

CASE STUDY

Airport

Corning Cable Systems



Madrid Barajas International Airport, Spain

SITUATION

The Madrid Barajas International Airport is the main gateway into Spain. With more than 38 million passengers, it handles the highest volume of airport traffic in Spain and is among the first five largest European airport complexes. Passenger growth of 10 percent per year at Barajas Airport has led the Spanish airport authority Aeropuertos Españoles y Navegación Aérea (AENA) to approve a €2.91 billion expansion in that includes the construction of a new terminal, runways and satellite building, a new baggage handling system and an "automatic people mover." The expansion also features numerous other projects including new parking facilities and a highway extension. The expansion will be completed in 2006, and which time the Barajas Airport will be equipped to handle more than 70 million passengers per year.



TECHNICAL REQUIREMENTS

When AENA began to plan this extensive project, one of the most important considerations was outfitting the new terminal and new runways with the most modern and secure network infrastructure. The communications contractors for the terminal, TECOSA, and the contractors for the runways, SAMPOL S.A. and COBRA S.A., needed to choose active and passive network solutions suppliers which could provide secure, reliable and upgradeable products in a short time period. For the passive media network solutions, these contractors chose LANscape® Fiber Optic and Copper Solutions from Corning Cable Systems.

NETWORK PLANNING & DESIGN

The design of the network infrastructure in the new Barajas terminal was planned to incorporate the most modern elements, inter-connecting all of the security and communication equipment, including cameras, x-ray machines and smoke detectors, in order to create a safer environment and allow data to be speedily transferred to save passenger time. In order to accomplish this task, the contractors installed a complete LANscape Solution including multimode cables and single-mode multipurpose cables, SC and ST® compatible connectors and patch panels. The multipurpose indoor cables (MIC®) are constructed with Corning® InfiniCor® Laser-Optimized 50/125 µm Optical Fiber, which are guaranteed to support 10 Gigabit Ethernet in accordance with the IEEE 802.3ae standard 10GBASE-S physical media dependent. Optical fiber is also completely dielectric, which is an important specification to airport authorities in order to avoid radar disturbances. The added advantage to the contractors and AENA in choosing a LANscape Solution is the modularity of the hardware. Moves, adds and changes can be made easily with minimal investment in time and money.

The LANscape Solutions hardware products are compatible with FutureCom™ F copper products which were installed as a portion of the work station cabling. Runway network design is just as sensitive as the terminal design; the communications equipments that links the beacons and the runways lights to the central terminal must be extremely dependable and must adhere to stringent criteria. For the design of the new runways, the contractors again chose a modular system, LANscape Solutions multimode and single-mode cable, SC connectors and patch panels, to guarantee the highest future performance.



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