too are through Elemental, which will allow us to manage 140 channels in various resolutions," says Lovsin.

Anderson adds that the company has some good strategic discussions and development planned for this year, as to how it might be able to approach the two-way market such as oil & gas, construction, education and, banking and enterprise.

It doesn't intend to approach these markets in the traditional way – buying a hub and hoping to build a market around it.

STN is looking at ways to interact with what would normally be its competitors and then bring value to what they have put in place in terms of their equipment, by working as a virtual network operator from their system.

He says: "If they have coverage of a region then there is an excellent business model to develop. There are hubs that are very well linked in some strategic regions, but the hub itself is only running below its available capacity.

"This is a proposition where everyone wins. We have been approached in the past by another teleport, who have brought to us opportunities in the broadcasting market that they can't deliver on. In the future if we get an enquiry for a two-way service, which we can't help with, we'd be more than happy to share that with them by

> ## "We are always looking at the diaspora from many countries and we know that there is a large community of people from the Middle East living in Africa, Europe, Asia and North America."
>
> ANVER ANDERSON, GM, STN Teleport

return. This is a very unusual way to work, and we wouldn't do this with everybody, but there are a few players where we can mutually lend services to each other, and in time maybe we will formalise this."

Teleports are changing. It is no longer about taking a satellite transmission and delivering it somewhere else. STN is feeding into OTT networks and fibre networks. Anderson says the company is working with other partners elsewhere to uplink in different regions, and this has become much more globalised.

"What is interesting about the Middle East is that there is a huge amount of cultural, religious, documentary and news content. What is more interesting is when it needs to get carried to other places. We are always looking at the diaspora from many countries and we know that there is a large community of people from the Middle East living in Africa, Europe, Asia and North America. So if you want to go global with content you have from the Middle East, you only need one partner to deliver on this, and that's us at STN. We really do have that route to market.

"The real route to success is sound management and here at STN we have enjoyed steady double-digit growth year-on-year, with services and revenue, and that's exactly how we want to grow our business. Everything we make, we build on, and this is absolutely critical to the way we go forward," concludes Anderson. **PRO**

Anver Anderson, General Manager, STN Teleport.

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Commanding
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With surging demand for higher bandwidth at lower costs,
operators and vendors are looking for ways to increase coverage
and improve spectral efficiency for the maritime industry

Maritime communications have changed dramatically – from basic voice and low-data applications used for safety, to fully-integrated IP applications. Companies are realising that better and faster connectivity can bring about business optimisation and increase profits, while improving crew morale.

Gez Draycott, Vice President, Portfolio Management, Gobal Mobility Solutions at SES, says: "One example is the luxury cruise market, which up to 2011 was seeing connectivity of 4Mbps but is today enjoying broadband connectivity over 300Mbps. The high-speed connectivity provided by O3b Networks to Royal Caribbean is providing a home-away-from-home experience. Existing customers are satisfied, and a new class of clientele who seek connectivity are quickly attracted to this new way of travelling. And more importantly, the improved crew welfare brought about by the fast connectivity is key to retaining staff and attracting new employees."

Tore Morten Olsen, President Maritime at Marlink, explains that more bandwidth for lower cost is enabling shipping companies to use applications that help them operate more efficiently and provide better crew and passenger communication services.

He says vessel operations and passenger/crew welfare are all drivers that have changed satcom in recent years and generated more demand for bandwidth. New satellites coming to market with higher bandwidths at lower cost have made it possible for many more shipping companies to benefit from satellite communications.

"It's now commonplace to have Wi-Fi networks for passengers and crews that are separate from the operational network, meaning all users can be confident of their ability to access the available bandwidth. The need for bandwidth continues to grow, though, so there is a requirement for innovation in the industry.

"This is partly answered by the introduction of new Ka- and Ku-band high-throughput satellite (HTS) services combined with Marlink's own multi-band approach, which seamlessly integrates multiple carriers to ensure high availability of connectivity using the best cost/

Gez Draycott, Vice President, Portfolio Management, Gobal Mobility Solutions at SES.

> **"These low-profile antennas are being designed with additional capabilities to transmit and receive in multiple frequency bands. Advanced innovations include the ability to access multiple satellites without realignment"**
>
> GEZ DRAYCOTT, VP, SES

performance service available, according to where a vessel is. At the end of the day, it's about ensuring the customer gets what they pay for, so we combine all VSAT bands, L-band MSS, 3G/4G and even terrestrial services to ensure high availability and cost-effectiveness."

Early VSAT platforms introduced important innovations such as uplink power control, dynamic bandwidth allocation and beam switching. Unfortunately, since most of those features operated independently, the results were unpredictable and difficult to manage – particularly at a larger scale.

According to Kevin McCarthy, VP of

Market Development at Newtec: "The next generation of VSAT platforms for maritime communications will be required to work at an unprecedented scale, with powerful HTS spot beams demanding more robust equipment and advanced transmission standards. HTS will also create new challenges, with a large number of small beams. With this in mind, beam switching logic must become smarter and multidimensional, allowing network operators to continually manage factors like load balance, regulatory restrictions, cost and weather."

Oversized mechanical antennas have traditionally been used in the maritime industry and often require increased maintenance and deck real estate. New coding techniques have resulted in the advancement of baseband design and the introduction of smaller antennas. Coupled with improved satellite design, this means connectivity can be optimised, resulting in significant changes to antenna design.

"We are now seeing a shift to electronically-steered antennas (ESAs) which are flat in appearance and easier on the eye. These low-profile antennas are being designed with additional capabilities to transmit and receive in multiple frequency bands. Advanced innovations include the ability to access multiple satellites without mechanical realignment," says Draycott.

Jan Michelsen, VP Maritime Business Development at Cobham SATCOM, thinks maritime antenna size is directly linked to HTS services and the spot beam configuration they use. Traditional wide beam satellites have a single beam covering a larger area, so in order to get acceptable performance on the edges of coverage, a 1m antenna system is generally needed.

"However, because HTS satellites use multiple overlapping spot beams, the challenges of securing a strong link on the edges of the beam are

mitigated. This paves the way for smaller antenna systems. We recently launched two new 60cm antennas that take advantage of the physics."

The SAILOR 60 GX for Fleet Xpress and the SAILOR 600 VSAT Ka for Thor 7 are able to provide a strong link anywhere in the footprint. They both use the same unique fusion of carbon fibre and aluminium to add strength and stiffness, therefore reducing the impact of vibration on the link, whilst keeping the weight below 37kg.

"The fact that we can now enable a strong link on 60cm antennas throughout the satellite's footprint means that smaller vessels (yachts, fishing vessels and workboats, for instance) can now seriously consider moving their communications from L-band MSS to the higher bandwidth pay monthly VSAT model. This will have significant impact on the efficiency, crew welfare and safety of those vessels," adds Michelsen.

All this new hardware, and the growing efficiency of satellite beams, means growing availability of faster connectivity. With the appearance of HTS like Intelsat Epic, Telenor Thor7 and Inmarsat GX, the potential for much faster connectivity is there. It's important to recognise, though, that most users don't demand much.

"On average, a ship owner has a link providing 170-180kbps. Of course, there are certain vessel types that need faster connections. We have provided links up to 12Mbps to seismic survey ships, for instance. And the cruise industry is always looking for more bandwidth and better experiences for paying customers. Generally, though, it's more important to provide reliable guaranteed bandwidth that is managed well, than go for the highest speed service a satellite can deliver," explains Olsen.

Draycott adds that there is an approximately tenfold increase in throughput being delivered, depending on the application. Ground antenna terminals no longer need bulky amplifier units and large apertures, because satellites are being designed and built with increased performances. While the ground solutions are becoming more compact, the trade-off is often in terminal gain. The antenna

> **"Scale is the next big challenge for mobile VSAT operators. With the advent of HTS and industry consolidation, networks are getting larger and bandwidth demand is growing exponentially. First-generation VSAT platforms and modems were never designed for this level of scale. VSAT platforms and modem hardware must become more powerful and future-proof, supporting higher data rates and extending upgrade cycles".**
>
> KEVIN MCCARTHY, VP of Market Development, Newtec

receivers and transmitters on SES satellites themselves provide much higher gain and amplification, enabling more opportunities for antenna developers to reduce the physical size of their products.

Higher speeds are only useful when there is continuous connectivity on vessels. When a vessel crosses the ocean, it goes through many different satellites overhead. Most modern antennas can easily switch between different satellites, and in the past there were considerable pricing differences during the switch. Nowadays many vessels have packages.

Draycott says: "SES is in the enviable position of having global satellite coverage, so our main concern is not switching between operators but to make sure we have seamless solutions for customers to enjoy connectivity without the worry of switching from operator to operator. In building platforms using the latest technology but with an agnostic approach, we allow providers and users to access networks that fit their specific application needs while managing the switching accordingly on their behalf."

Keith Murray, Product Manager at Thuraya, explains that there are often two

Kevin McCarthy, VP of Market Development, Newtec.

> **"We have provided links up to 12Mbps to seismic survey ships for instance. And the cruise industry is always looking for more bandwidth and better experiences for paying customers. Generally, though, it's more important to provide reliable guaranteed bandwidth that is managed well"**
>
> TORE MORTEN OLSEN, President Maritime, Marlink

or more systems on board with an antenna for each satellite service, such as an L-band service used by Thuraya and a VSAT system on a Ku-band or Ka-band service.

"A ship's connection is then controlled via a router or a priority box that selects the service based on availability. More complex electronic message handling systems can even select what particular type of traffic is passed over which service in the most cost-effective way. Thuraya offers a package to support this type of application called the VSAT Back-Up Service. This service ensures that customers have the security of an on-board dual redundancy communications system which has a minimal impact on the cost," says Murray.

McCarthy says Newtec has been focused on pushing the limits of spectral efficiency, to reduce costs for its customers. Its recently announced MDM5000 satellite modem aims to reduce capacity costs by up to 50%, with new waveforms like DVB-S2X and Newtec's unique Mx-DMA return technology.

"In addition, our upcoming Newtec Dialog 1.3 release will also include an advanced beam-switching engine, which will provide unprecedented control over beam-switching logic. A rich set of APIs will facilitate network load balance, least-cost routing and regulatory compliance.

"Scale is the next big challenge for mobile VSAT operators. With the advent of HTS and industry consolidation, networks are getting larger and bandwidth demand is growing exponentially. First-generation VSAT platforms and modems were never designed for this level of scale. VSAT platforms and modem hardware must become more powerful and future-proof, supporting higher data rates and extending upgrade cycles. Satellite networks should also be more transparent, integrating more seamlessly with terrestrial networks. Dynamic bandwidth allocation and beam-switching schemes will need to be more efficient and scalable in order to sustain the next wave of growth," adds McCarthy.

Marlink's Olsen thinks that in addition to satellite and beam management, solutions like Marlink XChange offer a wealth of functionality, including offering a single point for remote access onto a vessel's IT network, for software updates, troubleshooting, management of onboard data and voice traffic, etc. He says XChange also helps the shipping company to provide easy, low-cost crew communications, even using personal devices over Wi-Fi.

However, challenges still exist, and Olsen says having enough bandwidth to serve all vessels in a congested area is a potential challenge, but one that Marlink

has overcome through its partnerships with HTS satellite operators and technical innovations such as XChange and strong network management. "Having our own network of teleports fully interconnected with a dedicated terrestrial backbone is a key feature enabling us to control and guarantee the services globally."

Depending on the size of the vessels and the routes they travel, smaller vessels may require regional-centric coverage, while larger vessels may need global coverage. In all cases, they require high bandwidth to support high-throughput crew-centric applications. At the same time, satellite communications operations must be as efficient as possible.

"The recent revolution in smaller antenna designs and new satellites has resulted in more powerful satellites with comprehensive coverage being launched and the ability to utilise connectivity effectively. Smaller vessels are also finding that it is more cost-effective to utilise regional dedicated maritime beams such as SES-6 and SES-9, as opposed to the global beams that are more efficient for larger, global vessels.

"With HTS, the maritime industry will be able to get faster and better connectivity with competitive commercial plans," concludes Draycott. **PRO**

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Vox Pop

How is crew welfare being improved through on-board communications on ships?

Peter Broadhurst,
Vice President,
Service Development
Inmarsat Maritime

The Fleet Xpress service delivers the guaranteed high-speed connectivity that is essential to support the safest and most efficient vessel operations, anywhere in the world. In parallel, it will match the personal connectivity needs of even the most demanding modern seafarer, delivering services previously available only on shore.

On average, seafarers spend 7.4 months per year at sea. These are also months away from family and friends, when lack of communications with the outside world places the extra burden of isolation on both performance and wellbeing. A recent survey (The 2015 Crew Connectivity Survey, published by FutureNautics) reported that 73% of seafarers included ship-shore connectivity as a factor in their choice of employer, also noting that 77% of them bring a smartphone on board (compared to 57% in 2014).

Nick Farrell,
Director, Rock Seven

Crew welfare has become more of a priority, and has become more expected. Our RockFLEET product provides facilities for this, allowing crew to use their Bluetooth-connected devices to send and receive short emails and text messages back home without costing the operating company anything. Also, for RockFLEET users, posting to Facebook and sending tweets is free, wherever they are in the world.

Keith Murray,
Product Manager,
Thuraya
Telecommunications

It allows crew to stay in touch with family and friends, via social media, video calls and affordable VoIP voice calls. All of these services are available through Thuraya Atlas IP or Thuraya Orion IP. With shorter turnaround times in ports and the drive to work ships even harder in order to maximise profit, crews are spending less time on land. Retaining good qualified crew is key to the operational success of a vessel, and a happy crew is more likely to stay loyal to the company.

Vox Pop

Jan Michelsen,
VP Maritime Business Development, Cobham SATCOM

As more vessels deploy VSAT and costs come down, more bandwidth is becoming available for crew use. A shipping company that understands the cost and continuity benefits of a happy crew will ensure that their people have easy, low-cost voice and data. VSAT even makes it possible to provide free access to the internet. Of course, as expectations from seafarers grow, it becomes more important for shipping companies to provide a reliable service, so they have to choose the right service provider for them and indeed ensure they have reliable equipment on board.

Cobham's role in this is to develop highly reliable antenna systems that provide the vital link to the satellite, even in extreme conditions. We achieve market-leading reliability through innovative antenna design, the use of high-quality materials and in-depth testing using a unique vessel motion simulator platform. This allows us to test antennas in-house for hundreds of hours, which is not possible when just conducting sea trials. The result is technology that enables crew to make calls or access the web without interruption, which in turn supports the shipping company's crew welfare profile.

What other applications can be improved through on-board communications on vessels?

Keith Murray,
Product Manager, Thuraya Telecommunications

Improved communications systems can enable services such as telemedicine, tele-engineering and remote learning. In addition to supporting this type of access to subject matter experts while at sea, Thuraya's products and solutions provide many other types of applications, such as giving crew access to remote learning, allowing them to brush up on their skills and to learn new ones.

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Vox Pop

Peter Broadhurst,
Vice President,
Service Development
Inmarsat Maritime

The improved connectivity possible with Fleet Xpress releases the power of the shipping data revolution. It also enables use of other applications that can deliver real benefits in operational efficiency. These include real-time remote diagnostics, video surveillance for improved safety, security and compliance, enhanced IT security, and better crew management and welfare services, such as telemedicine and onboard training.

In addition, the launch of Fleet Xpress is likely to prove pivotal in the uptake of Fleet Media, Inmarsat Maritime's innovative multilingual entertainment solution for ship crews. Fleet Media offers on-demand movies, news, TV and sports that can be watched on laptops, PCs, or iOS and Android devices anytime, anywhere on board with a Wi-Fi or physical network connection. Keeping crew informed and entertained can help reduce staff turnover and boost job satisfaction and morale.

Nick Farrell,
Director, Rock Seven

Machine-to-machine data (M2M), vessel tracking for safety, security and logistics, catch reporting for fisheries and electronic forms can all be done via RockFLEET, with its low hardware and airtime costs in addition to very small form factor. The system doesn't work with high bandwidth, so isn't part of the maritime big data revolution, but not all applications and vessels require that. RockFLEET fits a large number of users who need low-cost, low-bandwidth global messaging and tracking.

Jan Michelsen,
VP Maritime Business Development, Cobham SATCOM

A lot of shipping companies migrate to VSAT, as the extra bandwidth and fixed costs allow them access to a wide range of systems that can help them operate more efficiently. These systems monitor on-board equipment and feed the data back to experts who can, i.e., use it to significantly reduce fuel costs or be more on the ball in proactive maintenance of engines or electronic equipment. Both of these applications can save millions of dollars a year, especially when you consider that fuel is the single biggest cost of operating a vessel or fleet by

> **"The objective of NEMESIS 2015 was to simulate the planning, preparation and execution of a multinational joint search and rescue exercise designed to prepare the teams for effective response in search and rescue missions and other humanitarian operations in the region"**
>
> JAN MICHELSEN, VP Maritime Business Development, Cobham SATCOM

far. A few percentage points saved on fuel can significantly boost your bottom line.

Applications for maritime users are essentially driven by the users' requirements and the ability of vendors to develop the systems that the industry needs. The sky really is the limit. A good example of a unique application for VSAT happened in July last year. Cobham SATCOM partner Tototheo deployed a SAILOR 900 VSAT system in support of the Cyprus Joint Rescue Coordination Centre (JRCC) Larnaca and the large-scale multinational search and rescue (SAR) exercise NEMESIS 2015. The exercise took place within the Exclusive Economic Zone of the Republic of Cyprus on 1 July. Air and naval search and rescue units, as well as personnel from Cyprus, the state of Israel, Greece and the USA, took part.

The objective of NEMESIS 2015 was to simulate the planning, preparation and execution of a multinational joint search and rescue exercise designed to prepare the teams for effective response in search and rescue missions and other humanitarian operations in the region. The exercise involved a number of air and sea craft: nine warships, an oil platform, an oil tanker, antipollution vessels, two Port & Marine Police ships, four helicopters and two airplanes. The scenario itself was divided into four phases and dealt with a serious accident in open sea, within an area where oil & gas rigs are operating along with their supporting vessels.

To enable the greatest learning from the exercise, a Cobham SAILOR 900 VSAT antenna system was installed on the EDT Flying Enterprise off-shore supply vessel. With the world's most advanced and reliable antenna of its class on board, the official camera crew were able to transfer live high definition video footage of the exercise to coordinators and stakeholders in the rescue coordination centre. **PRO**

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Tech **Showcase**

This year's CommunicAsia takes place from 31 May to 3 June. Local and international attendees are expected to cross the 50,000 mark, and will have the opportunity to connect and network throughout the four days

The Internet of Things (IoT) trend will add $1.7 trillion in value to the global economy by 2019, according to a Business Insider Intelligence report – which is exactly why the upcoming CommunicAsia2016 and EnterpriseIT2016, held from May 31 to June 3 at Marina Bay Sands, Singapore, will showcase the latest and most innovative connectivity and mobility technologies.

Both key enablers of IoT and smart cities, connectivity and mobility are the bedrocks of a smart future. Asia contains nearly half of the world's internet users, and countries in the region are eager to implement these technologies to connect their cities. A recent Research and Markets report says that India, for example, has allocated $1.2 billion to create its first 100 smart cities, while Singapore's Smart Nation Programme is well underway.

"CommunicAsia – Asia's pinnacle ICT trade event – remains the top platform for international industry professionals to network with leading companies and see first-hand the latest technologies, connecting attendees with more than 22,000 business opportunities," said Victor Wong, Project Director at Singapore Exhibition Services. "We are well poised to

"We are well poised to address the growing value chain of the IoT and smart city ecosystem"

VICTOR WONG, Project Director, Singapore Exhibition Services

address the growing value chain of the IoT and smart city ecosystem and are very eager for visitors to see what we have in store, especially at the new and improved NXT@CommunicAsia."

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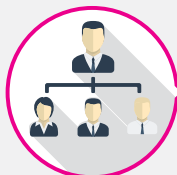
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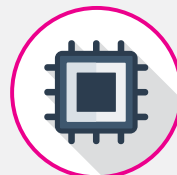
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Level 3 will focus on IoT and smart city innovations. Exhibiting in the exclusive NXT@CommunicAsia area is Singapore-based SME and IT system integrator SC Soft, which will be demonstrating its products, presenting its company credentials and highlighting its presence in regional markets.

"CommunicAsia is a hub for niche technologies from new and established local and regional players, and it provides us with the opportunity to meet with industry leaders as well as potential partners from emerging markets," said Dr Joule Lee, CEO at SC Soft. "During last year's event, we gathered a high volume of interest from our booth visitors as we launched a manual bike-sharing station prototype and branchless banking machines. Our participation proved worthwhile, with quick returns, and even today SC Soft's marketing activities are still centred on business contacts gathered at the 2015 show."

Lee added: "At CommunicAsia2016, SC Soft hopes to be recognised by major players as a trusted partner for projects in transportation, banking, surveillance and smart city thematic solutions through the portfolio of new hardware and software products that we will showcase."

Also exhibiting at NXT@CommunicAsia will be first-time CommunicAsia exhibitor Linear Technology Corporation. "We're very much looking forward to participating at CommunicAsia2016," said Joy Weiss, President of Linear Technology's Dust Networks product line.

"With the emerging opportunities in the industrial IoT market, we're looking forward to engaging with companies interested in our SmartMesh wireless sensor networking products, which provide the lowest-power, most reliable connectivity for industrial and smart city IoT applications.

"SmartMesh products are being used in more than 50,000 customer networks in more than 120 countries for a wide range of applications that require ultra-low power and wire-like reliability in harsh RF environments. Smart parking, data centre energy management, railcar

> ## "SmartMesh products are being used in more than 50,000 customer networks in more than 120 countries for a wide range of applications that require ultra-low power and wire-like reliability in harsh RF environments"
>
> JOY WEISS, President of Linear Technology's Dust Networks

monitoring, environmental monitoring and industrial process applications represent some of the varied uses of SmartMesh products."

In addition, new topics of focus for CommunicAsia2016 and EnterpriseIT2016 include consumer IoT, enterprise digital transformation and enterprise cyber security.

Cloud, big data analytics, wireless technologies, 3D printing, 5G/4G/LTE, augmented reality innovations, content network delivery, embedded technology, infrastructure & network solutions, IPTV, M2M and OTT, as well as multiscreen technology, software defined networks (SDN), sustainable ICT, wearables, apps, and satellite communications and services, will be among the cutting-edge technologies on display.

V2Plus brings UC&C products to CommunicAsia

V2Plus Technology is showcasing its All-in-One Business Communication Hub, UC-6050 and UC-8100 products at CommunicAsia 2016. The product is tailor-made for small and medium-sized businesses. It integrates a unified communications and collaboration (UC&C) solution with cloud video PBX, collaboration gateway, PSTN gateway, surveillance, door phone, remote presence, IoT gateway and router functionality in one box.

This significantly minimises the hassles of deploying and managing multiple system complexity and reduces Total CapEx and OpEx cost, while elevating business process effectiveness and productivity.

The communication and collaboration platform from V2Plus is designed to work anywhere, anytime and by anyone across the globe via any network – IP, internet, VPN, PSTN and wireless. It is suitable for either on-premise deployment or host Centrex set-up.

UC-6050 and UC-8100 support concurrent 100 and 200 video/voice/data sessions respectively, with multiple nine-party video/voice/data sessions. Both can scale up to 20 systems inter-connected in one cluster to support 10,000 user organisations.

RF-Design showcases FlexLink series

RF-Design is showcasing its FlexLink series at CommunicAsia 2016. The company specialises in developing, manufacturing and marketing high-quality RF distribution, RF-over-fibre and RF/DVB monitoring solutions, and has just released its new FlexLink S7A-1616 which represents a 1RU/19" rack-mount L-Band Switch Matrix that by standard comes in size 8:8 and allows field expansion to 8:16, 16:8 to up to 16:16, simply by licence-key activation.

This new switch matrix unit is especially designed for smaller RF distribution and signal management architectures and is perfectly suited for cable/IPTV headends, DSNGs, teleports, satellite earth stations and broadcast infrastructures.

The FlexLink S7A-1616 is available with 50Ohm and 75Ohm connectors and optionally can be equipped with optical inputs. It provides various advantageous features such as variable gain, slope equalisation and RF power monitoring for assuring superior RF performance and signal quality.

Furthermore, the unit supports switchable LNB-supply and a 10MHz external reference feed, as well as 1:1 redundant dual power-supplies. Access and configuration can be done locally via its front-side LC-display/keypads and remotely via its rear-side Ethernet interface (Web-GUI, SNMP).

APT Satellite showcases its entire fleet

APT Satellite is once again present at CommunicAsia 2016. The company is showcasing satellite solutions across its fleet of five in-orbit satellites. APT Satellite currently operates APSTAR-5, APSTAR-6, APSTAR-7, APSTAR-7B and APSTAR-9 (APSTAR Satellite System), covering regions in Asia, the Middle East, Europe, Africa and Australia, beaming to approximately 75% of the world's population. Additionally, plans include the future launch of two new satellites, APSTAR-5C and APSTAR-6C. These are under construction and both satellites are set to launch in the first half of 2018.

APT successfully launched its first satellite, APSTAR-1, in 1994. Since then, APT has experienced extensive growth, providing coverage over Asia, Oceania, the Pacific Ocean, Africa and Europe.

APT Satellite promotes itself as a one-stop shop for transponder leasing, satellite telecommunications and satellite TV broadcasting to top-notch broadcasters and telecommunication customers. It offers solution-based services via its APSTAR satellite system to video and telecommunication customers, including transponder service, teleport service, platforms service, co-location management and play-out services. With high power transmission and broad footprints, all APSTAR satellites are capable of providing high quality C-band and Ku-band transponder services.

Supported with comprehensive, high-quality services, the advanced APSTAR satellite fleet has become very important for the Asia Pacific region.

ETL Systems to showcase **new technologies in RF distribution at CommunicAsia 2016**

ETL Systems, a global designer and manufacturer of RF equipment for satellite communications, is showcasing its new technologies in RF distribution at this year's CommunicAsia.

ETL will be exhibiting the smallest matrix of its kind on the market. The new 64 x 64 Hurricane boasts inclusive LNB powering in a 4U compact, modular chassis. Hurricane's flexible design offers optimised performance and a range of customisable options to suit a particular set of RF needs, such as fibre inputs, variable gain and variable slope, which can be individual to each feed.

ETL has also designed new functionality and increased benefits into a series of advanced products, including its StingRay RF over Fibre and Dextra splitters and combiners. New StingRay models on show will include redundancy systems for reliability and standalone component modules, while new Dextra models now

include options with integrated DC and 10MHz pass. ETL's purpose-built secure facility next to the BT Madley Satellite Earth Station boasts RF testing facilities, software design, automated circuit board assembly, concept design areas, pick and place machinery and machining workshops. This means that design, production and maintenance are carried out in-house under the umbrella of the newly awarded ISO 9001 Quality Management System.

ETL's heritage is in designing satellite signal routing solutions for broadcasters who demand high levels of RF performance.

Newtec focuses on **new modems for HTS**

Once again at Newtec's stand at CommunicAsia, visitors can view the latest range of satcom applications, designed to improve efficiency in all areas of the industry. A particular focus will be on getting the most out of the ever-growing number of high throughput satellites (HTS).

The latest version of Newtec Dialog (release 1.3) will be among products making their Asia debut. Newtec Dialog is a scalable, flexible and highly efficient platform which allows operators to build and adapt their business as the market changes, by enabling multiple services over a single all IP-based platform. New features of release 1.3 include DVB-S2X on the forward link, support for the new MDM5000 satellite modem, layer 2 bridging and mobility support. Newtec Dialog is also equipped with Newtec's

unique technology, Mx-DMA, which enables MF-TDMA flexibility and on-demand variable bandwidth allocation at SCPC efficiencies. From release 1.3 onwards, Mx-DMA rates of up to 75Mbps in the return are supported using shared capacity.

Also available at CommunicAsia 2016 is the MDM5000, the industry's first DVB-S2X VSAT modem. Designed for mid- and high-speed applications like connectivity for medium-sized enterprise networks, government applications, oil & gas, maritime and cellular backhaul, the MDM5000 completes Newtec's modem portfolio for low- up to high-speed applications, ensuring the optimal solution for every application and price point.

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Internet **Exchange**

Franck Simon, MD of France IX, explains how Marseille will be one of the most efficient gateways for the Middle East and Africa for interconnectivity through submarine cables

France IX is an internet exchange based in Paris and Marseille, and the principle of an internet exchange is to make sure that all networks can meet together in the same place. You can interconnect CDN players, operators and any type of networks in a single place, ensuring that end users can exchange transparently through this type of gateway.

We are present in Marseille because a lot of submarine cables come there, especially from the Middle East and Africa, making Marseille an international gateway to make people come together in a technical place. For now, we have a critical mass of 300 networks in Paris and more than 20 networks in Marseille, and because of all the submarine cables landing there we anticipate huge growth for Marseille by welcoming Middle Eastern and African networks together.

We are mainly a technical platform connecting networks together to ensure a short pass for end users with speed and high quality of service. We have already connected Etisalat for the Middle East, and we plan to have more networks of this type connected in Marseille. We used to have many CDNs in Marseille and also French eyeballs, but we also want international networks to be connected here, to ensure it acts as a gateway and not just a French city.

The challenges of doing business in the Middle East and Africa is that you have to adapt to the way business is done in these regions. It is not the same as in Europe, and does not follow the same sort of procedure or the contacts.

You also have to understand your potential customers. For now, we are at that step of understanding about how business works in the Middle East, so that we can provide the best solution for networks in the Middle East.

We can see that Middle East networks do not expect the same thing from Marseille as African networks. They want CDNs, because they don't have these in Africa. In the Middle East and Dubai most of the CDNs are already there, so they are not waiting for CDNs, they are happy with what is available. They need more than this from Marseille, like French eyeballs.

After CDN, the gaming networks happen to be very high priority for customers in the Middle East. After speaking with some operators in the Middle East, we were told they would be interested to come to Marseilles if they can interact with a gaming community. The gamers want the best round trip time through servers and to play with very little delay, in almost real time.

We don't run capacity on our own, and just make sure we find global solutions for our customers to make sure they can connect remotely to Marseille. For now, we have not received requests for satellite capacity, but even if we do, it won't be us providing this capacity. We will make sure we partner with an operator capable of being a reseller of our offering, by bringing the long-haul circuit as well as the connection on our PoPs.

We are looking for operators who can be resellers and offer a bundle of capacity and remote PoPs to Marseille.

Satellite would be mainly for Africa, more than the Middle East, because the Middle East can benefit from existing submarine cables as well as new ones like SE-ME-WE 5, which we can expect by the end of this year. This will be a catalyst to bring new networks to Marseille.

France-IX is a Paris-based Internet exchange point (IXP) founded in June 2010 as a membership organisation. As of 1 August 2015 it interconnects more than 278 members, making it the largest IXP in France. **PRO**

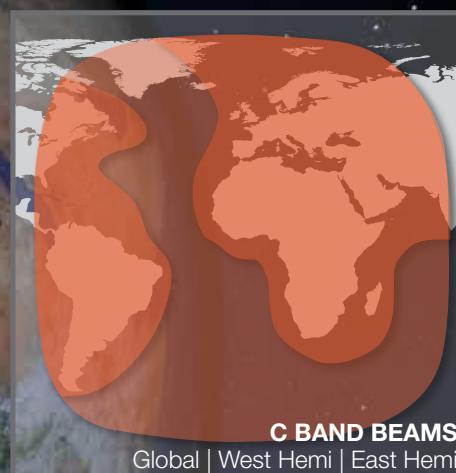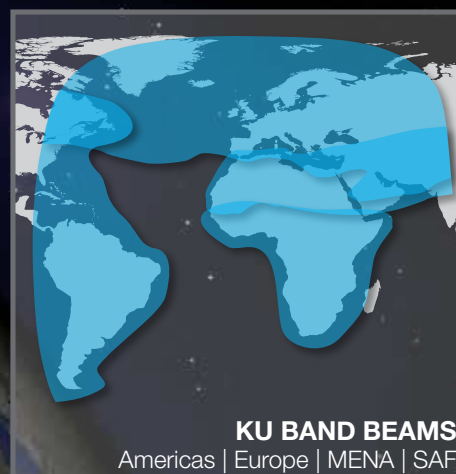> **"We have already connected Etisalat for the Middle East, and we plan to have more networks of this type connected in Marseille"**
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> FRANCK SIMON, MD of France IX