Cable AML News

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DIGITAL MMDS SYSTEM DEPLOYED IN PAKISTAN

Cable AML announced in June of 2005 the deployment of a digital MMDS system with 54 channels of full digital video in Okara Province in the North East of Pakistan. The system was commissioned by Ranja Enterprises of Lahore and has been in commercial operation ever since. It reaches subscribers in a 35 Kms radius from the main headend, an area with more than 40,000 potential subscribers.

The deployment consists of a fully integrated digital headend including CAS (Conditional Access System) to prevent unauthorized reselling of programming content and to provide multiple program tiers. The system includes a broadband base station transmitter and associated transmission equipment.

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Cable AML's integrated digital headend and broadband MMDS transmitter.

TWO-WAY DIGITAL BACKBONE INSTALLED IN LITHUANIA

TTT personnel install one of the STL antennas.

A two-way digital multi-carrier wireless backbone was successfully installed to feed two LMDS base stations in the Neringa Peninsula of Lithuania.

The backbone transports several OFDM-modulated TV carriers as well as DOCSIS downstream data carriers in one direction and DOCSIS upstream data on the return path. It links the central headend to two LMDS base stations at 5 and 12 kilometers respectively, where it feeds two 28 GHz TV and data transceivers fabricated and installed by TTT. The 28 GHz system provides multichannel digital TV and DOCSIS Internet Access service to subscribers in the area.

The backbone was implemented with transceivers in the 17 GHz band, manufactured under Cable AML license by Spanish company TTT. Each link consists of outdoor local and remote transceivers that interface directly with the 28 GHz base station transceivers. The multi-carrier wireless backbones pioneered by Cable AML eliminate

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CABLE AML TRANSMITTER POWERS DIGITAL MMDS SYSTEM IN BRAZIL

ACOM Comunicacoes, the leading Digital MMDS system operator in Brazil, has just installed a new Cable AML 1000 Watt broadband transmitter in Manaus, to improve its digital MMDS service in this city.

ACOM has other 3 digital systems in operation in Brazil. The new system in Manaus is designed to provide service in an area of over 20 Km radius with more than 200,000 TV households.

Cable AML is also providing a number of two-way repeaters, which will enable ACOM to offer service in shadowed areas where there was no previous service available.

According to Mario de Paula, CEO of ACOM, "the Cable AML transmitter has made it possible to provide optimum coverage with a high quality product. We are very pleased with Cable AML's technology and service and we plan to continue to use their products for the continued expansion of digital TV service we are planning in Brazil". ✦

Aerial view of ACOM's headend and transmit tower in Manaus, Brazil .

CABLE SYSTEM OPERATES WIRELESS DOCSIS EXTENSION

IRUTEL S.A., a cable operator in Spain, has just installed a wireless DOCSIS extension link operating in the license free 5.8 GHz band. The low-cost link makes it possible to provide DOCSIS modem service at a cable system 15 Kms away from the main headend without the need to duplicate costly headend equipment.

Headend 1.2 meter Antenna.

The 5.8 GHz DOCSIS Extension Link consists of a pair of wireless transceivers designed to carry two-way DOCSIS data signals from the Headend to a remote site. Each transceiver terminal consists of an outdoor pole-mounted transceiver and antenna. The local transceiver at the headend is connected to the antenna by a short cable, whereas the remote transceiver is integrated with the antenna.

The system is now operating in Sangüesa (Navarra, Spain), carrying two analog channels in addition to the EuroDocsis 1.1 carriers, linking the headend in Sangüesa with an Industrial Park 2 Kms away. According to IRUTEL's Engineering Manager José María Villamañán, "the link is working perfectly delivering very robust signals". ✦

Remote antenna mounted on roof of Industrial Park building.

WIRELESS HFC BEST SOLUTION FOR COMCAST CABLE SYSTEM

Comcast, the leading cable operator in the US, has selected a two-way CABLE AML link to provide full HFC service in the small community of Rio Vista, California. The link provides transport of 54 to 870 MHz downstream signals and 5 to 42 MHz upstream signals.

There were three available alternatives to provide full two-way service to Rio Vista: building a new 110 channel headend, Interconnecting to the existing Headend with 30 miles of fiber or interconnecting to the existing Headend with a 21 mile Cable AML link.

Comcast chose the Cable AML wireless solution based on cost and performance considerations: "the performance of the link is equal to fiber and the cost is several times less", said Butch Robertson of COMCAST.

Comcast personnel align one of the antennas in the Rio Vista system.

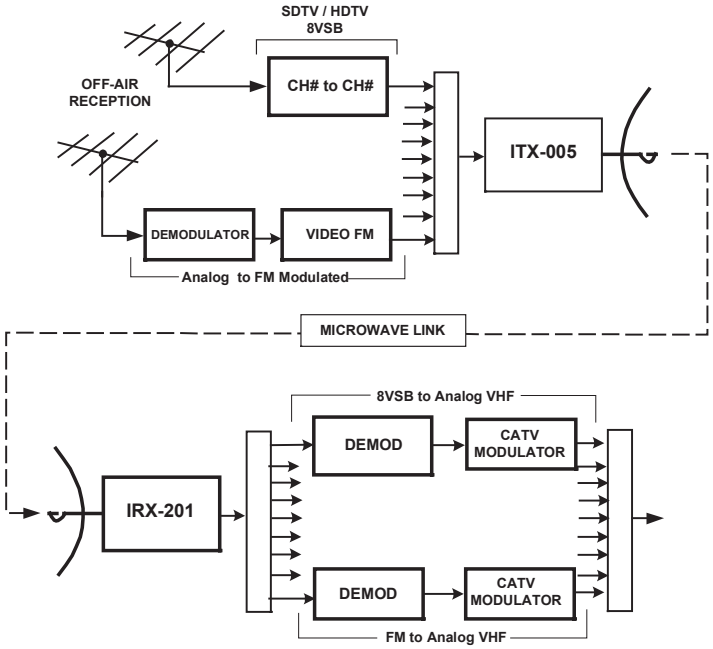
AML LINK TRANSPORTS FM AND DIGITAL 8VSB VIDEO

US Cable operator ADELPHIA has upgraded an existing Cable AML link to provide for transport of high-quality 8VSB-modulated off-air TV signals from a remote location to the central headend.

The link was originally installed several years ago to transport a number of distant off-air channels into Susanville (California). The Cable AML equipment replaced old channelized FM video radios that had developed serious reliability issues.

When the digital 8VSB off-air signals became available, Cable AML analyzed the possibility of transporting the digital carriers through the existing AML radios and concluded that it could be done by just upgrading the IF output of the receiver.

The digital 8VSB carriers were then added to the existing link together with the FM video channels. According to Mike Miller of Adelphia, "with the combined analog and digital signals, the AML link has been performing superbly".



Block diagram of FM and 8VSB Transport System.

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the need for demodulators and re-modulators at the remote base stations.

According to Luis Villa, TTT's President, "the backbone links provided a transparent, high-performance connection to the LMDS base stations, allowing for control of TV and Internet subscribers from a central location with minimum system cost and complexity". ✦

Main tower with STL remote antennas and 28 GHz Transceivers.

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The system is designed to be easily expanded to provide wireless Internet service as soon as the regulatory authorities provide the permits.

Omar Nazir, CEO of Ranja Enterprises selected Cable AML's system because of the superior technology and Cable AML's ability to provide the system as a turnkey solution, with full integration of the headend, transmission and subscriber hardware and software.

Following the smooth system installation and excellent operating results, Omar Nazir said "we are so pleased with the system that we have started planning to provide the service to several cities that are as far as 60 Kilometers from the base station". ✦

Key Ranja personnel during commissioning of the MMDS System. From left to right, Mr. Jehangir Khan, Mr. Naveed Iqbal, Mr.Naveed Akhtarand Mr. Muhammad Javed.

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