Satellite Executive BRIEFING

Vol. 14 No. 4 May 2021

SATELLITE Markets & Research

Industry Trends, News Analysis, Market Intelligence and Opportunities

The Middle East and African Satellite Market

by Omkar Nikam

A region heavily reliant on natural resources, the Middle East and Africa represent two large distinct regions, and then therein, several sub-regions each. Both regions have abundant natural resources which have in-turn help drive its growth for many sectors: broadcast and media being one of them. Though the transition from analog to digital is proceeding at a slower pace, most of the countries like Bahrain, Jordan, Egypt, and Tunisia have already started their transition to digital. While UAE, Morocco, Saudi Arabia, Qatar, and Israel are some of the countries to have completely adapted digital broadcasting.

The total population of the Middle East and Africa which is 412 million and 1.3 Billion respectively, represent a very diverse group, from super-wealthy petrostates to some of the world's poorest countries. Cultural influences are varied, contributing to a broad variety of content. With respect to the satellite market, Free-to-Air (FTA) and Direct-to-Home broadcasting (DTH) is relatively stable as compared to other regions of the world, with the Middle East & North Africa primarily being FTA, and Sub-Saharan Africa primarily being DTH.

Although the entry of Netflix in the Middle Eastern and North African market in 2016 has increased the popularity of Over-the-Top (OTT) content, the penetration of OTT players is still low in this region. The Middle Eastern and African countries remain a good and stable market for satellite operators. Especially as the countries like Jordan, UAE, Lebanon, etc. are now planning to invest in building 4K broadcasting infrastructure. Therefore, satellite operators have good of opportunities to expand with

Continued on page 4

What's Inside

SPACEBRIDGE

ALL THINGS CONNECTED

CONNECTING PEOPLE TO THEIR MISSIONS

Cellular Backhaul | IIoT, ATM, SCADA, Oil & Gas | HTS Broadband Consumer & Enterprise | SATCOM On The Move | Government & Military | Managed Services

For over 30 years, SpaceBridge has striven to eliminate the digital divide by being an innovator, leader and trusted provider of bold solutions that keep people connected to their missions, everywhere.

We live on the cutting edge of what's possible, challenging ourselves, adapting to an ever-changing landscape while delivering ultra-reliable, high-performance GEO and NGSO Extreme Broadband Gateways, VSAT Terminals, Modems and Services for mission critical applications.

As we venture even further, we invite you to join us as we aspire to make all things connected. Visit our website at spacebridge.com to learn how you can achieve greater connectivity.

ALL THINGS CONNECTED

spacebridge.com | info@spacebridge.com | +1.514.420.0045

USA | CANADA | LATAM | BRAZIL | EMEA | APAC

EDITORIAL

Key Indicators Looking Good

One quarter of 2021 has passed and indicators are quite good that the global economy in general and the satellite industry in particular are well on the road to recovery from the global COVID-19 pandemic. Publicly-traded satellite companies' financial results for the first quarter 2021, which we report in our website www.satellitemarket.com, are all very upbeat and projectons for the rest of 2021 are quite good.

One useful tool to gauge the overall health of the satellite industry is the Satellite Market 20 IndexTM which you can view on page 42 of this issue. As you will see, satellite companies' stock prices are steadily recovering and keeping pace with the S&P 500 Index. In this issue, we focus on the Middle East and Africa market, which is ripe with opportunities post-pandemic. It will still take a little bit more time for some normalcy to return in all markets, as evidenced with the postponement of the major trade shows such as Satellite, CABSAT, World Satellite Business Week towards the end of the year. But I foresee a very busy trade show schedule from September onwards which would be a fitting end to the year and the global pandemic.

Meanwhile, on May 18 at 9:00 am Hong Kong and Singapore time, I will be moderating a panel on the "Satellite Industry Post-Pandemic Environment" as part of the APSCC's Satellite Operators' Roundtable Webinar Series. Do join me and distinguished panelist from Hyunghan Kim of KT Sat, Adi Adiwosso of PSN and Christian Patouraux of Kacific, among others in this informative session. Go to: https://apsccsat.com/apscc2021-registration/ to register for free.

Virgil Labrador

Editor-in-Chief

Satellite Executive BRIEFING
Industry Trends, News Analysis, Market Intelligence and Opportunities

EDITORIAL

Virgil Labrador
Editor-in-Chief
virgil@satellitemarkets.com

Peter I. Galace,
Elisabeth Tweedie
Associate Editors

Contributing Editors:

North America:
Robert Bell,
Bruce Elbert, Dan Freyer,
Lou Zacharilla
Latin America:
Bernardo Schneiderman
Europe:
Martin Jarrold *(London)*
Omkar Nikam *(Strassbourg)*
Hub Urlings (*Amsterdam)*
Roxana Dunnette (*Geneva)*
Asia-Pacific:
Blaine Curcio (*Hong Kong)*,
Naoakira Kamiya (*Tokyo)*,
Riaz Lamak *(India)*

ADVERTISING

For Advertising enquiries send an e-mail to:
info@satellitemarkets.com

Satellite Executive Briefing is published monthly by Synthesis Publications LLC and is available for free at www.satellitemarkets.com
SYNTHESIS PUBLICATIONS LLC
1418 South Azusa Ave.
Suite # 4174
West Covina CA 91791 USA
Phone: +1-626-931-6395
Fax +1-425-969-2654
E-mail:
info@satellitemarkets.com

Middle East market...

from page 1

new technologies in this emerging market.

Market Overview

Eutelsat is by some margin the market leader, with Intelsat, Nilesat, Arabsat, Turksat, Es'hailsat, SES, Spacecom and Yahsat also having a good presence in both the Middle East and Africa. Even though foreign satellite operators like Eutelsat, Intelsat and SES have close to 60% of the market share, the regional operators like Arabsat, Nilesat, and Turksat too have more than 30% of the market share collectively. Eutelsat provides the largest amount of HD content that is 378 HD channels across both the regions. The Eutelsat and Nilesat operate two of their satellites Eutelsat 7 West A and Nilesat 201 at 7 degrees west. This is one of the lucrative spot for satellite consumers as most North African and Middle Eastern nations are located in and around this orbit slot. Therefore these satellite operators have an added advantage to grab most of the customers

One common thing that binds both the Middle Eastern and North African region is the prominent use of the Arabic language. While the Sub-Saharan Africa is influenced by the European languages. Therefore, the content producer and distributors in the European region can also venture into this market as both Arabic and European (French, English, Portuguese, etc.) languages are common in this region.

Satellite continues to remain the strongest mode of content distribution in the region, with 93% total market share, despite the accelerated uptake of IPTV and streaming services in the Middle East and North Africa (MENA), according to a market study undertaken by Arabsat in conjunction with Ipsos in 2020.

Satellite remains the strongest mode of content distribution in the Middle East, with 93% total market share, despite the accelerated uptake of IPTV and streaming services in the region according to a market study undertaken by Arabsat.

The DTH and Distribution market has a stronghold in the Middle East, North Africa and Sub-Saharan Africa. There are more than 10 DTH service providers in this region. OSN, DSTV Africa, Noorsat, BeIn, and IRIB are some of the well-known satellite content providers. The HD content services are still not provided to many of the countries. BeIn, D-Smart, DSTV Africa, and Digiturk provide the highest number of HD channels in the region. Considering the penetration of foreign companies, China is becoming more dominant in Africa. During the 6th Ministerial Conference of the forum on China-Africa Cooperation (FOCAC) in 2015, the Chinese President Xi Jinping, announced an annual financial commitment of US$ 60 billion to develop infrastructure in Africa.

Key Market Trends

The satellite broadcasting market in the Middle East and Africa is very much stable and is expected to grow with the incoming HD and UHD services. One of the strong reasons that this part of the world is heavily consuming satellite content is because of its developing status in the telecom and media sector. IPTV is one of the alternatives in the Middle Eastern countries, but satellite TV remains at the core

عرب سات
ARABSAT
عالمنا... عالمكم.
Our world Your world

Our world. Better, more reliable, more reachable and more efficient. Your world.

30.5° EAST
Arabsat 6A

The latest addition to our fleet.

/Arabsat @Arabsat /Arabsat

www.arabsat.com

of the regional content and video market. Although many African countries are now developing appropriate infrastructure for video content delivery, the hefty cost of satellite equipment is still an issue for many African communities. Therefore, China's success in this region is also because they offer DTH hardware equipment with price as low as USD 15. Whereas, other DTH service providers used to charge more than USD 50 in the African region.

Comparatively, Middle Eastern population has the edge to overcome price barriers due to its natural resource reserves, combined with heavy domestic and foreign investment to achieve developed nation status. UAE, Kuwait, Jordan, Saudi Arabia, etc. are some of the well-known satellite content consumers. Therefore, the Middle East is set to grab the OTT trend much earlier as compared to Africa and Sub-Saharan Africa. And satellite operators should start implementing smart strategies to keep a stronghold on the satellite TV customers in the Middle East.

Considering the trend of HD and UHD content, both Middle Eastern and North African countries are currently undergoing a change from analog to digital. This shift in the technology is set to change the landscape of satellite broadcasting market. Intelsat is one of the operators to target this segment of change, especially in Africa where the majority of the people are still viewing SD channels. To benefit from this digital technology, two Kenyan media companies Nation Media Group and Royal Media Services, formed a consortium, Africa Digital Network Limited (ADNL). In 2017, this consortium decided to utilize Intelsat's DTT to serve a maximum number of East African countries with a special focus on remote and rural areas. This collaboration between satellite operators and service providers is setting a new trend in East Africa to rapidly the digital solutions. And this further will lead to an expansion across Africa, which will ultimately pave for more satellite service providers in this region.

The Middle Eastern market is dominated by FTA and DTH broadcasting. But the Middle Eastern market is evolving rapidly as the new technologies are now dominating the media and broadcasting segment. In 2018, Turk Telekom was the first operator to utilize Media Transport Network (MTN) infrastructure for live feeds over the fibre network. The company utilizes this technology for sports broadcasting as it eliminates latency and adverse weather conditions for satellite-based connectivity. On the other hand, SES and YahSat launched Yahlive in 2011 with an optimize the reach of HD content across the Middle East and North Africa. Yahlive currently serves 13 million satellite TV homes, with the majority of the households from Morocco, Tunisia, and Algeria. SES is well known for its HD and UHD solutions in the European and American continent. And now with Yahlive, the company is expecting a two-fold growth in the HD content delivery across this region.

From this overall scenario, it is right to say that partnerships and international collaborations are fueling the growth of satellite broadcasting services in the Middle East. While in North Africa, the regional and international satellite players are still dominant swinging with a wave of digital transformation across the continent. The entry of Chinese company in the Sub-Saharan African will help to diversify the region with international players. And the growing popularity of OTT and IPTV in this region is still not a big threat to the satellite sector. But a prior readiness in developing smart solutions and taking over OTT platforms is something that satellite operators should focus in the coming years.

Impact of OTT and IPTV

Currently, OTT and IPTV services are not much popular in Sub-Saharan Africa as compared to Middle Eastern and North African countries. One of the reasons is the high cost of internet data. But as the telecom and media sector is rapidly developing in this region, the data prices may drop in the future. This will ultimately pave for the OTT and IPTV services. OSN is one such player in the Middle East to provide IPTV services. In late 2018, OSN signed a deal with Huawei to offer IPTV services in countries like UAE and Saudi Arabia. While in Africa, Showmax is already dominant SVOD player. Currently, Showmax has 6.6 million subscribers in South Africa. The company's biggest competitors in South Africa are Netflix and Amazon Prime. Both Netflix and Showmax offer a basic monthly subscription for USD 7. Therefore, the cost is not a com-

ENABLING **CONNECTIVITY**

With expanded capacity at MENA hotspot of 25.5°E/26°E, state-of-the-art Teleport, and a wide network connectivity, Es'hailSat enables broadcast, broadband, corporate and government services in the Middle East, North Africa and beyond

Es'hailSat سهيل سات

Qatar Satellite Company الشركة القطرية للأقمار الصناعية

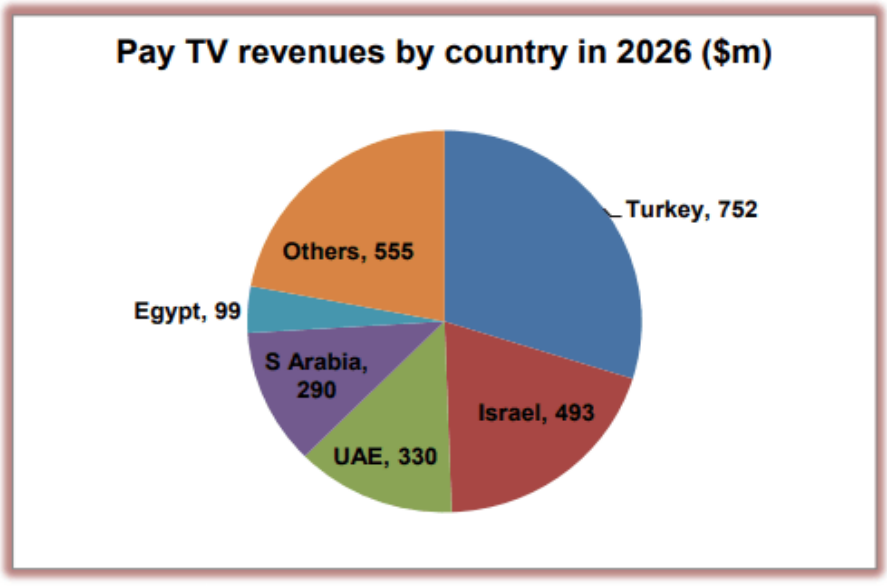
Space to deliver your vision

www.eshailsat.qa

petitive factor, but the African audience-oriented content is the baseline to attract more customers in Africa.

iflix, is one of the popular Malaysian company specializing in free as well as SVOD services. In 2017, the company expanded in Middle East under a joint venture, iflix Arabia, with investment backing from a Kuwaiti telecommunication company, Zain Group. While in Sub-Saharan Africa, the company provides IPTV services under Kwesé iflix, a joint venture with Sub-Saharan sports broadcasting company, Kwesé sports. Due to these foreign collaborations, OTT is slowly becoming popular in the Middle East, North Africa and Sub-Saharan African. But the international partnerships are also ensuring the growth of satellite TV in Africa. In May 2019, Chinese Rocket Company and Ethiopia Space Science and Technology signed an agreement to build broadcasting satellite. The agreement aims to cover most of the remote Ethiopian population. Able Wireless, a Kenyan OTT operator currently provides services to more than 5,000 homes with prices as low as USD 5. The OTT market in Africa is growing but at a very slower pace. Therefore, traditional TV consumption remains main source of entertainment for the African audience.

In the Middle East, illegal consumption of the satellite content is one of the biggest issues from past one decade. Especially UAE, where DTH has a stronghold in the broadcasting segment. The country's major workforce involves Indians. And with the launch of Tata Sky in mid-2000's created a somewhat negative impact on UAE's DTH market. As the Tata Sky utilizes satellite capacity from ISRO's INSAT-4 and GSAT-10 satellites, the satellite signals are also very well received in the neighboring countries. Many Indians were caught while illegally transporting Tata Sky equipment's from India to UAE. Therefore, UAE government regulated transport and followed various protocols to check the Indian luggage on UAE airports.



Source: Digital TV Research

Pay TV revenues for the 20 countries in the Middle East and North Africa region fell by 14% between 2016 and 2020 to US$ 2.74 billion. Revenues will continue to fall slowly - to US$ 2.52 billion in 2026. The 2026 revenues will be 23% lower than 2016 according to Digital TV Reserach.

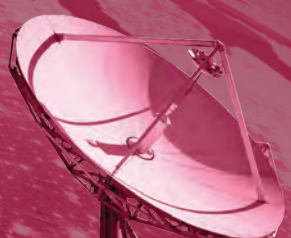
In 2014, MENA Broadcast Satellite Anti-Piracy Coalition was established to ban the illegal use of satellite content. Moreover in 2018, this coalition also banned 22 illegal TV channels that were broadcasting content via satellite. In spite of these efforts, the illegal satellite content still makes its way to Middle Eastern market. For example, BeIN Sports is a recent victim of pirated live sports broadcasting. A pirated platform called, BeOutQ, broadcasts illegal live sports video content via on BeIN Sports channel. And this situation has affected the whole sports broadcasting chain, such as reduction in selling legal rights to channels as well as affecting the overall image of the sports broadcasting companies. BeIN fighting this piracy issue from past 2 years, but still BeOutQ is unaffected even after the strict broadcasting regulations implemented by the Arab nations. On the other hand, in 2018, total 2.7 billion downloads of pirated satellite content were recorded in the Middle East. Therefore, the countries like Saudi Arabia and UAE, which are the strong economic pillars of Middle East, should roll out very strict regulatory framework for both satellite and OTT

www.stn.eu

@ sales@stn.eu

STN

SATELLITE



BROADCAST

CO-LOCATION

companies. As it will help to keep up the sustainability and integrity of the media and entertainment industry.

The growing popularity of OTT is certainly going to impact the satellite operators and service providers in this region. But as the development of infrastructure in various segments is increasing, many players like Netflix and Showmax will carve a way into this market segment.

Key Takeaways

Looking at the OTT scenario of Middle East and Africa, Satellite TV market is set to be flat in the coming years. But as the video market is evolving, satellite operators should also run with the time to deploy some creative and innovative solutions for the Middle Eastern and African video market. Following are the key takeaways for the satellite operators from regional OTT companies:

- Identifying the consumer needs: The meaning of this strategy is that if satellite TV is not attracting the consumers then start reinventing the video broadcasting by identifying the regional and international reach of the content to the specific region. This may not increase the overall subscriber base but might encourage the growth of SVOD content on DTH platforms.
- Fill the Gaps: The OTT players like OSN and Huawei are filling the technology as well as international content gap in the Middle Eastern and African region. Satellite operators should now focus on deploying 4K, Multi-screen and Multi-cast solutions in this region. Especially in Middle East, as countries like UAE and Oman have already started providing 4K TV services. This is one of the important step as it will help the satellite operators and service providers to match up the video market competition with the OTT players.
- Find the right partners: No matter how huge video market competition is, both Middle Eastern and African market are evolving mainly due to foreign partnerships. Satellite operators have this opportunity to collaborate, partner or acquire the relevant content distributors or the movie studios to take over the OTT market in the Middle East and Africa.

"...Globally, the Middle East and Africa market may contain some of the best opportunities for satellite broadcast, in spite of challenges..."

Conclusion

Globally, the Middle East and Africa market may contain some of the best opportunities for satellite broadcast, in spite of challenges. As the population is still very much dependent of traditional TV rather than any other video consumption mode. Following are certain aspects that both satellite operators and service providers should keep a close eye to expand their reach to the maximum number of customers:

- Take advantage of developing Technology Media and Telecom (TMT) infrastructure and accordingly develop video solutions specifically targeting countries like UAE, Saudi Arabia, Kuwait, Morocco, Tunisia and Algeria.
- Overlook the need of the regional audience. Showmax is an example that a regional video service provider can be a great competitor, if it knows what kind content is needed to be delivered to the respective audience.
- Deliver HD and UHD solutions by amplifying partnerships with local or regional decoders. As both Middle Eastern and African audiences are not served full-scale HD content, this is the right time to increase the presence of satellite solutions in the market.

Omkar Nikam is an independent space and satellite consultant based in Strasbourg, France. He has eight years of experience in technology and business consulting. He is also the EMEA correspondent for Satellite Markets & Research, USA. Omkar specializes in market research, analysis, and consulting services for several space and satellite market verticals. He can be reached at: www.oknikam.eu

Satellite Communications on the Move.

Actual Installation, u7 FPA

Presenting our enterprise COTM service.

BusinessCom's COTM service, designed for Kymeta™ u7 and u8 flat panel antennas, provides broadband connectivity on the move with *guaranteed quality*.

Developed to support a wide range of mission-critical applications at a high level of performance, our service features unlimited traffic, full bi-directional QoS, dedicated CIR bandwidth, LAN management, fully accelerated 256-bit AES VPN, network intrusion prevention system and *enterprise-grade SLA*.

The bandwidth can be provisioned either to a single remote or as a *Private Network* with a common bandwidth pool dynamically shared across a group of terminals. The flat panel metamaterial *antenna with no moving parts* can be integrated into any land vehicle or sea vessel.

Kymeta u8 Antenna

Contact us at www.bcsatellite.net for a demonstration.
Or call +1 (866) 556-3176.

BUSINESSCOM NETWORKS

Yamal-601 (49°E) Yamal-402 (55°E) Yamal-401 (90°E) Yamal-300K (183°E)

C- & KU-BAND CAPACITY FOR THE EASTERN HEMISPHERE

The wide coverage areas of Yamal satellites enable communication services delivery to different parts of the world for the purposes of Oil & Gas, Government, Aviation, Maritime, Education and Emergency segments. Yamal Satellite Capacity is successfully used for communication links and data transmission, TV distribution, occasional use, trunking, backhaul, inflight and maritime connectivity.

WWW.GAZPROM-SPACESYSTEMS.RU

GAZPROM SPACE SYSTEMS

FEATURE

From Smart Cities and Connected Vehicles: Commercial Satellite Imaging Augments It All

by Himanshu Joshi

Image courtesy of Earth Imaging Journal

Commercial satellite imaging provides images of the Earth captured by satellites operated by private companies and governments around the world. Commonly used satellite imaging spacecraft that are operated by private companies and governments include WorldView-2, WorldView-3, IKONOS, GeoEye-1, and various others. Before 1972, satellites were only used for military operations and satellite imagery was commercialized in 1984. IKONOS became the first high-resolution commercial imaging satellite that was launched in September 1999.

Companies sell this imagery to big corporations, for example, Google Maps and Apple Maps, and governments by providing authorizing agreements. Today, satellite imagery has become widely available, owing to the advent of inexpensive and easy-to-use software that offers easy access to satellite imagery provided by several companies active in the satellite imagery industry. Satellite images are used for various applications such as mapping of constructional projects, border surveillance, security of energy resources, and environment monitoring & management. Moreover, commercial satellite imaging is a critical part of location-based services (LBS) and is very useful in offering useful insights for emergency response in incidents such as natural disasters and life-threatening events. The activities, changes, and trends can be spotted, observed, and examined more proficiently with satellite imagery, which benefits the people and environment.

Satellite image database offers access to inexpensive satellite imagery. While some of the data is available publicly, the commercial satellite data players sell satellite images and data or they can be ordered to deliver a constant supply of data from a particular area. One of the most important properties of any satellite imagery is its spatial resolution. The competition among the companies to improve spatial resolution is attaining impetus across the world. Basically, spatial resolution is the smallest gap amongst two entities that can be picked out in a given image. The preferred spatial image resolution is determined by considering the final objective for conducting primary satellite imaging, and on the size of the observed area. Spatial resolution not only represents the ability to detect the presence of two entities but also their features in remote sensing technology. Analogous to digital photography, greater resolution indicates improved visibility of fine points represented on the image.

Market Size

The global commercial satellite imaging market was valued at US$ 2.24 Billion in 2018, and is expected to reach US$ 5.25 Billion by 2026, registering a CAGR of 11.2% from 2019 to 2026. Utilizing these images for commercial purposes is knows as commercial satellite imaging, which includes vari-

MISSION MICROWAVE

Family of X, Ku and Ka-Band BUCs
from 12-400 Watts

STINGER

25 W Ka-Band

55 W Ku-Band

50/80/100 W X-Band

JAVELIN

50/100 W Ka-Band

100 W Ku-Band

TITAN

200 W Ka-Band

200 W Ku-Band

The New Shape of Solid State

Available with Full Ka-Band Coverage for LEO/MEO/GEO Terminals and Gateways

ous applications such as environment monitoring & management, security of energy resources, surveillance of border areas, and mapping of constructional projects. The images captured with the help of satellite are used in commercial applications such as. One of the key advantages of satellite imaging is faster image delivery, which provides comprehensive earth coverage, thus making commercial satellite imaging service a preferred choice over other imaging services.

The growth of the global commercial satellite imaging market is anticipated to be driven by increase in dependence on location-based services (LBS). This is attributed to the fact that location-based services play an important role by providing real-time geographical data with the use of smart devices. In addition, commercial satellite imaging is applicable across various sectors, including defense, construction, transportation, and others, which acts as a key driver of the global commercial satellite imaging market.

Some of the key players operating in the commercial satellite imaging sector are Maxar Technologies, Planet Labs Inc., Satellite Imaging Corporation, L3Harris Technologies, Inc., ImageSat International N.V., and Ursa Space Systems Inc. In recent years, the commercial satellite data market has witnessed several developments in the forms of partnerships, product developments, and others, which indicate robust growth of the market and denotes steady growth in the future. For instance, in October 2018, NASA awarded a sole-source contract for high-definition commercial synthetic aperture radar (SAR) and electro-optical satellite imagery to DigitalGlobe, a Maxar Technologies company.

In April 2018, Iceye, a Finnish microsatellite manufacturer signed a partnership deal with Ursa Space Systems, a company that provides commercial insights from geospatial data. In February 2020, L3Harris Technologies entered into a partnership with the Air Force Life Cycle Management Centre to develop software to allow analysts to apply artificial intelligence (AI) to find entities in huge datasets in a simple and easy way, thereby addressing the critical defense requirement for automation to evaluate big geospatial datasets. In October 2020, European Space Imaging signed a collaboration agreement with Satellogic, a company active in the

geospatial analytics and satellite imagery industry to considerably enhance the tasking abilities along with introducing hyperspectral images to customers.

Factors, such as the rising adoption of artificial intelligence (AI), machine learning (ML), and cloud computing in the space sector, are expected to boost the growth of the commercial space imaging market over the years. For instance, in June 2019, Lockheed Martin launched an AI-based satellite image identification platform known as the Global Automated Target Recognition (GATR), which makes use of open-source deep learning libraries to detect and categorize large datasets quickly and efficiently. Moreover, the rising use of satellite data in the development of smart cities and connected vehicles is anticipated to offer lucrative growth for the commercial satellite imaging market in the coming years. For instance, in April 2019, Maxar Technologies Inc. entered into a partnership with Toyota Research Institute-Advanced Development, Inc. (TRI-AD) and a leading IT services provider NTT DATA Corporation to create an automated HD map of the Tokyo metropolitan region for autonomous vehicles using high-resolution satellite imagery data.

Impact of COVID-19

The COVID-19 crisis resulted in adverse economic scenarios in the market globally. The measures to contain the spread of the virus resulted in massive disruption in supply chains, declining business revenues, and increased panic among customers. Governments of different nations declared strict lockdowns and temporary shutdown of industries that affected the overall production and sales across all sectors. The commercial satellite imaging market also experienced decline in revenues in 2020 due to the COVID-19 crisis. International lockdowns impacted the design, development, and manufacturing activities of companies active in the commercial satellite imaging market. Struggling global markets with a large focus on tackling the adverse economic scenarios, owing to the pandemic are also expected to negatively impact the demand for a significant number of years.

The COVID-19 pandemic forced several nations to re-plan the launch of satellite missions and strategize their operations, for instance, signing partnership deals with private players. The pandemic led to the delay of satellite missions planned for the launch in 2020. For instance, the Indian Space Research Organization (ISRO) delayed the lift-off of the Gisat-1 satellite due to the countrywide lockdown imposed to check the spread of the virus. Moreover, the Department of Space (DoS) signed a deal with the Indian rocket company Agnikul Cosmos Pvt. Ltd in December 2020 to access technical expertise and facilities existing in ISRO offices to proceed with their rocket development program. Moreover, in response to the COVID-19 pandemic, the U.S. delayed the launch of GPS-3 in 2020 to minimize potential exposure of coronavirus to personnel. With the initiation of vaccination across the globe, the COVID-19 pandemic is anticipated to vanish gradually over the years while the space sector is expected to attain a considerable leap in the near future.

"...The growth of the global commercial satellite imaging market is anticipated to be driven by increase in dependence on location-based services. In addition, commercial satellite imaging is applicable across various sectors, including defense, construction, transportation, among

According to a recent report published by Allied Market Research, titled, Commercial Satellite Imaging Market gives detailed analysis of the pandemic on the market. This includes the current impact on the revenue, sales, and new measures taken by players, among others. You can request a sample of the report here: https://www.alliedmarketresearch.com/request-sample/1751

Himanshu Joshi works as a Research Associate at Allied Market Research. Himanshu conceptualizes and implements a scalable business strategy and provides strategic leadership to the clients. His forte lies in deep research, market analysis, customer assessment, and sustainable market strategy, among others. For more information on research on the Commerical Satellite Imagery Market go to: https://www.alliedmarketresearch.com/commercial-satellite-imaging-market

Hit Your Target

At Comtech EF Data, our diverse quiver of satellite communications products allows you to address a wide variety of applications across various vertical markets. Are you looking to meet throughput demands and provide first-rate quality of experience? Or, do you want to better utilize satellite resources and improve profitability?

Contact us today. Let's explore how the efficiencies and flexibility of our solutions can help you hit your target!

COMTECH EF DATA™

+1.480.333.2200
sales@comtechefdata.com
www.comtechefdata.com

NOW AVAILABLE
Beacon Receiver with extended L-Band up to 2450MHz

SatService
A Callan Company

Cost effective upgrade and refurbishment of existing satellite earth stations are key for teleport service providers...

AND WE HAVE THE SOLUTION!

TECHNICAL DATA

- Hardware compatible replacement of GD 7200 ACU with ***sat-nms*** ACU19V2
- State-of- the-art beacon receiver ***sat-nms*** LBRX in C-, X-, Ku-, Ka- & L- Band
- Time & space saving installation
- Fully remote controlled by ***sat-nms*** M&C if required
- German engineering

FURTHER UPGRADES

- Retrofit of existing Andrew tracking controller with ***sat-nms*** ACS3000 upgrade kit
- Further ACU replacement units on request
- More high performance solutions e.g. optical links, frontend processor, M&C software are available

IF YOU HAVE ANY QUESTIONS OR NEED A DEMO -

PLEASE SCHEDULE A PHONE OR VIDEO CONFERENCE WITH US.

SatService GmbH | Hardstrasse 9 | 78256 Steisslingen | Germany
sales@satservicegmbh.de | phone: +49 7738 9979110
www.satservicegmbh.de

Cloud-based Systems, a Key for Successful Satellite Service Delivery

by Alvaro Sanchez

The increasing demand for fast connectivity has turned on the alarm of the Service Providers, who are in the need of looking for a convenient solution that enables the optimization and efficiency of network design, implementation and management, leading to Cloud-Based-System tools.

The disruptive LEO constellations are around the corner, predictions point growth from US$2.8 Billion in 2020 to US$ 7.1 Billion by 2025 for these small satellites constellations; LEO constellations focus on small satellites that are not as complex as the current GEO, mega-constellations seeking full coverage need up to hundreds of satellites, and the lifetime of these small satellites is between 7-10 years, so they require maintenance and replacement. The implementation of mega-constellations will revolutionize the industry, giving a great array of possibilities and gathering all the efforts in flexible solutions. In order to create an efficient ecosystem, the Ground Segment will need to include flexible solutions to manage all the satellite data communication reliably and securely.

The automation will be essential, to make out the most of these constellations, therefore there is not only being new developments in the Space Segment, the Ground segment is also evolving with new systems, and new antennas, totally aligned with the goodness of the mega-constellations, the antennas are now being smaller, more compact, and manageable, in order to be placed in different surfaces. The new ground developments greatest advantage is the possibility of being autonomous, and automate the tedious processes that a network require, in each stage; in order to proceed with end-to-end network automation, is mandatory to use software to be integrated in the ground and capable of processing the information rapidly and supporting the multiple satellites simultaneously, with easy access; The follow path for SatCom Technologies is to make M2M integration, end-to-end.

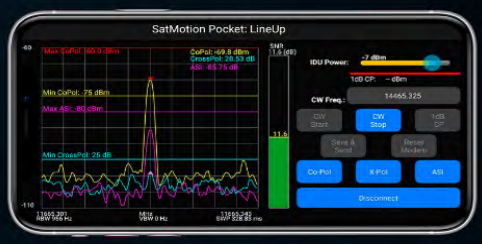
According to NSR Cloud Computing Report, the forecast cumulative revenue opportunity for cloud-based systems will be US$ 16 Billion, in the coming decade. Thanks to the Cloud we have no limitation in geography to multiply the number of systems so most of the business models can be closed as a lighter teleport footprint is required, and a single Hardware can be virtualized for global infrastructure. At INTEGRASYS we see Cloud as an enabler to address LEO and Earth Observation markets which we serve today and more efficiently in the near future. Our most innovative technology, Beam Budget, a link budget tool that is developed for sales teams to accomplish the capacity sales in a click, and be more autonomous in their operations. It is a private cloud-based-system and the tool is totally prepared to have instant outputs helpful to sales teams, with graphical metrics, and a very intuitive report with

INTEGRASYS

"Building Success from Innovation"

LEADING SIMPLICITY IN THE SATELLITE NETWORKS

Buy/Sell & Design

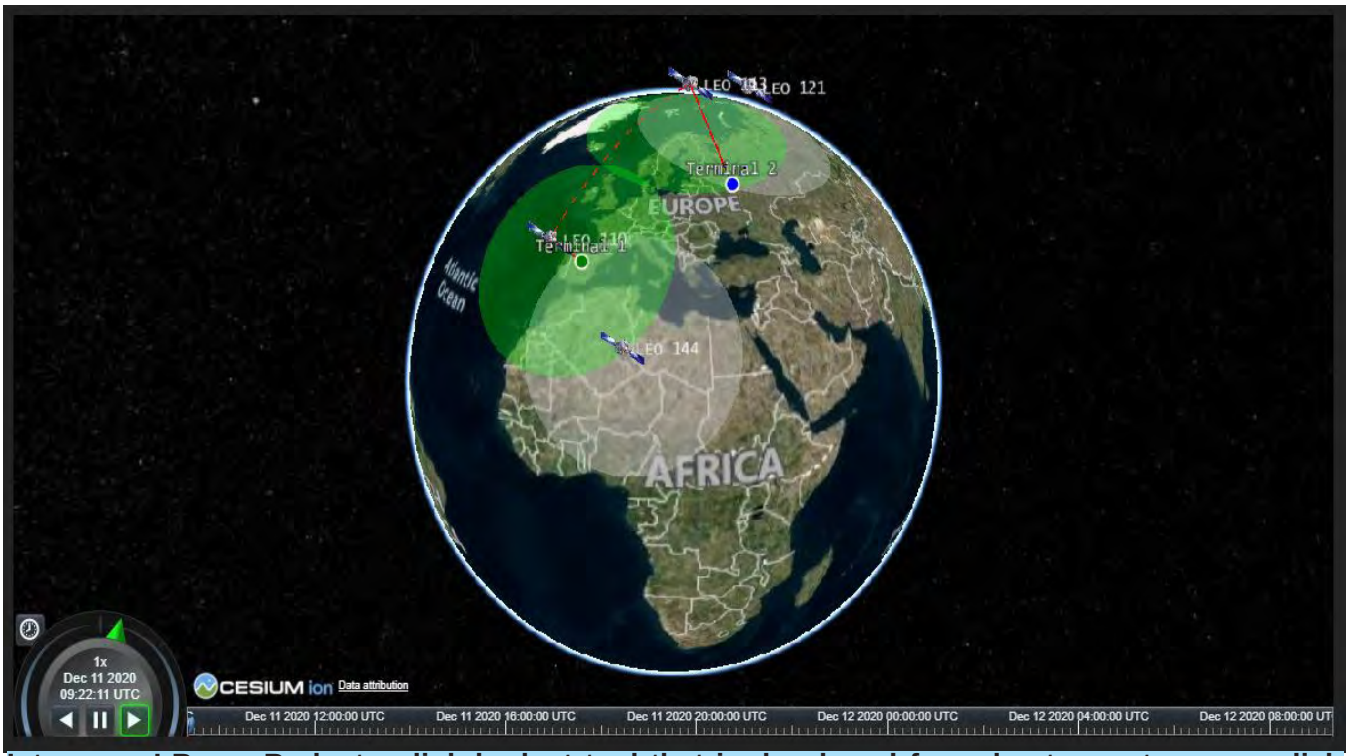


Deploy & Monitor

Maintenance & SLA compliance

Interference Mitigation & Removal

integrasys-space.com | info.sales@integrasys-sa.com | @IntegrasysSA | Integrasys SA and LLC



Integrasys' Beam Budget, a link budget tool that is developed for sales teams to accomplish the capacity sales in a click, and be more autonomous in their operations. It is a private cloud-based-system and the tool is totally prepared to have instant outputs helpful to sales teams, with graphical metrics, and a very intuitive report with the necessary metrics.

the necessary metrics. To go beyond Cloud-Systems, restful APIs are mandatory to make possible interoperability and complete the end-to-end network automation in order to decrease time to market and provide a solution that enables integrations, and rapid problem-solving.

The transformation of the satellite communications industry requires being ready for the newest market trends that are coming. End-to-end automation is an open door, and also an opportunity for Service Providers and Antenna manufacturers to incorporate these technologies in order to take advantage of the latest developments that are ready to revolutionize the Space and the Ground Segments, the innovation now depends on how technologies are used. The market is ready to adopt these innovative tools and INTEGRASYS, with its expertise demonstrated since 1990, as a Software company that has the most advanced, and flexible solutions to make end-to-end automation a reality.

Alvaro Sanchez is Integrasys CEO and Marquess of Antella (Noble Title from 17th century in Spain). Alvaro is a Software and Industrial engineer by European University and holds a Master Degree in Management, Sales & Marketing by ESIC Business School. Alvaro during the last 10 years has worked at Integrasys as Management, Sales Director and Executive roles were he was very successful growing the sales, revenue, profit and responsibilities within the company; and previous to that he was working at CERN European Organization for Nuclear Research as a RF Engineer measuring timing in a Nanosecond Synchronization for measuring the Neutrino Speed. The Noble Title that he hosts, is coming in his heritage from 1649 from his ancestor Nicolo Palavicino, given by Phillip IV in Sicily for the Antella region near Florence. He can be reached at: **alvaro.sanchez@integrasys-sa.com**

Is There a Satellite Inside?

Every day, nearly everyone on Earth does something that involves a satellite. Most of them never know it. That's kind of cool – but also kind of frightening.

If people who benefit from your products and services don't even know they exist, our commercial prospects are pretty dim. Especially at a time like this, when satellite communications and earth observation are poised for the first time to break out into immense global markets, from IT, mobile and IoT to finance, insurance, and logistics.

It was this consideration that drove Intel, in the 1990s, to launch its "Intel Inside" campaign. Its leadership realized that being an invisible part of a PC was a recipe for commoditization and shrinking margins. The company ultimately invested US$ 5 Billion (about US$10 Bil. today) in an international marketing campaign that was instrumental in keeping them at the leading edge of the chip industry.

The same consideration led SSPI to launch its Better Satellite World campaign in 2016 (www.bettersatelliteworld.com). We're a few dollars short of the US$ 10 Bil. we would like to be spending. But with the help of our industry's companies, media partners and other organizations, the campaign is making a difference in how the industry communicates its value to investors, to present and future customers and to the young talent we so badly need to fuel growth.

What's Your Sat IQ?

A recent video in the Better Satellite World series, "Is There a Satellite Inside?," aims at young people in middle school and high school. It asks them to guess whether or not satellite technology is part of everyday applications in their lives. So, let's take a moment to test your own satellite IQ. For each of these common objects or activities, is there a satellite inside? For answers, watch the video.

Click here to view a video on "IsThere a Satellite Inside":
https://www.youtube.com/embed/TqzZE2MGa-k

1. Your mobile phone?

2. A program you watch on TV?

3. Video games?

4. Sneakers?

5. A loaf of bread?

6. Weather forecasts?

7. Hanging out with your friends (back in the day when you could)

Go to https://www.youtube.com/embed/TqzZE2MGa-k to watch the video and test your Satellite IQ. You'be surprised with the results.

.

Produced for Satellite Executive Briefing by Space & Satellite Professionals International. See more stories and videos of satellite making a better world at: www.bettersatelliteworld.com

AvL TECHNOLOGIES

CONNECTING YOU TO THE FUTURE

1.35M FIT
FLEXIBLE INTEGRATED TERMINAL

SMALL PACKAGE.
BIG GAIN.

- MANUAL OPERATION WITH SATCAP OR AUTO-ACQUIRE
- FULLY INTEGRATED TERMINAL
- KU, KA AND X-BAND – QUICK CHANGE FEEDS AND RF KITS
- ULTRA-LIGHTWEIGHT
- SET-UP BY ONE PERSON IN MINUTES
- BEACON RECEIVER, ODU/MODEM INTEGRATION & BUC/LNB INTEGRATION
- ARSTRAT CERTIFICATION

avltech.com

Visit AvL @ Virtual SOFIC, May 17–21

Spotlight on key products and services now available in the market.

AvL's New 2.4m Axi-symmetric Antenna

AvL's new 2.4m axi-symmetric antenna is ultra-light-weight and has a breakthrough three-case pack-up. The 14-piece carbon fiber reflector operates in X-, Ku- or Ka-band with new bayonet-style feeds and quick-change RF kits, and a C-band capability is in the planning as an up-grade. The antenna is modular, flexible and operates on an aluminum space frame, which enables set-up or pack-up by one person in minutes. Once the antenna is set-up and anchored, the manually operated antenna is easily reposi-tioned using simple, ergonomic pointing assist features – no anchor adjustments needed – for fine tuning to one satellite or pointing to a different satellite.

AvL antennas are the industry benchmark of excellence for GEO & MEO ground systems, Oil & Gas Data Back-haul, Disaster Relief, mobile broadband Internet access, Defense & Homeland Security, and Satellite News Gathering solutions.

For more information go to: www.avltech.com

RF-Design's Product Portfolio

RF-Design specializes in developing, manufacturing and marketing high quality RF equipment, RF distribution, RF-over-Fiber and RF monitoring solutions for the inter-national Satellite-, Broadcast- and Broadband communications industry.

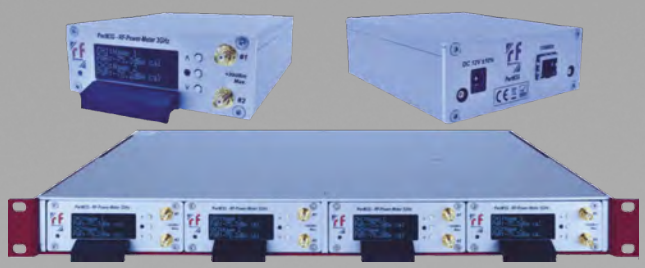
„PwrMxG" Dual RF Power Meter

Our product portfolio includes a wide range of Switch Matrix sys-tems, RF-over-Fiber solutions, Line Amplifiers, RF monitoring systems, Switches/Redundancy Switches and Splitters/Combiners perfectly suited for applications in Teleports, Satellite Earth-Stations as well as for Broad-cast- and Broadband RF distribution infrastructures. We also have strong capabilities to design and to manufacture custom-made products and solutions for your individual needs. All our products are devel-oped, manufactured, tested and approved in our own facilities in Lorsch/Germany and characterized by high quality, reliability and superior RF performance.

Learn more at www.rf-design-online.de or send an e-mail to contact@rf-design-online.de

Excellence in RF Equipment

„PwrMxG“ Dual RF Power Meter



„FlexLink K4“ 32:32 Switch Matrix

„HQ Series“ Line Amplifiers

„QLink“ Quad RF-over-Fiber

- **Unique - Innovative - Clever Switch Matrix Sytems**
- **RF-over-Fiber Solutions for Indoor & Outdoor Applications**
- **Line Amplifiers (Single, Dual, Quad & 1:1 Redundant)**
- **Innovative & Unique RF Monitoring Solutions**
- **Single & Quad Redundancy Switches**
- **Active Splitters & Combiners**
- **Custom Made Products and Solutions**
- **Perfectly Suited for Satellite Earth Stations, Teleports …**

Contact us for schedule a meeting:
contact@rf-design-online.de

PRODUCT SPOTLIGHT

Now Shipping: GaN SSPAs and BUCs from Comtech Xicom

Comtech Xicom Technology is shipping linear power GaN SSPAs and BUCs for gateway, mobile and airborne SATCOM applications. These amplifiers offer both Commercial and Milcom antenna-mount packaging.

Puma GaN SSPAs/BUCs

- X, Ku and Ka-Bands
- Powerful & Efficient
- Ideal for Fixed & Transportable Applications

Bobcat Compact DC BUCs

- X, Ku and Ka-Bands
- Interchangeable Bands
- Ideal for Fixed & Man-Portable Applications

Falcon Airborne SSPAs & BUCs

- Ku and Ka-Bands
- DO-160 Certified
- In-Cabin and Tail-Mount Applications

For more information go to: https://xicomtech.com/

Customized VSAT Antenas from JONSA Technologies

Jonsa Technologies is one of the most prestigious manufacturers of communication antenna around the world. With patented RF, object-oriented design and steady integrations of upstream and downstream, Jonsa is capable of providing the advanced products to satisfy the clients' demands.

Our best-selling products include :

VSAT(E74/E97/E120)

- Customized VSAT antenna products
- Corresponded with electronic devices, such as integrated LNB and Feedhorn.
- Support Ku and Ka band as an option
- Used in worldwide internet and aviation service etc

0.6m/0.9m Auto and Manual Flyaway

- Ring focus antenna with 8 segments reflector
- Support Ku and Ka band as an option
- Carbon fiber reflector with light weight, high strength and one person can finish the installation within 3 minutes.
- Fast and high-quality transmission at anytime and anywhere.
- Used in the military, broadcast & media etc.

For more information, go to: www.jonsa.com.tw or email saccount@jonsa.com.tw

The New Dimension in Redundancy Control: ND SATCOM's RCU 6000

Yet another dimension of ND SATCOM's satellite communication technology has been revealed: the new redundancy controller unit RCU 6000. Offering a highly intuitive user interface to manage all functionalities – from various base band encoders to multiple HPAs with all switch elements – the RCU 6000 represents ND SATCOM's ongoing commitment to superior mission-critical performance and reliability.

The new RCU 6000 2U unit has plenty of physical interfaces to not only control a 1:1 WGS system but also – and easily – 6:1 redundant uplink chains or more. The reliability of the RCU 6000 with fanless operation and redundant AC supply is the foundation for failsafe ground systems.

"With the RCU 6000, ND SATCOM strengthens its innovative product portfolio. The RCU 6000 is German-engineered, German-made, and ready for rapid customizations", said Bernd Lehr, Head of Sales at ND SATCOM. "In the broadcast ground station business, the new RCU 6000 helps to control more uplink components while concurrently performing more complex control tasks to minimize uplink outages. Customers can reduce station costs with less rack space and less dissipated heat, and benefit from economical cabling. This combination of exceptional quality, flexibility and cost savings are what our customers seek in failsafe operations."

The powerful new RCU 6000 features improved usability via "live view" WebUI and touchscreen. "The modern GUIs assist all engineers to quickly install complex uplinks. Selection of a specific uplink chain design is as easy as a parameter or switch command change, and are visualized in real-time," stated Michael Weixler, ND SATCOM's Head of Product Management. "Our unique GUI allows customers to deploy 'out of the box' and its clean design hides all the processing complexity. With RCU 6000 you can manage your ground station from your smartphone,"he added.

Other highlights include more processing speed and the embedded Ethernet switch that avoids communication bottlenecks over legacy serial lines. All M&C protocols support new LAN based equipment. With additional customized processing tasks, the RCU 6000 is ready to connect any device up to 1Gbps for rapid Monitoring and Control. Additional interoperability means the RCU 6000 can even optionally control customers' ND SATCOM SKYRAY antenna.

Dive into a new dimension of satellite communications and discover the new world of RCU 6000.

For more information go to: www.ndsatcom.com

TOUCH SCREEN

ND SAT COM

INSTALLING RELIABILITY

www.ndsatcom.com

KEEP UP TO 6 CHAINS IN THE AIR: RCU 6000 – THE NEW DIMENSION IN REDUNDANCY CONTROL

Ensure failsafe operations with **ND SATCOM**'s new redundancy controller, the **RCU 6000**. Outstanding performance and reliability are the hallmarks of **ND SATCOM** innovation and the **RCU 6000** delivers this and more:

Improved Usability: 6 waveguide switch interfaces | New "Live View" WebUI | New touchscreen
Enhanced Performance: Ultra-fast multi-core CPU | Customisable processing tasks | 8 Fast Ethernet ports
Rapid Monitoring: 2x 1Gps LAN for remote access | M&C over fast Ethernet

Dive into a New Dimension in SATellite COMmunications and discover the new world of RCU 6000.

Introducing Mx-DMA® MRC, the Satcom Industry's Most Powerful Return Technology

Mx-DMA® MRC (Multi-Resolution Coding) combines ST Engineering iDirect's leading Mx-DMA efficiency with the scalability of MF-TDMA. The result: the industry's most efficient, dynamic return technology, marking the end of compromise in network design for multi-service platforms.

Built upon the award-winning Mx-DMA HRC (High Resolution Coding) technology, Mx-DMA MRC:

- Seamlessly adapts to changing network traffic and link conditions
- Maximizes utilization of available bandwidth resources
- Self-organizes to support deployment of large amounts of terminals with mixed service types
- Scales to thousands of sites with cost-efficient hub modulator technology
- Operates at industry-leading efficiencies at the lowest possible cost

To learn more, visit idirect.net/mx-dma-mrc.

The New C-Band IBUC G for Multicarrier Application is Now Available

Terrasat Communications presents the new state-of-the-art 400W/500W IBUC G for multicarrier application. The new GaN IBUC G model now supports multicarrier transmissions across the full C-band spectrum. The 500W model produces +54 dBm of linear output power and is ideal for all high data rate multicarrier applications such as maritime, broadband, broadcast, and network hubs. All IBUCs allow the operator to customize configurations & manage alarms & sensors for real-time network management and control backed by a 3-year warranty. IBUC reliability is baked into the IBUC G design and verified through intensive individual unit testing.

For more information on the available units, go to: www.TerrasatInc.com


ST Engineering
INTRODUCING
Mx-DMA MRC
A dynamic return technology that ends the tradeoffs for your network. Don't choose between efficiency and scalability. Give your network the most powerful and flexible return for all of your markets at a lower total cost to your business. All while managing complex traffic demands in real time to confidently deliver the best Quality of Experience.
Discover How You Can Achieve A Greater Return.
idirect.net/mx-dma-mrc
powered by
Newtec iDirect

A Way You'll Never Be

by Lou Zacharilla

Few of us will ever enter a Hall of Fame as anything but a visitor or a guest. The reason should be as obvious to you as it is to me. After running the Space and Satellite Industry Hall of Fame inductions program for over 20 years you begin to see things clearly. The explanation for why most of us remain spectactors is as mind-bogglingly simple as a Dr. Gladys West https://www.sspi.org/cpages/hof-west model of the shape of the Earth is complex.

So here is the reason: while there is much, much, MUCH talent in every nook and cranny of our industry; exceptional talent – the kind that wins World Cup matches and Super Bowls and Nobel Prizes –is confined to a handful of humans. While we surely seek diversity and equality of opportunity as a charter of our industry and common humanity, talent is an urge of an unknown origin and exempt from any familiar design. If you think you can be Jim Oliver by studying the design of a Barcelona Chair as he did, think again. It is not linear. Talent's ways are not our ways.

Hall of Fame talent is a distinct trait and forever shall be unequally distributed. If you need proof, consider that with all of today's "platforms" to showcase one's talent in music or the arts about 1% of artists continue to take home the real money and the real fame. Same with CEOs and successful entrepreneurs. While there is a proliferation of start-ups, or "influencers," or clever, hard-working digital beasts their influence is of the moment. And the moment is fleeting.

Will their talent be lasting and offer the deeper values that turn them into Hall of Fame material? My observation is, naw. The laws of Hall of Fame talent are like the rising of the Sun. They always apply. A decent slide guitar player will never be in the same hallways with Eric Clapton.

So it is with both our Hall of Fame and, to a degree, the 20 Under 35 Cohort. https://www.sspi.org/cpages/20-under-35 They are simply special people in an industry so stuffed with talent that the term "rocket scientist" became a cultural expression to denote a higher order! It came from our industry – and we have zillions of rocket scientists who never will make the Industry's Hall of Fame!

So imagine how good THIS Hall of Fame must be.

Average is a great thing. Being in the middle is the sweet spot of existence. When the world pulls you left and right, being in the middle is Sanity. But it can be a painful awakening to realize that you are average. At first anyway. You may be talented in some area and have the occasional fantasy that you might be great "if only…." Let it go. When you stand next to genuine achievers, as I have for years with these Hall of Famers you come to an acceptance. You acknowledge the fact that success is an act of hard work. For sure. But "the work hard and you can be like Kathy Leuders and Peter de Selding" is merely a notion promulgated by

our teachers, parents and societies - I am convinced - to keep us in line and help us reach Social Security with having had a decent job. It has its virtue. In a productive industry it is what allows things to prosper.

But it ain't the Hall of Fame. Talent of the type we honor and bring forward is a gift of a certain type of grace.

In his blog on Larry Niven in this issue of SSPI's newsletter, The Orbiter, Robert Bell quotes Niven as writing, "There is only one universal message in science fiction: there exist minds that think as well as you do – but differently."

Some better than others, of course. I'll end by borrowing a phrase from another inspirational writer, whose material was honed close to the earth that most of us still have not left. Nobel Prize winning writer Ernest Hemingway titled a famous short story "A Way You'll Never Be." Hemingway nailed it. You just need to interview a Matt Desch, or speak to a Gwen Shotwell, or look at an AvL Technologies antenna design; or watch Greg Wyler and Steve Collar build a future without a real playbook to know this.

As Hemingway might conclude, "And it is a damn fine thing to know."

Lou Zacharilla is the Director of Innovation and Development of the Space and Satellite Professionals International (SSPI). He can be reached at: LZacharilla@sspi.org

Let's Zoom Again!

by Martin Jarrold

The GVF-Satellite Evolution Group (SEG) Webinar Series is approaching its first anniversary. For events across the last year we have been fortunate to have featured a diverse range of great moderators, as well as exciting populations of insightful contributors covering a broad spectrum of subjects.

Just recently, during April, I had the opportunity to return to the moderator's chair, working with panelists to consider the expansion of network connectivity using space-based solutions across two regions: Africa; and Europe, Middle East & North Africa (EMENA).

On 20 April Expand Your Network Connectivity Across Africa with Space-based Solutions included discussion centered on Connecting Africa to Broadband: A Roadmap for Inclusive Growth featuring four expert panelists from Liquid Satellite, Orange DRC, Safaricom, and Vodacom Mozambique, and which began by referencing three World Bank observations about communications and connectivity in Africa.

Firstly, that it will require an investment of US$100 Billion to achieve universal, affordable and good quality internet access for the continent's 1.1 Billion people by 2030.

Secondly, for the most part, universal access to broadband connectivity is an infrastructure challenge with nearly 80 percent of all required investment directly tied to the need to roll out and maintain broadband networks.

Thirdly, the impact of the pandemic on communication and connectivity has been felt within the ecosystem surrounding the internet and communications technology, increasing demand and highlighting the need to leverage tools and innovative strategies.

The panel considered a wide range of questions, beginning with an evaluation of what in Universal Access strategies to enable the bridging of Africa's Digital Divide has failed to work in the past, and what is new about different approaches being proposed today, and following-up on the World Bank observation the panelists gave their respective appraisals of the ways, and with what effects, the COVID-19 pandemic has magnified the continent's lack of broadband connectivity progress and the more urgent need for that progress.

Further questions included the benefits to mobile network operator (MNO) planning strategies of including satellite-based solutions, especially that for covering rural areas; how satellite fits with the CAPEX and OPEX demands of MNOs in terms of keeping costs to customers low; how high-throughput satellites, with slashed bandwidth costs and

significantly increased capacity, have altered the business equation of MNOs in satellite's favor; and, the ways MNOs can address mobile device and service plan affordability issues in remote rural areas, balancing the demands of customer affordability and company revenue growth and RoI.

Following the panel, a fireside chat with representatives of Intelsat and TinSky Connect, based out of South Africa, considered Connectivity Imagined… Where You Need It, When You Need It. Backdrop to the conversation was acknowledgement that industries all over Africa depend on reliable communications to keep them connected everywhere they do business, with users in mining, rail, oil & gas, first responders, civil defense, and humanitarian aid discovering innovative ways to optimize their operations in hard-to-reach locations or where other networks simply don't exist.

On 22 April, GVF hosted the Intelsat-sponsored Expand Your Network Connectivity Across Europe & MENA with Space-based Solutions, including a moderated discussion, Enterprise Networking: Meeting the Challenges of Growing Complexity, Expanding Needs. The foundation perspective of this 60-minute dialog was that 'hyper-connectivity' is now a global phenomenon. Enterprises worldwide are increasingly dependent upon reliable access to information, applications, secure networks, and productivity tools. Enterprise networking, via turnkey managed services or wholesale capacity-only options, provides enables businesses to seize

It will require an investment of US$100 Billion to achieve universal, affordable and good quality internet access for the Africa's 1.1 Billion people by 2030.

emerging opportunities, accelerate decision-making, and bring more value to customers.

Three experts, representing Algeria Telecom Satellite, Media Broadcast Satellite, and Orange Business Services, explored innovations that are transforming satellite solutions, supporting enterprise applications and services securely, reliably, and cost-effectively, and as a starting point considered if there are particular vertical markets across EMENA for which the role of satellite in advancing solutions to the challenges of growing complexity and expanding needs in enterprise networking is of particular and growing importance.

Further questioning examined the most important and complementary advances in the space segment and ground segment contributing to advancing satellite solutions for enterprises across EMENA, and how enterprise sector digital transformation will secure the long-term sustainability of the enterprise VSAT market. Other questions covered changes in the enterprise solutions marketplace arising from the dramatically reduced cost of bandwidth and dramatically increased capacity of high throughput satellites, and the degree to which this trend is altering the enterprise network solutions equation in satellite's favor, including when MNOs consider what role satellites should play in their networks. Panelists gave their views on how optimization of cloud networks with satellite-enable SD-WAN will progress in the longer term and referenced again advances in space and ground segment with their expectations of future innovation.

The subject Addressing Market Needs: Supporting Enterprise Network Applications Requirements provided the basis for the following fireside chat, which initially looked at key business continuity issues in today's enterprise networking solutions

market across EMENA, and how satellite is well positioned to meet the challenges involved. Discussion then turned to software defined wide area networking (SD-WAN), covering:

- How software-enabled and software-defined services drive interoperability standards which can bring together satellite, terrestrial and wireless solutions across the telecom and networking environment, simplifying services for enterprise.
- The SD-WAN decoupling of networking hardware from its control mechanism, simplifying operation and management of a wide area network by solving challenges related to latency, packet loss, bandwidth limitations, and network congestion and how satellite adds to these advantages.
- How the well-established advantages of SD-WAN (bundling and routing network traffic intelligently and securely across a combination of available wide area network access connections ranging across satellite and terrestrial) manifests itself across the different market verticals across Middle East, and North Africa.
- How the pairing of satellite-based services with SD-WAN creates solutions which bring additional value for enterprises over and above the simplification of networks implementation and management brought by non-paired strategies.

If you missed the original broadcasts on Zoom, you haven't missed out because recording of the events is available by visiting https://gvf.org/webinar/expand-your-network-connectivity-across-africa-with-space-based-solutions/ and https://gvf.org/webinar/expand-your-network-connectivity-across-europe-mena-with-space-based-solutions/, respectively.

"...The aviation and maritime markets have seen some exciting innovations over the past few years..."

Next in the GVF-SEG schedule is another in our Roundtable series with Mission Microwave. Moderated by Brad Grady, Principal Analyst, NSR, and featuring Will Mudge, Vice President Engineering Operations, SpeedCast; Matt Landel, Director of Sales Engineering, Astronics AeroSat; Blad Stavropoulos, Senior Director Product Management, Intellian; and, Jason Stephens, Vice President North America, GetSat. Terminal Innovation: Leveraging Satellite's Mobility Sweetspot takes place on 13 May at 3:00 pm UK time / 10:00 am US Eastern time and will examine On-the-Move (OTM) and mobile applications as a market sweet spot for satellite communications. While ships, 'planes, trains and tactical platforms are sometimes able to connect to high-speed terrestrial services SATCOM connections are critical to providing a reliable level of service and frequently a SATCOM connection is the only viable solution. The aviation and maritime markets have seen some exciting innovations over the past few years as HTS service offers worked to offer bandwidth to mobile platforms. One example is how advances in RF components and signal processing have made it possible to provide reliable high-speed SATCOM links to helicopters. Rotary aircraft represent a relatively unexplored market segment for SATCOM that is expect to grow from historically near zero to thousands of terminals in the next three to five years.

These Roundtable participants are globally recognisable as industry leaders in designing, building and deploying aviation and maritime SATCOM terminals and will offer their views on the technology trends that affect their current business, the effects of envisioned technologies including ESAs, and the role of transportable terminals in support of much anticipated non-GEO satellite networks. You can read more and register for this event at https://gvf.org/webinar/terminal-innovation-leveraging-satellites-mobility-sweetspot/

There will be further online events in during the month of May and you can keep up to date with the schedule by regularly visiting https://gvf.org/webinars/. Meanwhile, wherever you are whilst reading these words… Keep well, stay safe.

Martin Jarrold is Vice-President of International Program Development of GVF. He can be reached at: martin.jarold@gvf.org


RSCC
Russian Satellite
Communications Company
TV
SATELLITES
FOR DIGITAL
ECONOMY
rscc.ru

HISPASAT Takes Over Media Networks Latin America's Management and Signal Transport Business

Madrid, Spain, April 29, 2021--HISPASAT, the Spanish satellite telecommunications operator of the Red Eléctrica Group, has signed an agreement to take over the management and signal transport business of Media Networks Latin America, a subsidiary of the Telefónica Group involved in multimedia. The agreement will be implemented gradually in upcoming months in strict compliance with regulatory provisions and without affecting the service that Movistar's television clients receive in South America.

Media Networks Latin America currently provides signal transport and management services to the leading telecommunications and television operators in South America using HISPASAT's satellites in the 61ºW position to reach millions of homes. The integration for these services will allow HISPASAT to strengthen its position as a leading operator in the region for satellite TV related services in Latin America.

According to Dataxis, a company that specializes in market studies, there are more than 17 million satellite TV subscribers in South America, which reflects the importance of this technology in the region to bring informational, educational and entertainment content to a large part of the population.

This action falls within the lines of action proposed by HISPASAT in its 2020-25 Strategic Plan, which will turn the company from an infrastructure operator into a services and satellite solutions company. This transformation will take place by strengthening its current business, with actions like this agreement with Telefónica, and promoting growth to address the latest market trends, which will allow the company to diversify its offering through new technologies, services and strategic partnerships.

For Miguel Ángel Panduro, CEO of HISPASAT, "this agreement will make our multimedia business in Latin America more efficient and strengthen our strategic position in a vertical market where we provide service today to close to two million homes in Brazil, Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela. With this highly important transaction for our company, we are expanding our presence in the value chain and promoting the high-quality service that Media Networks has providing in the region for all these years".

Alfonso Gómez Palacio, CEO of Telefónica Hispanoamérica, commented that "we are very satisfied with the agreement we have reached with our trusted partner HISPASAT for the management and signal transport, Media Networks Latin America. This agreement will allow Telefónica Hispanoamérica to remain focused on the fiber optic rollout, as well as mobile connectivity with the latest generation networks to provide our clients the best experience. At the same time, the company is taking another step in its goal of making its operations in the region more dynamic."

Deploy Ruggedized High-Performance Intelligent BUCs to your Critical SatCom Operations Anywhere.

Explore all **IBUC** models at TerrasatInc.com

IBUC G

IBUC 2

New IBUC 3

TERRASAT
Communications, Inc.
Engineered to Endure

Globecast Promotes Genevois to Marketing and Communications VP and Bonneau to Internal and External Communications Director

Paris, France, April 29, 2021--Globecast has announced that Denis Genevois has been promoted to Marketing and Communications VP with Valéry Bonneau promoted to Internal and External Communications Director. Genevois also sits on the Executive Committee and reports directly to Globecast CEO Philippe Bernard. Bonneau reports to Genevois in his new role. Previous Communications Group VP, Olivier Zankel, has left to take up another position within Orange Group.

Denis Genevois

Philippe Bernard, Globecast CEO, said, "We have seen over the last year in particular the vital importance of clear and concise internal and external communications in what has been a challenging time for the world. We know that our customers greatly appreciate it and this is something that we must continually strive to improve upon. I have great faith in the abilities of both Denis and Valéry to rise to the ongoing challenge."

Marketing and Communications VP, Genevois is responsible for defining both internal and external communication strategies, in close co-operation with key members of staff and their teams around the world. He is tasked with maximising the visibility and clarity of messaging. He will continue to define how services work as well as reporting sales performance. He has been with the company for 20 years.

Valéry Bonneau

He will be supported by Bonneau, who has been with the company for more than ten years, most recently as Digital Marketing Manager, a role that now forms part of his new position.

AVIA Appoints Campbell-Pitt as its New **Chief Policy Officer**

Singapore, April 30, 2021–The Asia Video Industry Association (AVIA) has appointed a new Chief Policy Officer (CPO) to be based in its Singapore office, a first for the role. Celeste Campbell-Pitt joins AVIA on Monday 3rd May, initially joining CPO John Medeiros, who will be retiring after a transition period.

Medeiros, who is based in Hong Kong, and joined the Association then known as CASBAA, in 2005 as Vice President of Government Relations and Regulatory Affairs, has been CPO since 2013.

Celeste Campbell-Pitt

Campbell-Pitt has over twenty years of business and legal experience in the media and entertainment industry across both Europe and Asia. Prior to joining AVIA, she was consulting with various global media and technology companies as well as private equity firms who were looking to expand into the Asia Pacific region. Campbell-Pitt was previously the Vice President and Head of Business Development and Advertising Sales at Discovery Networks Asia Pacific, after her stint at Endemol Shine Asia Group as the Director and Head of Commercial and Operations. She has also held Senior Legal Counsel positions in international media companies including Star, Turner and Channel Four in the UK.

Microspace Appoints New VP & GM

Raleigh, NC, April 29, 2021-- Microspace Communications, a satellite services provider owned by Capitol Broadcasting Company, has appointed Cyrus Wilson as Vice President and General Manager. Wilson brings more than 20 years of experience in satellite communications, operations and customer management, and defense business management.

In this role with Microspace, he will be responsible for all functions of the business, including sales, marketing, engineering, finance and administration. The appointment is effective May 17.

Wilson joins Microspace from Cubic Corporation, where he led a support services division under their satellite communications business unit. Over a 10-year career at Cubic, Cyrus held key positions in program management, sales and marketing, and product sustainment. Prior to Cubic, he spent several years with DRS Technical Services Inc., supporting program development, systems integration and technical solutions delivery. Cyrus also held roles at CAS Inc., and Eagan, McAllister Inc. in network engineering, satellite services and systems analysis. Additionally, he served in the U.S. Army, where he specialized in providing secure data links and communication systems around the world.

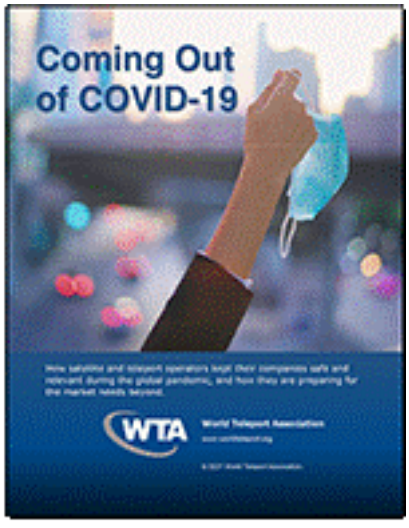
Wilson holds a bachelor's degree in Computer Information Systems from Campbell University and a master's degree in Information Technology Management from Webster University.

New WTA Report, "Coming Out of COVID-19," Explores the How the Teleport Sector Managed and Learned from the Pandemic

New York City, NY, April 15, 2021– The World Teleport Association (WTA) released "Coming Out of COVID-19," a new research report that explores the widespread impact that COVID-19 had on satellite and teleport operators around the globe. The report examines the similar and disparate ways technology companies addressed the pandemic with new policies for both internal operations and relations with new and existing customers. It also explores how these companies see the light at the end of the tunnel: what comes after COVID, and how is the industry preparing for it? Coming Out of COVID-19 was sponsored by Telstra.

"The pandemic put our industry to the test, as it did to so many parts of the economy and society," said executive director Robert Bell. "COVID-19 is unlikely to be the last crisis we face as humanity continues to change the Earth's natural environment. That makes this report a 'must read' for teleport and satellite operators charged with maintaining operations, serving customers and accessing new opportunities in the years ahead."

WTA members can access the report by signing into their accounts on the WTA website. The report is free for WTA Members and available for purchase by others. Members may directly download the report by following this link.



COVID-19 fundamentally disrupted the entire global economy, and satellite and teleport operators were not exempt from its impact. The extraordinary circumstances of the pandemic forced technology companies and service providers to adapt in ways few could have predicted beforehand.

Throughout 2020, the services the world came to rely on most were those enabled by teleport and satellite operators: reliable network connectivity, secure connections and additional bandwidth to allow workers to operate remotely and students to learn from home. These service providers were not only required to provide their customers with assured access to their allocated bandwidth—and sometimes more—but they also had to ensure their own workforces received the same resources. This put pressure on companies that were in the midst of building new assets, or that had been looking to transition into new regions or markets in the coming year.

But the situation also presented new opportunities and ways to change business processes in the long-term. Market technology trends, including 5G standards, mega constellations in low-Earth orbit (LEO) and new wide-area network (WAN) services were all on the horizon pre-COVID. Companies will need to be swift to adapt to those new trends for present customer needs, as well as the post-pandemic future.

The Satellite Markets 20 Index™

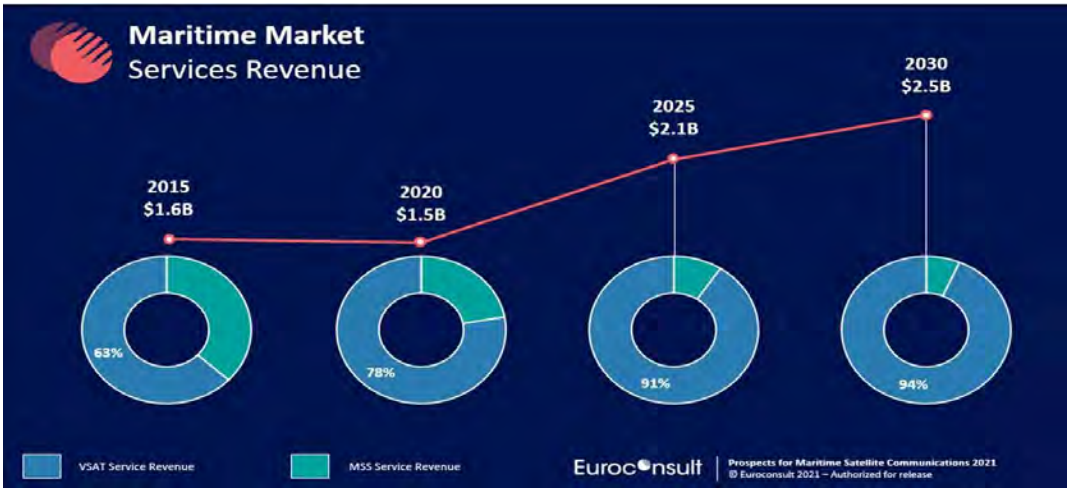
Company Name	Symbol	Price May 3	52-wk Range		Price Change Last Month	Price Change From Jan 15
Satellite Operators						
Thaicom Public Company Limited	THCOM.BK	10.60	3.36	11.90	15%	16%
Eutelsat Communications S.A.	ETL.PA	10.53	7.98	11.01	1%	12%
APT Satellite Holdings Limited	1045.HK	2.60	1.70	2.89	8%	23%
Echostar	SATS	24.69	19.75	35.33	2%	0%
SES S.A.	SES.F	6.27	5.51	8.55	-9%	-18%
Satellite Manufacturers						
The Boeing Company	BA	236.18	113.89	278.57	-7%	11%
Maxar Technologies	MAXR	39.40	8.65	58.75	4%	-21%
Lockheed Martin Corporation	LMT	386.03	319.81	417.62	2%	9%
OHB SE	OHB.DE	35.75	30.55	49.85	1%	-19%
Honeywell International Inc.	HON	223.7	117.11	232.35	2%	8%
Equipment Manufacturers						
C-Com Satellite Systems Inc.	CMI.V	3.14	1.70	4.48	-21%	16%
Comtech Telecommunications Corp.	CMTL	24.30	12.96	30.40	-6%	9%
KVH Industries Inc.	KVHI	13.28	7.38	15.29	-1%	10%
ViaSat Inc.	VSAT	52.80	29.82	61.35	5%	45%
Gilat Satellite Networks Ltd.	GILT	10.10	4.80	22.69	-5%	38%
Service Providers						
DISH Network Corporation	DISH	45.02	22.54	45.86	20%	38%
Globalstar Inc.	GSAT	1.21	0.28	2.98	-6%	36%
Orbcomm Inc.	ORBC	11.46	2.32	11.55	47%	35%
Sirius XM Holdings Inc.	SIRI	6.09	4.95	8.14	-4%	4%
RigNet Inc.	RNET	9.60	0.82	11.19	5%	44%

The Satellite Markets 20 Index™ is a composite of 20 publicly-traded satellite companies worldwide with five companies representing each major market segment of the industry: satellite operators; satellite manufacturers; equipment manufacturers; and service providers. The base data for the Satellite Markets Index is January 2, 2008 - the first day of operation for Satellite Markets and Research. The Index equals 1,000. The Satellite Markets Index™ provides an investment benchmark to gauge the overall health of the satellite industry.

INDEX	Index Value Index Value May 3, 2021	Percentage Change last month	Percentage Change since Jan 15 2021
Satellite Markets 20 Index™	2,844.30	9%	14%
S & P 500	4,202.31	3%	10%

ADVERTISERS' INDEX

VITAL STATS



The satellite maritime market has been hit hard by the global pandemic but prospects for its recovery are very promising according to Euroconsult.

- Kilowatts of Solid State RF
- Highest Availability
- Lowest MTTR
- No Single Point of Failure
- Available in C, X, Ku and S-Band Architectures

INTRODUCING SUMMIT II

The **Summit II** high-power, modular, soft-fail redundant SSPA systems are wide bandwidth and ruggedized for outdoor applications. They can be configured with 4, 8 or 16 amplifiers and are field expandable. All of the amplifiers are phase combined into a single system that can generate extremely high levels of RF output power – 10,000 watts or more.

To learn more about the **Summit II** high power systems, visit **advantechwireless.com/summit-II/**

ADVANTECH
Wireless Technologies

advantechwireless.com