

# Cable AML News

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## HIGH POWER DIGITAL MMDS REPEATER SYSTEM

A dual-redundant, High-Power MMDS Repeater System has been delivered and installed to extend the coverage of a digital MMDS system in Reno, Nevada.

The system transports 12 digital 64QAM-modulated carriers via a

dual-redundant 13 GHz AML link from McClellan to the repeater site at Peavine, a distance of 25.7 miles (41.1 Kms). The link is implemented with a dual-redundant ITX-011D broadband transmitter. The signal from the headend to the McClellan site is also relayed by a Cable AML system installed several years ago.

At the Peavine AML receive site, each of the two AML receivers feeds the model IRX02-2000, a Broadband High Power MMDS Repeater which re-broadcasts the digital MMDS signal with excellent quality over a distance of more than 15 miles (24 Kms).

The IRX02-2000 delivers the highest output power of any broadband MMDS repeater or transmitter in the world. ✦

## THIRD GENERATION LMDS SYSTEM DELIVERED

The third generation of 28 GHz Base Station Transceivers (BST) and Customer Premises Transceivers (CPT) have been completed and delivered to Terminales de Telecomunicaciones Terrestres (TTT) of Madrid, the current world leader in the deployment of multi-media LMDS systems. This RF equipment is the latest in a series developed for integration into a BWA-4000 Broadband Wireless Access System for deployment in Portugal.

Designed to take full advantage

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*Mr. Kenneth Jonsson (left) with the integrated AML+MMDS equipment at Cable AML's California plant prior to delivery.*



*Third generation LMDS (28 GHz) Base Station Equipment*

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# MMDS SYSTEMS DEPLOYED IN ECUADOR

## MMDS FOR RIOBAMBA

Ingeniero Franklin Viteri, General Manager of AEROTV, said the turn on of a 100-Watt transmitter for an MMDS system with 15 analog channels was “a good experience”.

The system was installed in the City of Riobamba, capital of the Chimborazo province in Ecuador, 110 miles (180 Kms) from the country's capital, Quito. Riobamba is home to 90,000 people and it is estimated there are 10,000 homes with TV.

“The installation of the system was easy”, said Mr.

Viteri, who led the team of technical people from AEROTV in charge of installing and commissioning the MMDS system. “From the start the transmitter has worked very well”, said Mr. Viteri.

AEROTV started to transmit MMDS signals in December of 2002 and in the first six months of 2003 the company is well on its way to achieve the goal of ending the year with 900 subscribers. In two years the plan is to reach 35 percent of the market, or approximately 3,500 subscribers. ✦



*Employees of AeroTV next to the Riobamba (Ecuador) transmitter site.*

## MMDS FOR SANTO DOMINGO

Mr. Holger Velastegui, owner of Cable ZAR in Santo Domingo (Ecuador) has successfully installed a combined cable and MMDS system (with a Cable AML transmitter) to extend the reach of the TV signals outside the downtown commercial sector.

Mr. Velastegui said that the Cable AML broadband transmitters allow his company to offer a high quality multichannel TV service at low subscription rates, which is appropriate for the cities in the

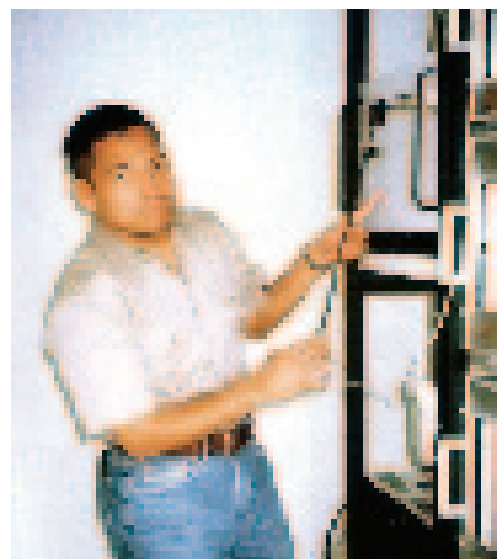
country because subscribers there do not have the same income level as the large cities.

Technical personnel from Cable ZAR installed the equipment without any glitches and in a short time,

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*Ingeniero Franklin Viteri, General Manager of AEROTV, and key company employees.*



*System Owner Mr. Holger Velastegui inspects the MMDS transmitter in Santo Domingo (Ecuador)*

Santo Domingo from page 2

due in part to the training received. Mr. Velastegui said that the commissioning of the transmission equipment was “quick and efficient” because the equipment is designed to be simple to install and to use.

The transmitter installed in Santo Domingo reaches to about 10 Kms all around the antenna, but due to the success of the system, demand for the service has increased at up to 25 Kms, so Cable ZAR plans to increase the transmitter capacity soon to increase the potential subscriber base. ✦

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of a 350 MHz bandwidth allocation, this system provides the customer with a powerful wireless platform capable of operating multiple simultaneous applications of the operators’ choosing. These applications include high-speed Internet access, digital OFDM TV distribution, VoIP, video conferencing, distance learning, virtual private networking, and dedicated high-capacity connections.

This multi-media capability is what sets the Cable AML BWA-4000 system apart from all others. The BWA-4000 infrastructure supports applications that

## AML CABLE MODEM RETURN SYSTEM DELIVERED

Comcast Corporation, the world’s largest Cable MSO (Multiple Systems Operator) Company, has taken delivery of an AML microwave return system to convert an existing one-way AML link to two-way capability for cable modem service.

The existing AML link transports 80 channels from the headend to two locations at 11 and 22 miles (17.6 and 35.2 Kms) respectively. Cable AML’s expansion kit allows for a return path to be implemented within the extended CARS band without the need to install

new antennas.

The expansion kit consists of two Model TRX18 transceivers at the remote locations and one shared

receiver at the headend, which delivers the 5-42 MHz upstream cable modem signal to the CMTS. ✦

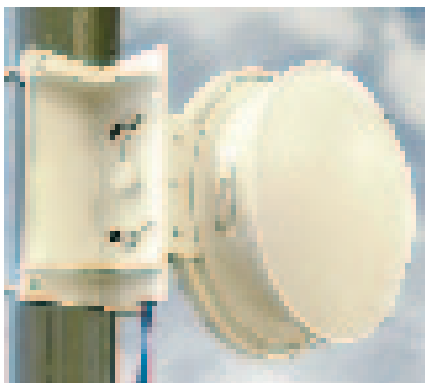


*AML Microwave Return Link undergoing system tests at Cable AML’s factory.*

appeal to different subscriber groups enabling the operator to broaden his product offering and his customer base. This is appealing because the larger customer base reduces the operator’s dependence on a revenue stream generated by a single application.

The BST (model HPB28-TR) is a two-piece system with the outdoor transceiver mounted at the antenna, and the Interface Processing Unit (IPU) installed indoors along with the Access

System equipment. The outdoor transceiver unit incorporates a number of cost-reducing and performance-enhancing improvements over the previous generation.



*Third Generation 28 GHz Subscriber Premises Equipment.*

The IPU was redesigned to accommodate more upstream channels. It is now a 2-rack unit high chassis with slots for six four-channel down-converter modules. Each IPU can now handle 24 upstream channels and multiple IPU units can be configured into the system.

The CPT (model CPT28-TR) includes numerous design upgrades focusing primarily on cost reduction for high-volume production. ✦

## What Our Customers Are Saying...

Cablevision del Comahue , the leading cable and MMDS operator in the province of Rio Negro, Argentina, was one of the very first customers of Cable AML.

The ITX-015 Broadband Transmitter shown in the photograph has been continuously in operation since 1993. The transmitter is used to connect the headend at General Roca with the city of Cervantes, about 20 Kms away, carrying 64 channels of analog video.



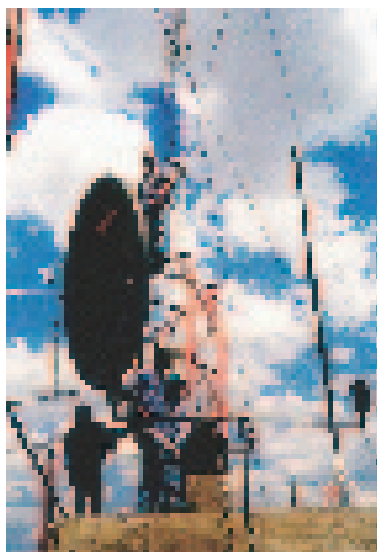
*AML ITX-015 transmitter in continuous operation since 1993.*

Mario Carranza (General Manager) and Horacio Indaco (Chief Engineer) were with Cablevision del Comahue when the transmitter was installed. They tell us that “the quality and reliability of Cable AML’s transmitter exceeds that of any other piece of equipment in our system...” ✦

In San Miguel de Tucumán, a province in Argentina’s North West, Cable AML’s ITX-011 Broadband AML Transmitter has been working since installed in 1995 to provide cable service to three nearby cities.

Ingeniero Eduardo Ise, who installed the three links, says that the system “meets the key demands of any Engineer: Quality and Reliability”.

The Technical Support from Cable AML is also an important factor to consider, said Eduardo. “Cable AML has always responded to our questions in the most diligent manner”. ✦



*Engineers Juan Eduardo Ise and Rene Rivadeneira during installation of the Cable AML links in 1995.*

### For More Information On Any Cable AML Product or Application, Call or e-Mail:

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