

Cable AML News

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HITRON UPGRADES TO 100 CHANNEL DIGITAL SYSTEM

HITRON Ltd. of Port Moresby, the capital of Papua New Guinea, upgraded its 31-channel analog system to a digital system with 100 channel capability.

The switch from analog to digital followed installation of an integrated digital headend and broadband, dual-redundant MMDS transmitters.

The independent country of Papua New Guinea lies on the mineral rich island of New Guinea. The signal from the headend at Port Moresby feeds part of the city. On-frequency repeaters carry the signal to several remote areas.

Careful planning and execution of the switchover

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The entire staff of HITRON ready for the transition to Digital MMDS

TURKS AND CAICOS CHOOSE CABLE AML DIGITAL VIDEO BACKBONE

Residents on the islands of Grand Turk, Salt Cay, Providenciales, North Caicos, Middle Caicos, South Caicos and East Caicos experienced an immediate and dramatic improvement in the quality of communications from government facilities after installation of a digital microwave backbone designed and manufactured by Cable AML.



Herbie Ingham following installation of an outdoor Repeater.

The system architecture consists of a number of links in series as opposed to a “star” or Point-To-Multi Point approach in which all delivery originates from a single, common point.

The three principal links in series are between 40km

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WIRELESS HFC EXTENSION BEATS FIBER IN HOMER ALASKA

Connecting the headend to a building in the city center posed a challenge for CGI in Homer, Alaska. Cable AML came to the rescue with a Wireless HFC Extension.

The 4 Kilometer bidirectional link carries the full Downstream and Upstream cable channel load on a single pair of antennas with radomes. The active electronics are all rack-mounted indoors.

The Head End was built on a ridge near the city. The



Rick Bates following installation of the Cable AML broadband transmitter

very low look angle to geostationary satellites serving CONUS, requires satellite receive antennas in Alaska to be constructed on rises or on man-made structures. The link interconnects the Headend with the central data site in the city center.



Microwave path from the Headend to the Central Office

Right-of-way issues and the high cost of constructing a fiber link made a microwave link the only feasible solution.

CABLE AML BRINGS DIGITAL TV AND WIRELESS INTERNET TO MOZAMBIQUE



Humberto Barros following installation of the 500 Watt Base Station Transceiver

Thousands of households in Maputo, the capital city of Mozambique, on the African continent, can now enjoy Digital TV and Internet access thanks to a new Digital MMDS System integrated with a Wireless Internet System.

The integrated system consists of a Base Station and subscriber equipment. A

Cable AML Indoor, 200 Watt Transceiver at the base station transmits digital data carriers from an existing Cable TV headend nearby.

The transmitter output is routed to a 200 foot transmission line that feeds an omnidirectional antenna mounted at a height of 180



Base Station antenna in Maputo, the capital city of Mozambique.

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MMDS BROADBAND REPEATER MEETS MULTIVISION'S NEEDS IN BOLIVIA

A new, 200-Watt broadband MMDS Repeater was recently installed and commissioned by Multivision to provide MMDS coverage in the area of Quillacollo, 14 Kms from Cochabamba in Bolivia.

A broadband, 100 Watt transmitter delivers the sig-



Headend Technicians Jesús Vedia and Ángel Sánchez with Engineer Juan Carlos Baya following installation of the Repeater



View of Quillacollo from the repeater site.

nal from the Headend to the new repeater.

The system currently operates with 62 analog channels but will soon upgrade entirely to digital. The new repeaters will not require modifications when the switch-over to digital takes place in the near future. All Cable AML's transmitters and repeaters support analog signals, digital signals or both simultaneously.

Multivision uses Cable AML repeaters at many of its repeater sites. Another 200 Watt repeater has operated continuously without incident for the last 5 years.

Cont. from front cover...

and 50km each, with a total route distance in excess of 130km, mostly over water.

The combination of 5 links in series and spectrum constraints made it necessary to use digital MPEG2 encoding of the video channels and QAM modulation of



Microwave Backbone System Diagram

the ASI carriers.

Fourteen receiving points downconvert the backbone signal to the conventional 54 to 870 MHz spectrum and feed rack-mounted Demodulators. The Demodulators feed signal to existing CATV systems that had never previously been interconnected.



Repeater Tower in Middle Caicos Island

A Cable AML MMDS transmitter in Salt Cay delivers analog signals from Grand Turk directly to subscribers.

The system will expand to three videos with their stereo audios in the next phase. The backbone can accommodate more than 200 video programs.

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Hitron Headend at Port Moresby

minimized disruption to any of the more than 10,000 system subscribers. The digital performance of the system, including the repeaters, was tested by transmitting a single 6 MHz digital carrier with the analog signals.

The headend and the CAS were installed and commissioned prior to selecting a switchover date. Several thousand digital Set Top Boxes were distributed to customers.

System Manager Anne AMES set up four outdoor PC stations, an outdoor container store and an overhead tarp. Twelve assistants answered queries and assisted customers with channel package selection. Demand for the improved service caused customers to wait in line as long as 2 hours but the average wait was only 30 minutes.

The digital take-up rate has been huge. According to HITRON's Chief Operating Officer, Lindsay Jorgensen, "Cable AML's system was crucial to the successful deployment of a state-of-the-art digital system that will enable our company to be at the forefront of high quality video service providers in Papua New Guinea for years to come."

Mozambique cont. from page 2...

feet at the top of a transmission tower.

The MMDS system transmits five digital PAL B/G DVB carriers, or a total of 40 TV programs modulated with 64-QAM. The DOCSIS wireless downstream carrier is also modulated at 64 QAM.

Customers use either Downconverters or Transceivers. Downconverters accommodate TV-only reception while Transceivers deliver TV plus Internet service simultaneously.

According to Humberto Barros, "The commissioning of this system is giving us the capability of substantially expanding the service footprint to areas previously not accessible to us."

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