

# 4G WiMAX high-speed Connection in Madrid

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## The Company

Headquartered in Madrid, **ACE Business Group** is a multi-disciplinary company specialized in civil engineering, video surveillance systems and healthcare-related communications. Founded in 1975, it has since developed all kinds of infrastructure and equipment projects, with a particular focus on the electricity, energy, ICT and social-health fields, which proves its commitment to improving the general welfare of citizens.

## The Problem

ACE Business Group headquarters in Pozuelo de Alarcón (Madrid) previously lacked a high-speed link differentiating Data, Voice and Video services and providing QoS.

These various needs demanded high quality services and the utmost confidence: high-speed internet connection, VoIP services, video streaming and backup services for core servers.

ADSL services were insufficient to cover these needs. Besides, traditional operators could not offer economically competitive dedicated links, which resulted in monthly increases of invoice prices of up to 80 %. This situation turns out to be inefficient for any corporation.

The best solution lies therefore in the use of wireless technologies guaranteeing high radio link net throughput and quality services. Such technology is the one designed and manufactured by Alcentia Systems: **WiMAX 802.16-2009**.

**Client:** ACE Business Group

**Area:** Spain

**Solution:**

ALB-158-LNK PtP Radio Link with integrated antennas

**Implementation:**

WiMAX wireless Point-to-Point Radio Link for high-capacity backhaul supporting QoS

## The needs

- Reliable robust connection guaranteeing QoS
- Telepresence and videoconference
- VoIP applications
- Mail servers, backup, citrix...

## The solution

Net throughput of 35Mbps and extensive control over QoS on multiple differentiated services leading to a unique user-friendly experience



## The Solution

ACE Business Group decided to use WiMAX 802.16 2009-based equipment for license-exempt 5GHz bands, i. e. Albentia Systems' radio link operating in the 5.8 GHz band, **ALB-158-LNK**, which comprises 23 dBi integrated antennas for a better installation. This radio link provides up to 35 net Mbps, with multiple differentiated service flows, QoS and Uplink/Downlink asymmetric allocation ranging from 5:1 to 1:5.

Although the area to be covered in this case is relatively short (2.5 km), the equipment allows radio links covering distances of over 100 km, by means of high-performing directional antennas.

## The Implementation Process

Being easy to install, trustworthy and economically feasible are the main challenges faced by any kind of technology.

The Line of Sight (LOS) between both points was checked, the antennas pointed on both sides and all services which could not be previously guaranteed by ADSL were now configured.

Short-listed as manufacturer and R&D partner, Albentia Systems stood out as the best possible solution to provide these services thanks to its state-of-the-art WiMAX solutions for networks in license-exempt bands.

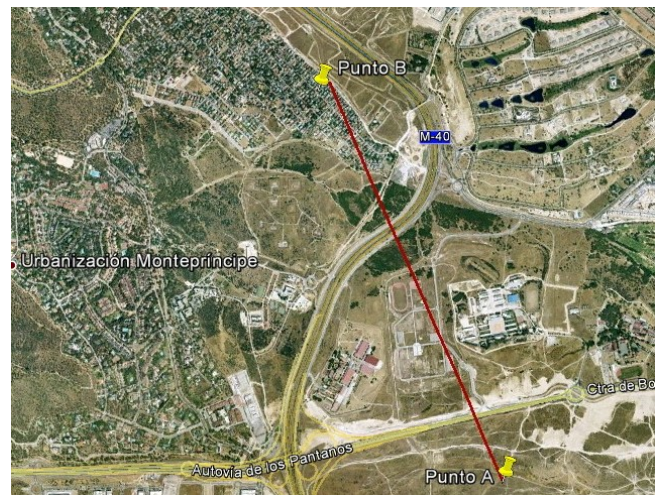
## The Result

**Quality of Service:** all services required by ACE Business Group were allocated in various flows, including differentiated QoS levels. This Quality of Service and streaming reliability is proven by the absence of cuts on VoIP phone lines or image pixels.

**Cost savings:** Equipment costs paid off in less than 1 year. ACE Business Group has also saved up to 50 % on communication expenses compared to the wire option used so far.



Data Center- Fibre-optic connection



Bird's eye view of the link

**Scalability:** the most interesting thing is that this scalable solution makes it possible to implement future services and even to double capacities, should it be necessary.

***"Beyond technology and price, we put our full trust in ALBENTIA SYSTEMS as our equipment provider for our corporate communication services thanks to their reliability and technical support."***

**ICT Manager**

## Albentia Systems

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Albentia Systems is a leading provider of value-added Broadband Wireless Systems and Solutions. Headquartered in Madrid (Spain), Albentia Systems leverages its intellectual property and strong systems expertise to develop innovative WiMAX-based infrastructure and subscriber equipment for broadband access, cellular backhaul, VoIP and professional video applications.