

Newtec

NEWS

Newtec Newsletter
March 2015

Cellular Backhaul and HTS:
This Is What You Need to Know

What Does the Future Look
Like? Industry Shares Insights

Broadband Trends: African View

256APSK DVB-S2X Is Reality

30 YEARS

Newtec

CONNECTING
PEOPLE

SHAPING THE FUTURE OF
SATELLITE COMMUNICATIONS

CONTENTS

DEAR BUSINESS PARTNER	3
NEWTEC CELEBRATES 30 YEARS OF CONNECTING PEOPLE	4
ADDRESSING THE BROADCAST CHALLENGES OF TODAY AND TOMORROW	6
FROM VOICE TO DOMINANT DATA-SATELLITE MOBILE BACKHAUL	8
MULTISERVICE AND HIGH THROUGHPUT SATELLITES	9
WORLD'S FIRST DVB-S2X 256APSK TRANSMISSION TAKES PLACE.....	10
SATELLITE'S ROLE IN COMPLEX CRISIS MANAGEMENT OPERATIONS.....	11
SCADA CONNECTIVITY THANKS TO NEWTEC DIALOG IN SAUDI ARABIA	12
NEW BROADBAND SERVICE HELPS BRIDGE PHILIPPINES' DIGITAL DIVIDE	13
HBE PAVE WAY FOR EFFICIENCY IN INDIA	14
LIQUID TELECOM WINS VSAT OPERATOR OF THE YEAR	15
NEW PRODUCTS AND TECHNOLOGIES	16

Train with Newtec

By Brigitte Braems,
Newtec Training Center
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Newtec Training is the best way to understand the theory and application of Newtec's products and technologies. We offer a comprehensive training and certification portfolio of face-to-face and online courses for businesses, customers and individuals interested in developing their technical knowledge.

Our training courses and certification programs are designed to ensure that participants are kept up-to-date with the latest technologies to help them advance their business. Well trained engineers are a solid base for designing and running a future-proof system with high availability, reliability and maximum performance at minimal cost.

OPEN TRAINING CALENDAR

Newtec offers a number of courses which provide you with discounted public scheduled training. This service is available to all and organized at one of our Newtec Training Centers. Please see our training calendar for the latest availability. We can also offer our customers any combination of courses from our training portfolio as a closed training session, delivered in full confidentiality either at a Newtec Training Center or at the customer premises.

Alternatively, if you have a specific training requirement, we can offer a tailor-made program. Please contact us and let us know your requirement, preferred location and time frame.

NEWTEC OFFERS GVF TRAINING

We have successfully integrated the Global VSAT Forum's (GVF) VSAT Installation Certification Program into our training portfolio. We are offering GVF's online courses as part of our product-specific classroom training.



The GVF courses complement Newtec's training program, bringing the skill level of all trainees to a solid understanding of the fundamentals of Satcom. The online courses cover an extensive range of Satcom fundamentals, knowledge and installation techniques.

NEWTEC CERTIFICATION PORTFOLIO

Our industry is a knowledge-driven industry that demands up-to-date skills and warrants continuous training on existing and emerging technologies for its professionals.

We realize that technical training and applicable business knowledge are paramount to success, therefore we have further expanded our training portfolio to feature application oriented certification tracks for different engineering roles. We offer several levels ranging from Foundation to Professional and extending to Expert.

We aim to provide a range of globally recognized certificates. Each one is adapted to the activity of the certified person, whether they are in solution design, network operations or deployment activities, and defined by the targeted level of expertise of the participant. It will facilitate even stronger interaction with suppliers and help engineers learn best practice across a range of domains. The certification program is also beneficial for staff and will ensure a well-trained and satisfied team.

LATEST TRAINING CALENDAR

NEWTEC CERTIFIED PRODUCT ASSOCIATE - IP OVER SATELLITE
20/04/2015 - 21/04/2015 Sint-Niklaas, Belgium

NEWTEC CERTIFIED OPERATIONS PROFESSIONAL - IP OVER SATELLITE
22/04/2015 - 24/04/2015 Sint-Niklaas, Belgium

EARTH STATION DESIGN
5/05/2015 - 8/05/2015 Sint-Niklaas, Belgium

UPCOMING NEWTEC EVENTS

www.newtec.eu/meet-us

10-12 Mar	CABSAT	Dubai, UAE
16-19 Mar	SATELLITE 2015	Washington D.C., USA
13-16 Apr	NAB	Las Vegas, NV, USA
14-17 Apr	LAAD	Rio de Janeiro, Brazil
2-5 Jun	COMMUNICASIA	Singapore
9-11 Jun	ANGACOM 2015	Cologne, Germany
1-2 Jul	VSAT LATIN AMERICA	São Paulo, Brazil
23-27 Aug	SET EXPO 2015	São Paulo, Brazil
11-15 Sep	IBC	Amsterdam, NL

DEAR BUSINESS PARTNER

Welcome to the latest edition of Newtec News which we have released just in time for the CABSAT, SATELLITE and NAB Show 2015. This newsletter also marks 30 years of connecting people for Newtec – a milestone which comes with yet more new innovations. As we look back, we are also looking forward to the next 30 years, with a continued commitment to lead our industry into a new era of faster and more efficient satellite communications.

Follow on Twitter @serge_van_herck

30 Years of Connecting People

As we reach our 30th anniversary, we kick-started the celebrations by announcing significant sales growth and expansion into new markets. This growth has come over the last several years, during which time Newtec performed strongly in its core markets, achieving 20% sales growth. Key drivers for the success, include market evolution and our strong performance in the Direct-to-Home (DTH), broadcast systems, consumer and enterprise markets. As we move forward, we will retain this focus, while also putting a stronger emphasis on fast growing markets, including High Throughput Satellite (HTS), oil and gas and cellular backhaul. And you'll read more about it in the coming pages.

Recognition for our CTO

Recently, the Society of Satellite Professionals International (SSPI) announced it will honor Newtec's co-founder and CTO, Dirk Breynaert, with a 2015 induction into the Satellite Hall of Fame. This officially recognizes his 30-year history with the company, during which time he was responsible for an extensive number of innovations, including contributions to the Digital Broadcasting Standard (DVB). These came as a result of his constant ambition to push the technical boundaries of satellite communications. Dirk was officially presented with his award at the SSPI's annual gala dinner, held during this year's SATELLITE show in Washington.

Testing the Industry

As we move further into 2015, the era of multiservice also continues, with broadcasters and satellite service providers facing numerous challenges. These include more complex workflows, the introduction of new services, increased user expectations for always-on connectivity and pressure on efficiency in both the space and ground segments. The importance of embracing the multiservice trend was emphasized by our recent comprehensive industry survey, which aimed to address and understand the key challenges for broadcasters. The research involved around 270 leaders in the satellite industry, with the findings revealing that our industry is vibrant and in a constant search for new growth and expansion. A full round up of results and analysis can be found on page 6.

You'll also find news of new projects, partnerships and products.

With so much happening, this edition really is a bumper read - enjoy it!

Warm regards,
Serge



Serge Van Herck
Chief Executive Officer
Newtec

NEWTEC CELEBRATES 30 YEARS OF CONNECTING PEOPLE

Founded in 1985 by two engineers with a vision - Dirk Breynaert, the company's current CTO, and Jean-Marie Maes - Newtec is today one of the world's top players. The milestone anniversary will be officially celebrated with receptions round the world. Here, we take a look back at Newtec's history and some of our most recent achievements.

NEWTEC THROUGH THE YEARS

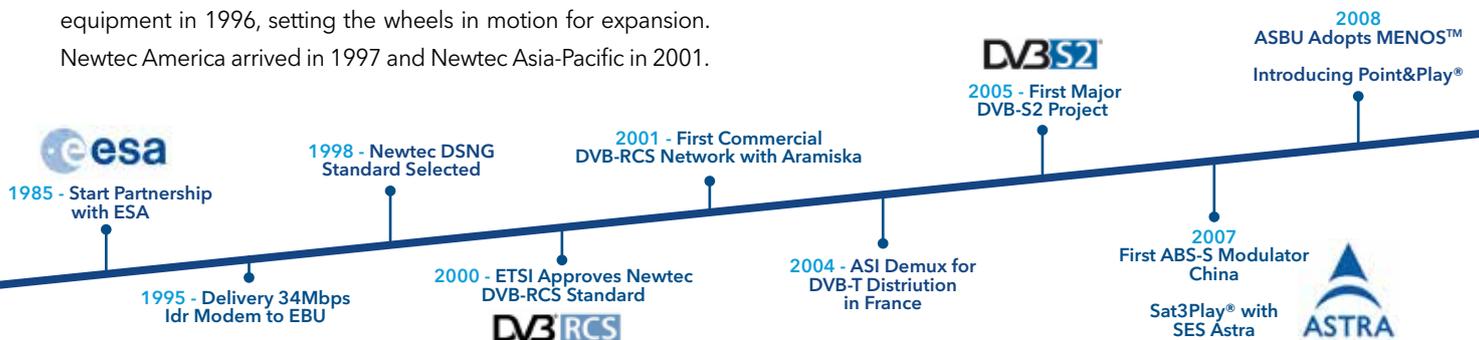
For the first ten years, Newtec concentrated solely on Research and Development (R&D) on behalf of the European Space Agency (ESA). Today, Newtec still has an excellent relationship with the ESA and the Federal Science Policy Department (BELSPO).

It has also retained its R&D focus and its ambitious R&D reinvestment policy meaning Newtec is regarded as a front-runner in a range of innovative satellite communication technologies which are considered industry standards.

In 1994, the European satellite communication market was deregulated and Newtec began working on its own product development strategy. It successfully started selling satellite communication Digital Video Broadcast (DVB) modulation equipment in 1996, setting the wheels in motion for expansion. Newtec America arrived in 1997 and Newtec Asia-Pacific in 2001.

Newtec started developing complete satellite broadband systems in 2000, leading to success stories such as the award winning MENOS (Multimedia Exchange Network over Satellite) system and some of the world's best Internet broadband via satellite solutions - Sat3Play® - and end-to-end technologies like FlexACM®.

Its success has continued, despite the economic crisis at the end of 2008. Product innovation, customer-focus, product quality, marketing efforts and a passion for the improvement of every employee are the most important reasons for this success.



20% GROWTH AND NEW MARKETS

Over the last several years, we have performed strongly in our core markets. Market evolution and our strong performance in the Direct to Home (DTH), broadcast systems, consumer and enterprise markets were key drivers for our success in 2014, resulting in a 20% sales growth.

The figures underline that our strategic direction is on course to provide a strong base for the future. We have outpaced the market in terms of growth, taking a larger proportion of market share.

The evolving multiservice ecosystem will further fuel this growth, with the Newtec Dialog® platform allowing service providers and broadcasters to build and adapt their network easily as their business grows and the market changes.

A large part of our success is down to our strategic partners in geographical locations and vertical markets. Newtec has more than 100 certified global partners operating in the satellite communications industry, covering over 100 countries across Europe, the Middle East, Africa, Asia, Australia, and North and South America.

Looking to the future, we will build on what we have already achieved and continue to shape the satellite industry with efficient, scalable and economical solutions.

"This growth underlines that our strategic direction is on course to provide a strong base for the future."
Thomas Van den Driessche,
Chief Commercial Officer at Newtec.

2015 INDUCTION INTO SSPI'S SATELLITE HALL OF FAME

Earlier this year the Society of Satellite Professionals International (SSPI) announced it will honor Newtec's co-founder and CTO, Dirk Breyneart, with a 2015 induction into the Satellite Hall of Fame. This officially recognizes his 30-year history with Newtec, during which he was responsible for an extensive number of innovations and an ambition to push the technical boundaries of satellite communication.

As company CEO, Dirk pushed for Newtec to develop and introduce advances in DVB and played a leadership role in the standards development process that led to DVB-S, DVB-S2, DVB-RCS and DVB-S2X. Thanks to these innovations, more than three billion people across the world have access to the latest content, which is being transmitted at greater volumes and lower cost than ever before.

Dirk and his team also combined existing technologies, including DVB-S2, to create new modulation technologies, which power more than 130,000 satellite broadband terminals for SES and are bridging the digital divide in Russia, Africa, Latin America and the Philippines.

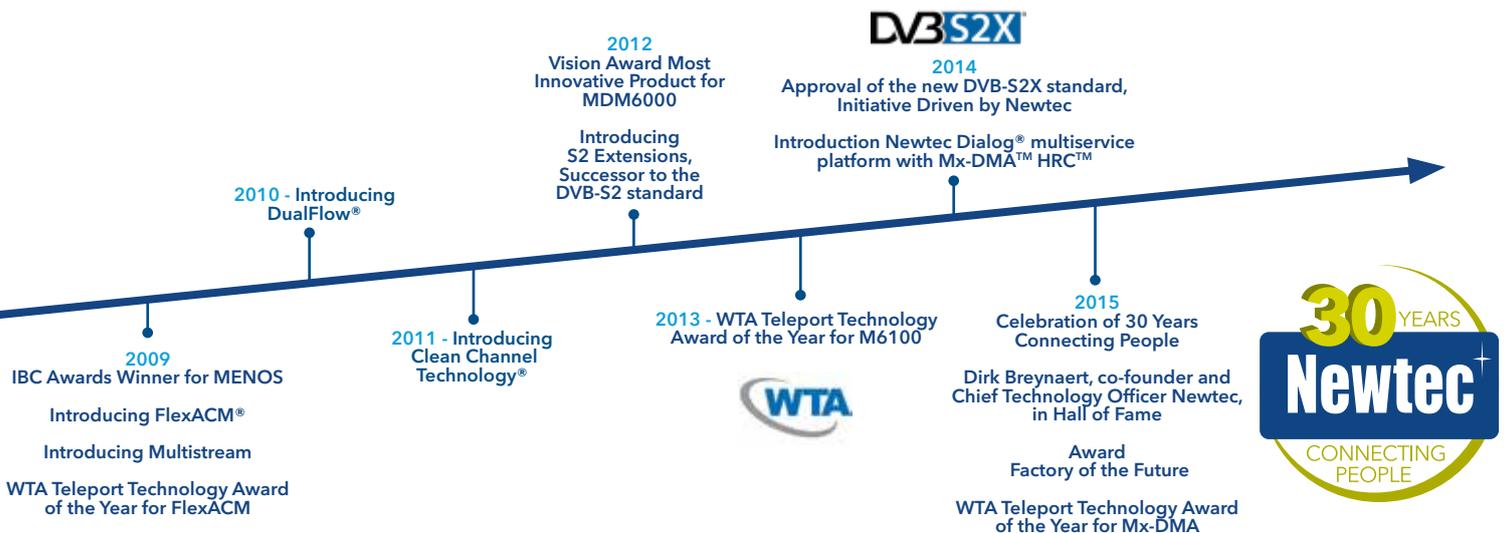
Dirk surrendered the CEO role in 2006 to become the company's Chief Technology Officer and has worked since then to break through the throughput barriers that have limited the satellite industry for decades. His biggest success to date was achieving 500 Mbps in tests with Eutelsat, Intelsat and Yahsat. Inside Newtec, he is appreciated as much for his humility as for his passion for technology. For "Mr. dB", as he is known inside the company, the future is without limits.



*"Dear Mr dB,
It's an honor and privilege to work for and with you! Keep on inspiring us and our industry. Your passion for pushing the technical boundaries of satellite communications is now officially recognized at the highest level in our industry.*

This is certainly a nice 30th birthday present!"

Serge Van Herck, CEO at Newtec



FACTORY OF THE FUTURE

Last month, Newtec was honored with the 'Factory of the Future' award, which is part of the Belgian campaign 'Made Different' that aims to recognize the market challenges faced by Belgian companies and the need for them to be innovative and future-proof.

Launched by the Belgian government, 'Made Different' is driven by Agoria, the Belgian federation for the technology industry, and Sirris, the collective center for and by the Belgian technological industry.

On the same day we were presented with the award, we announced an important investment program to upgrade and extend the state-of-the-art production capacity and capabilities at our Manufacturing Competence Center (MCC) in Erpe-Mere, Belgium.

The way we are organized makes it possible to deliver high-quality production services to the Newtec Group and to other companies, without exception. This is seldom seen in the market and the award recognizes our achievements in this area.



It also reaffirms that we are delivering relevant services to the industry and we are delighted to have had that recognized by the 'Made Different' judges. The future investment we have planned will ensure we continue to live up to the 'Factory of the Future' label.

ADDRESSING THE BROADCAST CHALLENGES OF TODAY AND TOMORROW

By Hans Massart,
Market Director Broadcast,
and Kerstin Roost,
Public Relations Director at Newtec

In the second half of 2014, Newtec conducted a comprehensive industry survey to understand the key challenges broadcasters face today and in the near future. Respondents included satellite operators, service providers and end-users, the latter being mainly private or public broadcasters or service providers in the broadcast industry.

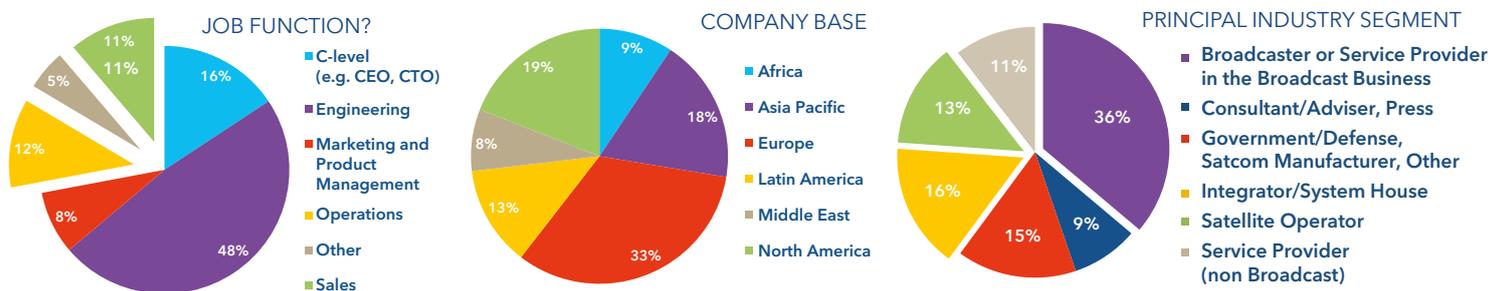


Image 1: Survey Demographics: 270 respondents

Multiservice Networks

Today's networks often carry a single specific service, operated in isolation from others. As a result, there is limited or no sharing of OPEX and CAPEX. The flexibility to change service offerings or add new services is also limited. Each service often has its own separate space segment, with specialized staff and dedicated Network Management System (NMS) operating separate equipment both at remote stations and teleports. This setup can be rigid, requiring different workflows for different networks. Single service networks are therefore not cost-effective. A multiservice network is the exact opposite of this, sharing the NMS, space segment, ground equipment and staff resources among different applications.

Care to Share?

Our survey found that over 90 percent of the industry considers the satellite segment OPEX to be a very high expense, yet more than a third (40%) say they have spare capacity. The total amount of space segment is therefore an expense area where OPEX can be reduced.

The survey results also uncover many Occasional Use (OU) sessions in broadcast networks. These sessions often require a lot of manual operations, despite the cost of staff overall being considered even more important than the satellite space segment OPEX. This is another area where OPEX can be saved.

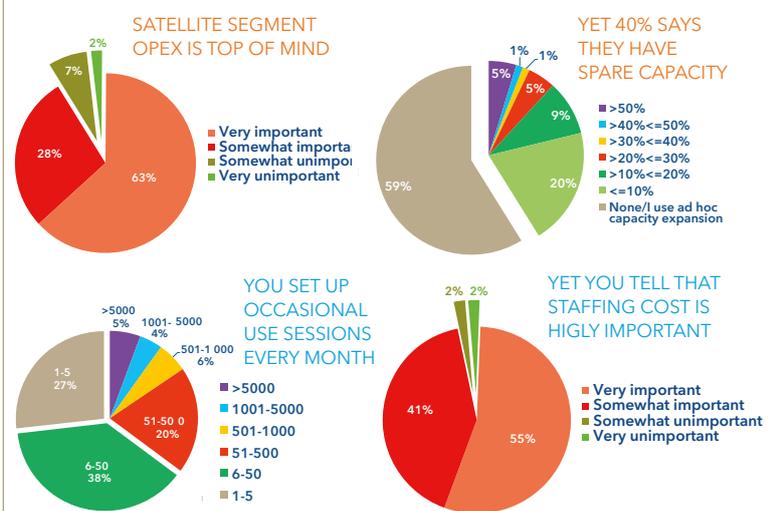
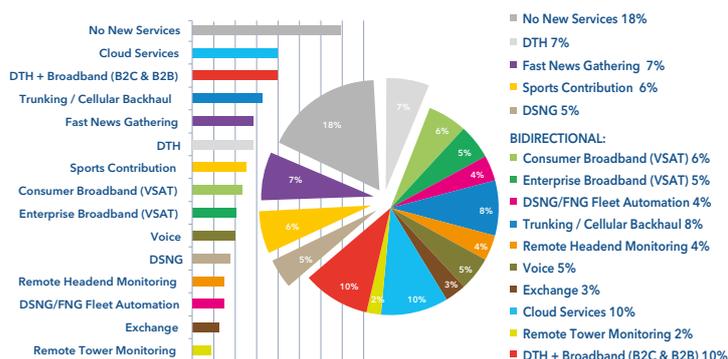


Image 2: Overview: OPEX and Capacity Usage

The industry is also constantly searching for new growth and expansion. More than 80 percent of broadcasters and broadcast service providers plan to launch additional services in the near future. A single platform shared between multiple services, a "multiservice network", will help address rising costs while increasing network flexibility, enabling business cases for new service deployments.

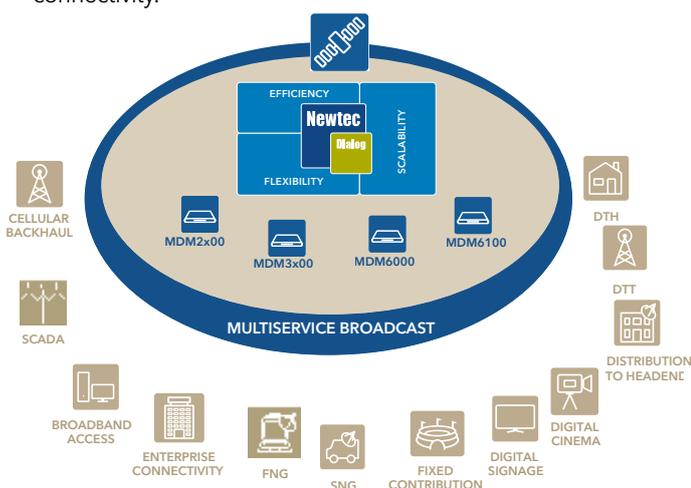
What new services will you add in the near future?



The Nuts and Bolts

A multiservice network is based on a single and future proof all-IP transport layer, independent of the underlying network layers. An all-IP multiservice network supports video, voice, data and broadband services on a single infrastructure and space segment. Different broadcast linear and non-linear workflows can run simultaneously on multiservice networks. They share the same infrastructure, operating staff and space segment, instantly reducing the level of CAPEX and OPEX while increasing business flexibility.

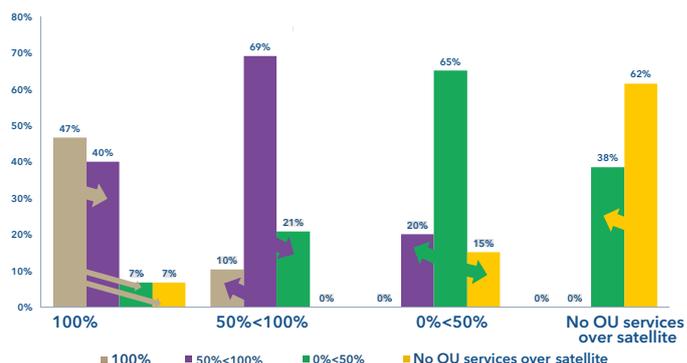
A unified NMS provides end-to-end visibility, monitoring and control of all network elements and accommodates scheduling and execution of broadcast workflows. A multiservice network dynamically selects the optimal satellite transmission return technologies to reach the highest efficiency and quality of service (SCPC, MF-TDMA or Mx-DMA™). It is capable of hosting different applications, including cellular backhaul and enterprise connectivity.



Hybrid Networks are the Future

When discussing which transmission infrastructure is used for broadcast services, there is often a terrestrial component involved. In our survey we wanted to see how the mix of satellite/terrestrial networks is expected to evolve.

Of respondents using 100 percent satellite today, about half indicated they intend to complement satellite transmission technology with other technologies. For those operators using satellite transmission between 50-100 percent and 0-50 percent of the OU sessions, some expect to grow the amount of satellite transmissions relative to terrestrial, others think the opposite. Finally, of the broadcasters that today have no OU services on satellite, almost 40 percent plan to start using satellite. A balance between satellite and terrestrial transmissions will therefore continue.



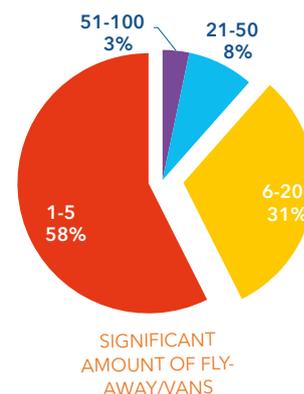
Satellite for occasional use services spitted in 4 categories and how each will move in the coming 3 years (broadcast sector only)

Network Automation

Going back to the survey results, one out of three broadcasters has a fleet of between six and 20 trucks and 11 percent have more than 21 vans. Quite a lot of OU sessions are setup every month to facilitate these broadcasts and as shown earlier, the staffing cost is highly important (see image 2).

Automation of live and file-based workflows lowers OPEX for any remote transmission station on the multiservice network.

An automated setup has many benefits including less remote staff, fewer errors and faster execution. A central database to manage capacity and equipment also avoids any kind of overbooking.



Conclusion

The industry is continuously searching for new business opportunities, while seeking ways to reduce OPEX and CAPEX. A multiservice hybrid network, leveraging best of breed technologies available, is key to achieving those objectives.

FROM VOICE TO DOMINANT DATA-SATELLITE MOBILE BACKHAUL

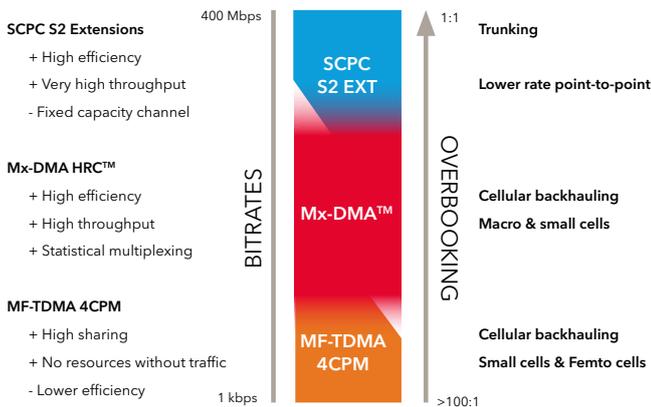
By Semir Hassanaly,
Market Director Cellular Backhaul & Trunking, at Newtec

Mobile operators in emerging markets are under increasing pressure to extend their services in rural areas. Either these markets are becoming more mature or governments are now willing to bridge the digital divide and enforce Universal Service Obligation programs. For operators, satellite backhaul is often the only mobile transport available in these remote regions, providing reliability and quick service roll-out. While 2G voice is still the main revenue source and primary mobile service deployed across these regions, 3G is also being rolled out in many areas.

A few markets are even looking at HSPA+/4G with small cells for a mobile broadband offering. This move from voice-centric to increasingly data-oriented services is having a direct impact on the evolution of the mobile backhaul solution.

Technology Disruption

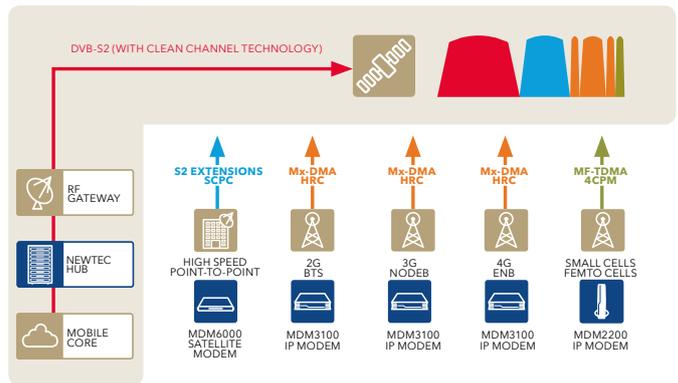
For a long time, the satellite industry has been entangled in the choice between SCPC and TDMA for the return technology. With the introduction of the Newtec Dialog® platform, both these technologies are now leveraged along with our revolutionary Mx-DMA™ technology. Combining the benefits of SCPC and TDMA, Mx-DMA ensures all traffic is accommodated at each remote base station while multiplexing the bandwidth very efficiently between these remotes, thereby decreasing backhaul operating costs.



Ensuring QoS

Mobile operators usually assign a higher priority to voice and signaling compared to data. However, the ability to differentiate traffic, manage the peak requirements and get a service level commitment is equally important in newer backhaul solutions where data occupies a substantial share of the overall service.

Newer backhaul solutions must also be extremely flexible and able to serve all mobile technologies, applications, architectures and satellite services. Through advanced efficiency features and performance gains achieved by Mx-DMA, FlexACM® and Clean Channel Technology®, operating costs are lower without the introduction of any additional jitter.



Enhancing User Experience

Different bandwidth optimization solutions also need to be integrated in backhaul deployments to increase efficiency and service offering. Newtec works with trusted partners and leverages its award winning software solution for acceleration and shaping. In 4G for example, acceleration, compression, caching and traffic shaping help enhance the user experience, which becomes key as the traffic becomes more data/video centric.

Investing in the Future

While early satellite backhaul deployments focused on voice only, the landscape has radically changed. Newer habits, mobile technologies and devices are driving towards solutions which have to be the best in efficiency, scalability and flexibility. 5G will provide even higher speeds and more services in a Cloud environment with more demanding QoS. Mobile operators have to invest in solutions which best serve them today and are also geared towards their fast evolving environment.



MULTISERVICE AND HIGH THROUGHPUT SATELLITES

By Jo De Loor,
Market Director for
Multiservice, HTS and
Enterprise, at Newtec

In the last five years we have seen a steady growth in High Throughput Satellite (HTS) capacity. The first generation of HTS targeted specific markets, mostly broadband applications, and were operated in a vertically integrated service provider business model. This model saw one player taking the role of both satellite operator and service provider, selling to end-customers and resellers.

Meanwhile, many satellite operators are entering the HTS arena, resulting in HTS capacity becoming available in all regions. The HTS capacity, typically Ka- and Ku-band, and in some cases C-band, provides higher throughput services at a lower cost per Mbps, while the high-performance HTS spot beams result in smaller and lower cost terminals.

This enables optimization of existing services but will also boost applications and opportunities which have been challenging to deliver over traditional satellites. Next to traditional broadband, HTS is rapidly finding its way into cellular backhaul, mobility and government markets, as well as broadcast.

New Business Models

Many satellite operators support the traditional business model where service providers can buy dedicated HTS MHz space segment to run their own services.

Next to this traditional model, most players also support VNO models for service providers. Here, the satellite operator puts the entire satellite and hub infrastructure in operation and sells wholesale services to the service provider. Using this wholesale capacity, the service provider can tailor, operate and sell services to the end-customer.

We are also seeing the emergence of a new hybrid business model where the satellite operator provides the space segment, RF Gateway and hub infrastructure. This is then operated independently by the service provider.

Avoiding the Pitfalls

As the business environment becomes more complex, the pitfall for many service providers is building their services on equally complex infrastructures that have grown organically over time, along with their business. These platforms become difficult to manage and operate, impacting heavily on both operational and capital expenses. Small changes to improve operational efficiency or satisfy the customer prove difficult when different technologies, topologies and platforms are built on top of each other.

Managing a Solution

Enabling these new business models in various markets, while at the same time supporting optimized operations, requires a multiservice platform which allows operators to invest as their business grows. Scaling up the services flexibly will be absolutely vital to meet the low up-front CAPEX requirements of service providers.

Step Forward Newtec Dialog®

The Newtec Dialog® platform provides satellite service providers with the scalability, flexibility and efficiency required to run successful operations over satellite, while addressing the needs for consumer and enterprise customers, cellular backhaul, government and mobility services.

The Newtec Dialog platform will secure operators' futures, giving them the power to offer a variety of services while making hassle-free decisions on which technology to use. Using the high density hubs, combining both MF-TDMA and SCPC technologies along with our patented Mx-DMA™ technology, the Newtec Dialog platform is able to provide the optimal modulation and bandwidth allocation, while guaranteeing the highest efficiency and service availability.



WORLD'S FIRST DVB-S2X 256APSK TRANSMISSION TAKES PLACE



Japan-based Nippon Television Network Corporation (Nippon TV) has successfully completed the world's first DVB-S2X 256APSK satellite transmission using Newtec technology.

By Dirk Breynaert,
CTO at Newtec

The trial campaign, which was performed on November 1, 2014, saw Nippon TV transmit 5 MHz bandwidth with a 256APSK carrier from a Satellite News Gathering (SNG) truck to the Superbird-B2 satellite. The headquarters of Nippon TV in Minato, Tokyo, successfully received the transmission.

The test follows Nippon TV's interest in the new DVB-S2X modulation standard for its next-generation video network over Japan. Considering the benefit of the 5% roll-off technology that saves satellite bandwidth, Nippon TV wanted to establish the feasibility of using this higher modulation and the associated challenges.

Putting the DVB-S2X 256APSK to the test, the team used Newtec's MDM6100 Broadcast Satellite Modem and 5 MHz bandwidth on a JSAT transponder. This is the same amount of bandwidth required for Nippon TV's next-generation video network. From the SNG truck, 25Mbps was transmitted through a 1.4 m antenna, which was received on a 5 m dish at the TV station.

For the trial, Nippon TV teamed up with MOUBIC and JSAT. MOUBIC is a Satcom and broadcast equipment provider in Japan and one of our long term partners.



DVB-S2X, the new DVB extension with improved efficiency, will enable the satellite industry to increase profitability and allow for business growth throughout all applications, from high-speed IP to broadcast. It boosts the satellite link up to 20% in Direct-to-Home (DTH) networks and up to 51% in other professional applications compared to DVB-S2. This is achieved through a combination of innovative technologies, including lower roll-offs, advanced filter technologies, Modulation and Coding (MODCOD) and Forward Error Correction (FEC) upgrades, wideband implementation and additional standard scrambling sequences.

By Koen Willems,
Market Director for
Government and Defense at Newtec

SATELLITE'S ROLE IN COMPLEX CRISIS MANAGEMENT OPERATIONS

As the task of government agencies, departments of defense, non-governmental and intergovernmental organizations becomes increasingly difficult, traditional VSAT platforms are becoming outdated and new more efficient, flexible and scalable solutions are required to support the diverse crisis management operations.



A Complex and Globalised World

When a manmade or natural disaster strikes or conflicts threaten to escalate, a timely intervention is required to help the population in the affected area and prevent the effects of the disaster or conflicts spreading to other parts of the world.

The types of intervention by national and international crisis management organizations have therefore changed drastically over the last couple of years. Crisis management operations now focus on peacekeeping, the global fight against terrorism and humanitarian relief-efforts. In a globalized world, problems need to be dealt with when and where they emerge before they threaten the economic, social, political or cultural stability of entire nations.

New Approaches

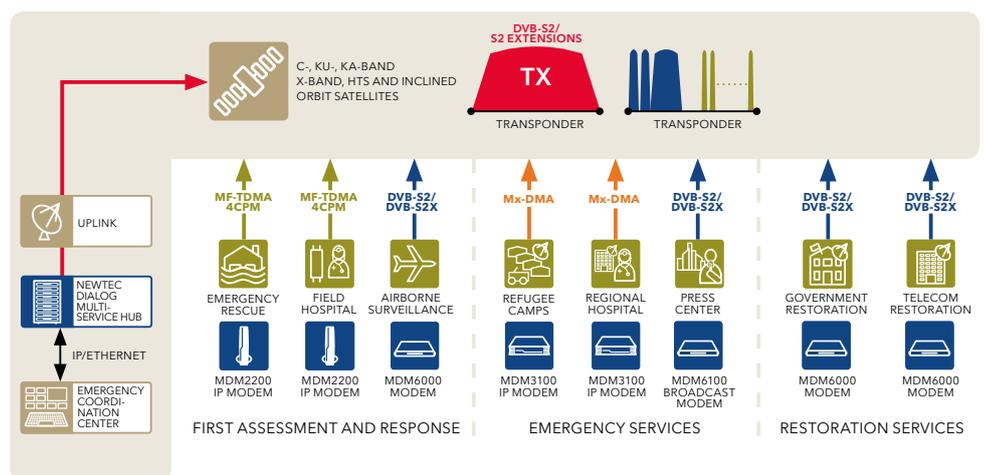
As a result of the changing landscape, standard VSAT systems are becoming redundant. Instead, a new type of platform is needed. Today's VSAT platform needs to be multi-purpose, multiservice and allow global connectivity. Secondly, it needs to support a variety of video, data and voice traffic from a few kilobits to many megabits in an efficient way.

Our Newtec Dialog® platform offers just that. The multiservice VSAT platform is highly scalable and flexible and offers crisis management organizations the opportunity to build and adapt their infrastructure according to the operations at hand.

Newtec Dialog to the Rescue

In the event of disasters and conflicts, telecom landlines and terrestrial wireless systems are often destroyed, or overloaded by people sourcing help and information or trying to contact relatives. Satellite communication is the only reliable method to exchange critical logistic, medical and situational awareness information with crisis management headquarters in this situation. Newtec Dialog can be deployed from the early stages after a disaster to the restoration of the affected area, setting up reliable satellite links in a flexible, scalable and efficient way. Additionally, double throughput can be achieved at maximum service availability, giving the crisis management remotely deployed personnel the peace of mind to focus on their core tasks.

Furthermore, Newtec Dialog gives agencies the power to support different services and applications (from medical video and logistic information to ISR data and biometric data exchange) while making hassle-free decisions on which technology to use. Users can choose between transmission technologies (SCPC, MF-TDMA and Mx-DMA™), terminal types and Quality of Service schemes depending on the operational needs. Newtec Dialog also ensures service availability to increase the effectiveness of crisis management operations.



SCADA CONNECTIVITY THANKS TO NEWTEC DIALOG IN SAUDI ARABIA

By Eric Van Hoecke,
Regional Sales Director, at Newtec



Saudi Electricity Company / National Grid Saudi Arabia (SEC/NG SA) is the Kingdom of Saudi Arabia's leading electricity utility company and we have recently signed a deal to provide the company with our Newtec Dialog® multiservice platform to deliver Supervisory, Control and Data Acquisition (SCADA) satellite connectivity between remote sub-stations to enable new applications.



Facilitated by our partner, Baud Telecom Company (BTC), a long-trusted integrator and service provider to SEC/NG SA, installation of the Newtec HUB6504 4IF Hub Module and terminals is expected to take place in the coming weeks. Initially, Newtec VSAT terminals will be installed at sites in the Eastern region of Saudi Arabia, while the Newtec Dialog Hub will be located in the country's capital city, Riyadh.

The modularity of the Newtec Dialog gives BTC agility to respond to both its customer SEC/NG SA and market needs in a fast and cost-effective way. Additional satellite networks can be added easily and rapidly by installing extra modulators, multicarrier demodulators and server blades in the preconfigured rack slots. These can then be activated in the Newtec Dialog Network Management System (NMS). High-capacity multicarrier demodulator units can also be added to achieve the required capacity for MF-TDMA, SCPC, and our own patented return link technology, Mx-DMA™.

Hosting up to four satellite networks in a single rack, the Newtec HUB6504 enables any network configuration, from single to multiple service areas, one or more satellites, different frequency bands, multiple transponders and High Throughput Satellites (HTS).

In addition to delivering and installing the platform, we have also supported SEC/NG SA, which provides services to various governmental, industrial, agricultural, commercial and residential sectors, and BTC by providing engineers for training and on-site support.

We are pleased that Newtec Dialog is able to meet the requirements of SEC/NG SA so efficiently. The platform will allow them to build their network as their business continues to grow and we look forward to a continued partnership with both SEC/NG SA and BTC.

“To develop the energy network into a full smart grid we face the challenge of a large number of sites which are difficult to connect due to the limited terrestrial infrastructure in this area. We require a robust solution for time-critical applications. With Newtec Dialog, we are confident that we have found a reliable and flexible platform that can be deployed quickly and cost-effectively integrated into our network.”

**Abdul Aziz Al Sultan,
telecom engineering and substation
automation department manager at
SEC/NG SA**

NEW BROADBAND SERVICE HELPS BRIDGE PHILIPPINES' DIGITAL DIVIDE

By Kerstin Roost,
Public Relations Director at Newtec

Following our partnership with satellite service provider First United Broadcasting Corporation (FUBC) to launch a new broadband service in the Philippines, the first modems have now been shipped.

The new service called "iGSat Satellite Broadband" (iGSat) is being provided by FUBC which is licensed to operate Direct-to-Home (DTH) satellite services, as well as radio and TV broadcast. FUBC, also runs the DTH Satellite TV (GSAT) and Global News Network (GNN) and its satellite footprint reaches the Philippine archipelago and surrounding countries.

Supporting the grassroots program of the government and private firms to cover the entire region for communication, information and education, the service will deliver reliable high-speed satellite broadband across the Philippines, which is comprised of more than 7,100 islands.

The network connects entirely via satellite, meaning residents no longer need to depend on the terrestrial network. Whether in the city or the depths of the countryside, users will be able to enjoy a broadband connection wherever they are.

iGSat offers a range of solutions for the broadband user, comprising of satellite connections for the home, business, private network and maritime communications, as well as for Internet Service Providers (ISPs). It will ultimately connect thousands of homes and businesses to satellite broadband technology.



Press conference held in Manila: in front, from left to right: Ambassador Roland Van Remoortele of the Kingdom of Belgium; Serge Van Herck, CEO of Newtec; Philip J. Chien, CEO of First United Broadcasting Corporation (FUBC); and Ambassador Garry Lin of Taiwan ROC

The broadband service is based on our broadband hub utilizing thousands of Newtec terminals, including the MDM2200 IP Satellite Modems and interactive LNBs. This technology provides local ISPs with the broadband connection they need in order to offer reliable, high-speed and always-on Internet access to users through a wired or wireless (Wi-Fi) connection.

This is a project at the forefront of pushing satellite broadband to areas where any connectivity was not previously thought to be possible. We are proud to be a part of it and see the service take its first steps towards realizations with the delivery of modems.

The contract to deliver the service was signed last November at the Sofitel Philippine Plaza during a press conference and witnessed by Ambassador Roland Van Remoortele of the Kingdom of Belgium and Ambassador Garry Lin of Taiwan ROC (see photo).

"The technology will be available anywhere and everywhere. It is limitless and beyond boundaries. Furthermore, the project will not be in competition with the present providers but will be a great support in areas where there is slow or no available bandwidth at all."

Philip J. Chien,
CEO at First United Broadcasting Corporation



Serge Van Herck and Philip J. Chien cutting the first piece of the cake to celebrate the moment with close to 80 business partners and journalists

HBE PAVE WAY FOR EFFICIENCY IN INDIA

By Srinii Rao,
Regional Sales Director,
at Newtec

Being an official certified Newtec business partner (bePART®), is all about achieving more, together. By combining local market knowledge and the expertise of regional distributors and integrators with our products, support, dedicated training and marketing tools, the aim is to increase revenues for all parties.

Horizon Broadcast Electronics (HBE), a leading player in broadcast, aviation and defense, has a rich history of success and a long, trusted partnership with Newtec, exemplifying our channel business partner philosophy.

Where the Relationship Began

Operating across India, HBE and Newtec have worked closely on satellite communications projects. Our extensive range of satellite modulators, up-converters and redundancy switches have been at the forefront of HBE's operations, particularly in the delivery of DTH broadcasting. Having formed a trusted relationship during the process, HBE has gone on to utilize Newtec equipment for a number of projects and continues to rely on Newtec's modulation solutions to maximize throughput in a country where bandwidth is limited.

Indian Trends

Although DVB-S2X, the new transmission standard behind which Newtec was the driving force, is some way from gaining traction in India, Satellite News Gathering (SNG) continues to gather momentum. India is a huge market and has seen massive development in the area of SNG, with contribution feeds of live sports events and news exchanges increasing significantly in recent years. In particular, Ultra High Definition (UHD; e.g. 4K) transmission is an emerging market in sports



Kuldeep Kaul
(CEO at HBE),
Mario Querner
(VP Asia Newtec);
Srinii Rao
(Regional Sales
Director Newtec)

broadcasting, and one which will gather significant momentum in the coming years. The Newtec Dialog® platform is essential here, delivering a fully-fledged multiservice solution with a minimal OPEX cost.

Efficiency over Satellite

Newtec's modulation solutions are critical to HBE'S operations in squeezing the maximum amount of bandwidth available to broadcast operators. HBE equips all the leading players in the broadcast industry with satellite solutions, including a long list of major Indian players. Downtime is therefore not an option. In this case, HBE looks to the Newtec M6100 Satellite Broadcast Modulators to offer the highest system reliability and service uptime through robust design and industry leading redundancy solutions.

A Vision for the Future

For Indian operators such as HBE, efficiency and reliability over satellite is key. With growing trends in sports broadcasting and the upgrade from SD to HD in transition, satellite operators are looking to rely on satellite equipment manufacturers to provide a fail-proof solution. Here, through HBE, Newtec provides the best in modulation equipment, with built-in innovations such as Clean Channel Technology® and Equalink® 3 resulting in bandwidth efficiency gains that make all the difference when working in a country where bandwidth is often hard to come by.

"HBE is pleased to partner with Newtec, which has always provided un-paralleled support to our satellite operations, offering the highest reliability and efficiency gains."

**Kuldeep Kaul, CEO
at Horizon Broadcast
Electronics Pvt Ltd**

LIQUID TELECOM WINS VSAT OPERATOR OF THE YEAR

By Scott Mumford,
Group Head of
Satellite Services at
Liquid Telecom



Newtec Newsletter
March 2015

As wireless devices continue to grow in popularity, 800 million people in Africa now own a mobile device – yet only around 300 million are online. To bridge that gap and achieve widespread coverage, satellite is key.



When it comes to Internet connectivity, Africa presents a unique challenge. As well as being vast, the continent is also largely underdeveloped, with permanent infrastructure only just beginning to emerge in some areas. Other challenges include scarce power sources, regulatory issues for shipping and licensing, and a rocky political landscape, making providing seamless Internet access expensive and difficult.

The Right to Be Connected

This is where satellite comes in. At Liquid Telecom, we believe everyone has the right to be connected. Over the last decade, this philosophy has helped us change the face of communications in Africa, with satellite playing a crucial part.

Although fiber is the fastest way to provide Internet access, the installation of cables is not always possible. Consequently, satellite complements our fiber networks, especially in rural areas. This past year has been particularly busy for our satellite business. Projects have ranged from remote connectivity for financial institutions to Internet access for remote communities. VSAT continues to be a big part of Liquid Telecom's business and one of our fastest growing departments.

Liquid Telecom and Newtec

Most notably in 2014, we have completed the installation of a Newtec Sat3Play® broadband hub and VSAT terminals in Johannesburg, providing connectivity and enterprise services in Sub-Saharan Africa.

Since installation, the hub has gone from strength to strength. Almost a thousand terminals have been installed, with more on the way. Our customers range from home users and enterprises to state-funded and government projects. The service was also recognized with a 2014 AfricaCom award for Most Innovative VSAT Product.

The Next Steps

We are also constantly improving network uptime and reliability of our fiber network – the largest independent international fiber network across Africa.

With our fiber network growing at a rate of 100 km per week and plans to grow our satellite operation once the Newtec hub is filled, we'll be looking at the next step in satellite – Newtec Dialog®, a multiservice platform with Mx-DMA™ technology. This will particularly help our enterprise customers, as it will build on our approach of offering solutions to fit individual requirements and enable us to go after all market verticals with increased efficiency.

In traditional systems, operators have to choose either SCPC or MF-TDMA but Newtec Dialog provides three different technologies that can be dynamically selected to offer optimal performance for a given service and user profile. In addition to SCPC links and MF-TDMA, Newtec's patented Mx-DMA technology combines the best features of both.

A Bright Digital Future for Africa

Ultimately, we want to build Africa's digital future and make communicating easier for everyone. The global VSAT forum and ITU recognize the regulatory challenges we face in doing this and we work together to convince Governments that facilitating connectivity is important.

Demand is also vital and this is likely to come from two areas: Schools in rural areas with e-learning and our business customers which will require increased connectivity as their businesses grow.

With the right technology and solutions, I am confident that Africa's bright digital future can be realised.



Scott Mumford of Liquid Telecom

NEW PRODUCTS AND TECHNOLOGIES

DVB-S2X IS ONLY A SOFTWARE UPGRADE AWAY

Newtec's professional series of broadcast satellite modulators, demodulators, modems, OEM boards and hubs are software upgradeable to the new DVB-S2X transmission standard. DVB-S2X reaches efficiency gains over DVB-S2 of up to 51% for high speed professional applications and up to 20% for Direct-to-Home (DTH) applications. This is much needed as the growing consumption of video and data, and the ever growing consumer demand for higher quality video such as HD and (4K) UHDTV, continue to squeeze bandwidth. Satellite operators and broadcasters using Newtec's equipment cut costs or deliver more and higher quality content within the same capacity.

EQUALINK® 3: ADD 15% MORE CHANNELS IN A DTH CARRIER

Equalink® 3 is Newtec's linear and non-linear pre-distortion technology. The newest version, available in the Newtec's broadcast modulator/modem MDM6100 R2.6, provides breakthrough performance gains on DTH satellite links. Operators can increase the link margin of all set-top boxes in the field, by simply enabling Equalink 3 at the modulator side. Live satellite tests have demonstrated 0.4 dB gain for QPSK 5/6 (10% throughput gain) and more than 0.6 dB gain for 8PSK 5/6 (15% throughput gain). This extra link margin can be used to improve the coverage/availability or it can be used to increase the symbol rate in combination with a lower roll-off factor. In this way, it inserts up to 15% more TV channels in a DTH carrier.

NEW DENSE DVB-S2X NEWTEC MCX7000 MULTI-CARRIER SATELLITE GATEWAY

The Newtec MCX7000 is a new dense DVB-S2X multi-carrier satellite gateway for efficient distribution to towers and headends, resulting in OPEX and CAPEX savings. Compatible with the Newtec Dialog® multiservice broadcast platform, it brings increased bandwidth efficiency of up to 51% and features multistream, as well as Newtec's Clean Channel Technology® and its linear and non-linear pre-distortion technology Equalink® 3.



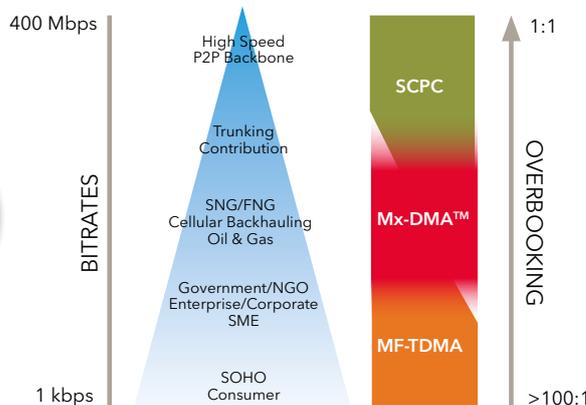
BEST IN CLASS!

NEW NEWTEC M6100/MDM6100: BROADCAST SATELLITE MODULATOR/MODEM R2.6

- DVB-S, DVB-S2, DVB-S2X and Newtec S2 Extensions
- From QPSK up to 256APSK modulations
- Baudrate range up to 72 MBaud
- 40 Mbps MPE en-/de-capsulation
- 425 Mbps (in multi-stream mode) modulator
- 400 Mbps high throughput modem (2 x 200 Mbps)
- IF and L-band interfaces
- Best in class spectral purity (MER)
- NIT and DVB (RF) Carrier ID
- BISS encryption
- Highest efficiency over satellite with Clean Channel Technology® and Equalink 3
- Non-linear compensation in demodulator for single and multiple carriers per transponder via NLPC 2.0.
- Covers broad range of DTH, broadcast contribution and distribution applications
- Dual Power Supply option

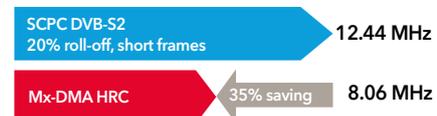
NEWTEC DIALOG®: FLEXIBILITY MEETS EFFICIENCY - R1.2

AVAILABLE NOW!



- Scalable multiservice platform: 5 to +100.000 terminals
- Highly efficient forward link with DVB-S2, ACM and CCT
- Return link flexibility: SCPC, Mx-DMA™ or MF-TDMA
- Advanced NMS capabilities including VNO support
- **NEW:** Full VPN and private network support
- **NEW:** OpenAmip support
- **NEW:** IPv6 support
- **NEW:** nomadic multi-beam support

SCPC versus Fixed Rate Newtec Mx-DMA



SCPC versus Newtec Mx-DMA with Statistical Multiplexing



TECHNOLOGIES THAT MAKE THE DIFFERENCE: Mx-DMA™ AND HRC™

Newtec Dialog®, the multiservice platform from Newtec for applications like broadcast, VSAT connectivity and cellular backhaul not only comes with MF-TDMA and SCPC technology, but also with a third and new patented return link technology called Mx-DMA (Cross-Dimensional Multiple Access) and a new low latency waveform called HighResCoding (HRC™). The Mx-DMA innovation offers both the flexibility of MF-TDMA and the efficiency of SCPC. For dedicated capacity services Mx-DMA typically brings two attractive options when compared to SCPC: Save more than 35% bandwidth or serve 54% more customers with the same bandwidth.

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