



*With digital CCTV systems being used increasingly in shopping centres and public spaces to improve public safety and security, a variety of different sub-systems operating in multi-storey car parks, shops, stations and streets have to be combined into a single system. During the redevelopment of the Passerelle shopping arcade leading into the modern "Niki-de-Saint-Phalle-Promenade" in the centre of Hanover, the existing security system was significantly enhanced by adding an innovative new CCTV monitoring solution. This combines the easy-to-use features of an integrated solution with the strict requirements of a CCTV security system.*

## **SeMSy technology**

### **Digital CCTV systems for surveillance solutions of shopping arcades**

*In this monitoring system the various existing sub-systems are integrated into a unified whole using the latest digital technology. The sub-systems are responsible for providing such functions as public announcements, barrier control in the car park, two-way communication, and of course the arcade's high quality CCTV monitoring and recording system including remote controlled dome cameras.*

At the heart of the new integrated system are networked DIS-1 units supplied by Dallmeier electronic GmbH. These devices combine all the functions of a digital video recorder with a digital video transmission system. Their triplex functionality enables the simultaneous recording, transmission and replay of audio and video data. Linux-based systems, DIS-1s use the MPEG-2/4 picture compression process and hence achieve outstanding picture quality with 25 pictures per second at full PAL resolution. The integral Ethernet connections distribute the video data streams to the display stations. Staff at the two workstations in the security control room at Raschplatz have six monitors on which they can watch and analyse live pictures and recordings (with text insertion information) from the 40 dome and fixed cameras. A loudspeaker is paired up with each camera so that security staff can quickly and easily, make announcements direct to the passers-by in the observed area, to provide information or warning of a particular threat. With all the various functions (CCTV monitoring, public announcements, control etc.) integrated into a homogeneous, fully digital system, operating procedures are simplified, reaction times are shortened and thus security and service are improved for Passerelle visitors.

This seamless integration and matrix functionality is achieved thanks to the SeMSy technology developed by Dallmeier electronic and used by the DIS-1

#### **Topic**

CCTV monitoring in an underground shopping arcade.

#### **Situation**

Rebuilding work at the "Passerelle" shopping arcade in Hannover provided a good opportunity for increasing security precautions by updating the CCTV monitoring system with one which would offer high quality pictures and be easy to expand in future.

#### **Solution**

The arcade operator chose a new kind of monitoring solution based on a software-generated data matrix. This uses a standard Ethernet network for transmission, produces high quality pictures and has a completely open, flexible structure.

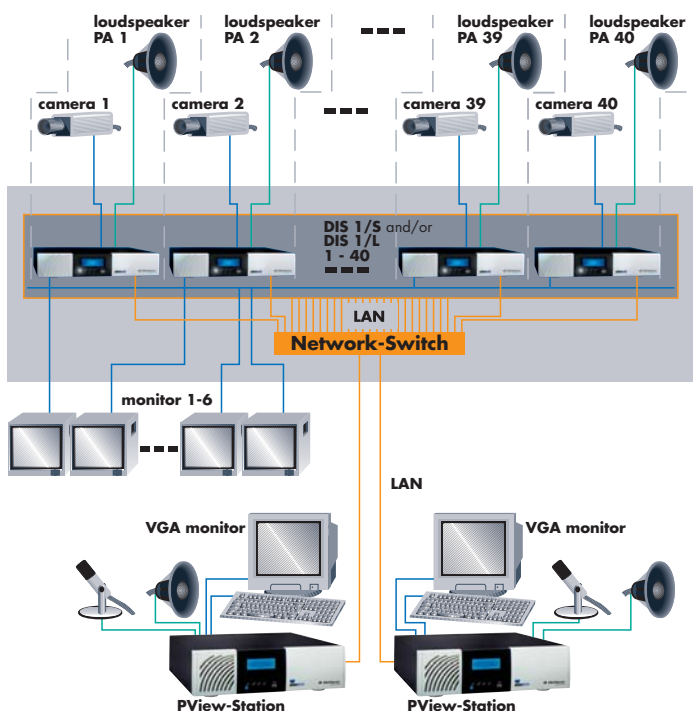
# SeMSy in use

streams (e.g. audio, video, control) with the result that you can display and record live pictures anywhere in the networked system; you can record locally and/or centrally on a server; and you can watch live video pictures at different places (for example in different control centres) at the same time. In contrast to traditional analogue matrices which are only accessible at a particular location and have a limited number of inputs and outputs, the virtual matrix generated through the co-operation of SeMSy and the network, can have any number of extra components added anywhere on the network. Hence this kind of digital network offers significantly greater flexibility and expandability for future requirements.

In addition to live displays, the system has ring buffers recording full picture quality pre-alarm histories. Video sequences can be permanently archived onto DVD to remain available for future processing, and, for ease of analysis, video sequences can be replayed in many different modes: forwards, backwards, in slow motion, speeded up and freeze-frame are all possible.

The camera pictures can be selected by mouse click from a site plan which is based on a standard graphic format so that it can be produced direct from design office CAD drawings. Security-relevant conditions such as a camera failure are indicated on the plan with a flashing symbol. The system allows you to pre-define procedures for camera switching which it automatically actions as a virtual guard tour at the click of a mouse.

Thanks to the open, freely scalable system architecture, the use of standard interfaces and the system's flexibility and adaptability, new expansions and developments can be integrated easily and seamlessly into the solution at any time. This ensures that the system is ideally positioned to meet all future requirements and constitutes a perfect basis for professional, easy to use systems for complex security projects. Dallmeier electronic provides support for the planning phase to ensure all the sub-systems co-operate well with each other.



## Video network with SeMSy technology

- triplex function: simultaneous recording, transmission and replay

## Central video wall

- live
- access to ring buffer
- access to alarm memory

## Central control and analysis

- live
- access to ring buffer
- access to alarm memory
- local data storage/backup