

The Future

With the installation successfully completed, Mr Van der Walle believes he made the right choices. The smooth implementation was a good start but the real proof is confirmed by the speed and reliability of the final system. This was recently demonstrated during a ceremony in which honorary degrees were awarded to Kofie Anan, among others, in the presence of several dignitaries, including Queen Beatrix where the network was used to transmit video images of this event live throughout the university, so that everyone could follow it.

The success of the new network has already started to open up opportunities which were inconceivable in the past, such as new ideas now being considered to expand learning potential by enabling lectures to be broadcast over the network to a wider audience.

But that is still a thing of the future.

For now Mr Van der Walle is satisfied in the knowledge that UvT has a fast, secure, and reliable network in place which will allow him to start work on future plans – and that is already a real benefit! ☒





UNIVERSITY OF TILBURG RENOVATES ENTIRE CAMPUS USING NEXANS

University of Tilburg has provided eleven university buildings with new data cabling infrastructure from Nexans Cabling Solutions

The new cabling infrastructure at the University of Tilburg, replacing the old infrastructure that was already more than ten years old, is meant to connect the computers and the telephones with the central network. With this project, the university has made an important investment in order to meet network requirements, for example Gigabit Ethernet Applications.

Executive summary

CUSTOMER University of Tilburg

LOCATION Tilburg, the Netherlands

REQUIREMENTS provision of a fast Ethernet (100 Mbps)

EQUIPMENT: LANmark-5 FTP cabling

NUMBER of points : 12.000

From a historical perspective

The university has been laying coax cabling for Ethernet applications since 1990. Slowly but surely, this coax network expanded throughout the campus with fibre optic cables linking the buildings. In 1996, the university changed over to Fast Ethernet, one of the first in the Netherlands to do so. Then it was still usual to use relatively expensive "routers" to control local network traffic. UvT was one of the first to use "switches" to increase the capacity of the network in this way. This type of segmentation was exceptional because the campus-wide network was not made up of several smaller networks, but actually formed one very large network. Only by means of these "switches" was local traffic kept local. The end of the existing infrastructure on coax was signalled by the wish to finally bring fast Ethernet (100 Mbps) to all areas. For this wish to be realised, the network had to be modernised and converted from coax network to universal structured cabling system.

A large-scale project commenced resulting in the decision to buy and install new cabling together with new active data equipment.



“Downloading from the internet goes faster than reading from a CD-rom.”

M.A.G. van der Walle
Specialist Networks
& Datacommunication
University of Tilburg

Challenges

- » Minimal downtime during installation
- » Strict performance requirements
- » Complex planning and logistics

Solutions

- » Easy installation
- » Modern technical solutions
- » Excellent project management

Benefits

- » High network availability
- » Outstanding performance
- » Seamless implementation

With the installation successfully completed, Mr Van der Walle believes he made the right choices.

Look before you leap!

The project was in preparation for approximately two years. From 1997, Mr Van der Walle of UvT invested a great deal of energy into establishing the requirements for a long-lasting network. Several factors had to be considered:

- What type of cable to use -shielded or unshielded?
- What type of network?
- what specifications?

These were some of the questions Mr Van der Walle tried to answer during the preparation period. Together with consultancy firm Tebodin a clear specification was finally reached.

The campus has a very large area and includes various buildings, meaning that there is always renovation going on somewhere. During renovation, cable ducts are generally open for extensions or adaptations. Cable ducts can normally offer extra protection against outside radiation (EMC), but in this case it was decided that extra shielding requirements were necessary and an FTP Category 5e solution was specified. The choice of a shielded system involved spending a little extra care and attention on the network earth system to ensure that there were no differences in electrical potential across the infrastructure. With Tebodin's input, this was solved by means of an electrical bonding system to ensure consistent earth potential on the network. This was introduced in parallel with the data cabling system, an arrangement which would benefit both network and computing equipment.



Apart from the price, the project approach, the quality, logistic skills and project planning were important selection criteria.

Cable and connector specifications therefore played an important part in the selection process. Not wanting to proceed on the basis of the manufacturers' specifications alone, test reports of independent laboratories were consulted and a supplier shortlist was established. In this way, it was ensured that only fully compliant solutions were considered. The reports of the Danish test laboratory Delta played an especially important role.

Approach

In advance of the full installation, work began with a pilot project to gain practical experience of the implications that such a project would entail. UvT and Tebodin used this experience to improve practical planning and logistics issues and also as part of the installer selection process for the main phase.

With the installation of some 12000 connections in eleven buildings over a period of over two years, minimising the disruption to the University staff and students was of paramount importance. Communication was a vital element and to this end, an internal website with information on planning and progress was set up. In addition brochures explaining details of network adaptations and related planning were made available and every housemaster was personally informed in advance with detailed information on the planning for each building. This approach not only resulted in greater understanding, but also increased involvement and cooperation from those affected.

After the pilot project and its evaluation, the main project started. Eleven buildings were cabled and the network was emigrated from the old coax-based Ethernet to the new network, with a choice between 10 and 100 Mbps. For two and a half years, three to maximum twenty people of HVL were involved in the project for the installation and project management.

Partnership

The new data cabling entailed an adaptation of the cable duct system, which was no sinecure. But with its expertise, Tebodin has carried out an investigation in order to achieve the right specifications.

Such a massive, long-term project requires in-depth selection of the party which must carry it out. Consequently, UvT and Tebodin drew up a shortlist of installation companies. These installation companies received an invitation to make an offer on the basis of the specifications. On final selection, not only the cost was considered, but also the presented project approach, the quality of work already carried out, logistical skills and project planning.

Eventually HVL were selected, a large national company (part of TBI Techniek) and who are a Nexans Certified System Installer (CSI).

The logistics and supply of the materials was provided by Nexans distribution partner, Electronics & Telematics.

