



Whether it's 112 or 911, it's about controlling the situation. Both inside and outside the room.

The Central Emergency 112 de Cantabria in Northern Spain chooses Matrox Extio remote graphics units to distance the computers—as well as noise and heat—from their busy control room environment.



Images courtesy of Central Emergency 112 de Cantabria



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Juan Hernández Álvarez,
Regional Manager
APD, Algorithms, Designs and
Processes

About the Central Emergency 112

The new Central Emergency 112 de Cantabria, inaugurated on March 3rd, 2009, is part of a larger effort undertaken by the government to improve emergency services for the citizens of this autonomous region in Northern Spain. Just like their counterparts at 911 centers throughout North America, the Central (Cantabria) is a 24/7/365 operation that handles all types of emergency calls and coordinates with both public and private agencies that need to respond, including: Fire, Health, Civil Defence, Police (regional and national), Public Works, and many more.

In addition to incorporating new technology, updates to the new Central include an increase in staff from 13 to 30 operators, and a Crisis Management area for local government that provides the same real-time access to information as working from the control room, helping to facilitate and accelerate decision making.

The Challenge

In control room environments, noise and heat are real issues that need to be managed to ensure a comfortable and productive work area for the operators. Most emergency centers in Spain are about ten years old. Many have already been updated two or three times in the course of their operation, but the government of Cantabria was looking for new ways to respond to operational requirements—not just technological improvements.

In the case Algorithms, Designs Processes (APD) was looking for new technology that would eliminate the noise in the control room, thereby improving the day-to-day environment of the 112 operators.

In other emergency centers, the solution to this noise problem has been to custom design the architecture of new buildings to meet the needs of the control room operators, or to use traditional extension technologies to distance PC equipment from the control room environment. For example, at the famous Emergency 112 Center in Madrid, a 2.5m-high technical floor was incorporated just beneath the emergency control room to house all the workstations. Other centers in Spain have installed their computer equipment in rooms adjacent to their control rooms and used technologies, such as standard analog video cables to extend the graphics signals from the PCs to the operators' monitors. This method, however, would often require the installation of intermediary signal amplifiers, for instance, which can introduce negative impacts to video quality and delays inherent to carrying a graphics signal across a considerable length of standard cables.



After looking at all the options to removing the noisy PCs from their control room, the Central integrators decided to go with an extension solution that provided the best of both worlds: no added expense related to a building-specific architecture, and no degradation of image quality due to signal attenuation.

“The Matrox Extio fiber-optic extension technology was by far the best choice for Central 112 de Cantabria,” states Juan Hernández Álvarez, Regional Manager for Andalucía and APD, Algorithms, Designs and Processes. “It was exactly the solution we were looking for—capable of distancing the PC equipment from the operator console, running completely silently, and not generating heat.”

The Solution

While looking for solutions to control noise problems, APD, contacted Mitrol, a Matrox distributor company and member of Grupo Empresarial SITRE, who recommended Matrox Extio. A fanless device, the Matrox Extio Remote Graphics Unit permits a quiet and secure environment by separating the host computer from the monitors and other user peripherals—including keyboard, mouse and audio devices—by up to 250m (820 ft) of fiber-optic cable. Each Extio is capable of driving up to two or four monitors at resolutions of up to 1920x1200 per display.

In total, APD installed 14 workstations at Central Emergency 112 de Cantabria, each using the Extio for remote graphics extension. Twelve of the systems were designated for the control room, with additional systems for management and monitoring in the Chief’s office. The setup is comprised of both Extio F1220 and F1400 units, each with accompanying PCI Express fiber-optic cards. They have also installed special Matrox cables into the PCs in order to connect the fiber-optic interface card to the motherboard to allow the power on/off and reset buttons to be controlled remotely from the PCs by the Extio units. This function was essential for the Central.

APD chose ALDA Premiere X38 model PCs in an industrial 19" rack format—a system with redundant ventilation, power supply, and two redundant disks (RAID 1). These PCs also have back-up graphics cards installed that are connected to a KVM switch located in the same rack cabinet as the computers. These redundant cards were added so that equipment would boot up and operate for local administration in case of failure of the Extio units themselves, or in the communication between a fiber-optic card and an Extio unit.

The Result

The PC workstations—running 24/7—are in the server room (maintained at 19°C) and connected via multi-mode fiber-optic cabling to Extio remote graphics units powering two monitors on each operator console. The control room is now free of noise generated by computers, and there is no other hardware in the room to generate additional heat. The control room is uncluttered and visually appealing, since all equipment and related cabling does not occupy the space.

“The Extio installation was a breeze and the operators are happy to no longer have the computers under their desks generating noise and heat,” stated Juan Hernández Álvarez. “When people visit the Central 112, we are often asked how the monitors, keyboards, and mice are connected, because there is little equipment in the room.”

Additional Media

- www.soscantabria112.com
- www.eldiariomontanes.es/20090305/cantabria/nuevo-situa-cabeza-espana-20090305.html
- <http://www.eldiariomontanes.es/multimedia/fotos/cantabria/inauguracion-nueva-sede-30793.html> (slideshow)

For More Information

The Matrox Extio Series is ideal for environments requiring data security, low heat emissions, no noise, and more workspace. Contact Matrox Graphics to learn more: www.matrox.com/graphics

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North America: 1-800-361-1408 (outside North America: 1-514-822-6366) United Kingdom: +44 (0) 1895 827260 Germany: +49 89 62170-444
Email: graphics@matrox.com

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