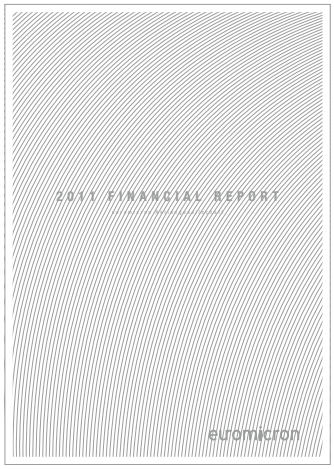
MAGAZINE

euromicron Aktiengesellschaft

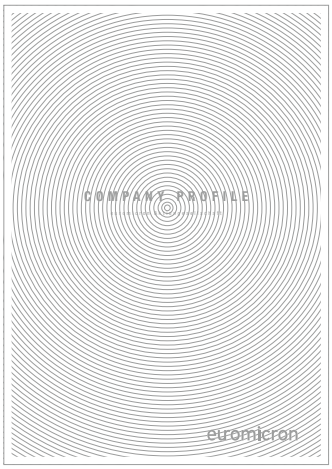
2011 ANNUAL REPORT MAGAZINE

euromicron's business. We have compiled a selection of particularly important and exciting projects from the past years. Together, they give an insight into the business segments we operate in: With very different technological approaches, we successfully accomplished demanding projects in a wide range of sectors, demonstrating our outstanding expertise in planning and constructing networks.



2011 FINANCIAL REPORT

Our financial report is aimed at shareholders and analysts. It contains the foreword by the Executive Board, the report of the Supervisory Board, the declaration on conformance, details on the board members of the company and information on the share and investor relations. It also includes the group management report, the IFRS consolidated financial statements, the single-entity financial statements (HGB), a five-year overview of the main figures for comparison and the financial calendar for 2012.



COMPANY PROFILE

This is euromicron. Its competencies, vision and strategy, markets, employees, structure and organization: Our profile outlines our group, its strengths, values and technological and entrepreneurial alignment.

NEXT GENERATION SOLUTIONS

NETWORKING
THE FUTURE

The euromicron Group unites all the expertise and technologies needed for state-of-the-art, future-oriented data transfer. On the basis of powerful broadband networks, we ensure top-class communication, control and monitoring for our customers in the Gigabit age.

We support our customers in Germany and within the international markets with high-performance components, integrated modules and a broad range of application know-how: We plan and build the infrastructure they require for their business success and for realizing their visions. As a result, we create forward-looking, future-proof, innovative solutions for our customers – next generation solutions.

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FOREWORD BY THE EXECUTIVE BOARD

DEAR SHAREHOLDERS,
DEAR READERS,

2011 was a remarkably successful year for us. With consolidated sales of just over €305 million, we grew by some 50% year on year. And we embarked on the new year 2012 with the largest order books we have ever had.

One of the defining events for us was the purchase of telent GmbH, which contributed to our very good performance. telent complements our business excellently. Nevertheless, as anticipated, the acquisition temporarily dilutes the quality of our earnings. The decline in the EBIT ratio will be made good as planned in 2012 and 2013 after telent's business has been integrated and synergies leveraged, with the result that the Group will again achieve its target EBIT return of 8% to 11% of previous years.

DR. WILLIBALD SPÄTH
CHAIRMAN OF THE EXECUTIVE BOARD

THOMAS HOFFMANN
MEMBER OF THE EXECUTIVE BOARD

REVIEW OF THE YEAR

Strong organic growth of 10% in euromicron's traditional markets and the purchase of telent ensured record results in 2011. Consolidated sales were €305.3 million, far surpassing the target we set ourselves of €280 to €300 million including telent. As a result we have already reached the €300 million mark, which was actually planned for 2013, and we are now embarking seamlessly on the next phase of the company's development.

Consolidated EBITDA increased by 24% to €30.8 million. Given an average tax ratio of 27.7%, euromicron generated net income of around €12.9 million, a rise of 6.3% over the previous year.

euromicron's shares performed in line with the DAX and TecDAX, but proved very robust and immune to all too great fluctuations. euromicron sticks

by the dividend policy it has adopted and plans to distribute around 50% of the profits it has generated to shareholders.

FLEXIBILITY ENHANCED

So as to continue to be able to plan proactively and with an eye to the future, it was necessary to gear our capital resources to match our business development in 2011. As part of this, we first successfully placed a borrower's note loan for €24.5 million in August to make us more independent of short-term loans.

The General Meeting authorized the Executive Board in 2011 to increase equity. This enabled the issue of around 1.5 million new shares at a subscription price of €16.00 and yielded proceeds of €24.6 million. euromicron's share has weathered the capital increase very well in a restless stock market climate, and soon after the issue again stood at more than €18. At present (March 2012) it is stable at €22 to €23.

PROACTIVELY POSITIONED

We operate in an extremely dynamic industry. Major trends such as mobile Internet and cloud computing require high-speed networks with full coverage. Markets with a highly promising future, such as energy, healthcare or mobility, demand innovative infrastructures and applications. As a network specialist, we anticipate today what is expected of networks tomorrow. That is also the background to the selective company acquisitions in 2011. We remain on a growth course of sustainable high earnings.

STRENGTHENING THE GROUP

Acquisition of telent enables us to complement and expand our portfolio as a vendor-independent system integrator. We are thus deepening our system competence, above all in the field of mobile radio and complex wide area networks.

We have strengthened our skills in system integration, supporting active networks and developing products for active system technology by acquiring ACE Advanced Communication Engineering GmbH and TeraMile GmbH.

We have now also complemented our successful business model in Austria. We now have an extensive footprint in this market in the shape of euromicron NBG as a manufacturer, euromicron austria as a system house and Qubix as the distribution organization.

Obtaining qualified employees is a growing challenge. That is why we seize the initiative with training and further education measures. We believe we are well-prepared in this field for a growth-oriented 2012 with many demanding tasks.

TOP INVESTITION

Top placements in acknowledged ratings and the accolade of being one of Germany's 100 most successful small and medium-sized enterprises also contribute to the excellent reputation of euromicron's share among investors. "€uro am Sonntag" highlighted our group as a "small cap dog" and recommended it as one of the top 10 investments. euromicron was admitted to the TecDAX in the first quarter of 2012.

We are delighted about such assessments. They confirm the path we have taken and the trust that you, dear shareholders, have shown in the Executive Board of euromicron. We thank you for that. We intend to stick by our course of value-oriented growth.

DR. WILLIBALD SPÄTH
CHAIRMAN OF THE EXECUTIVE BOARD

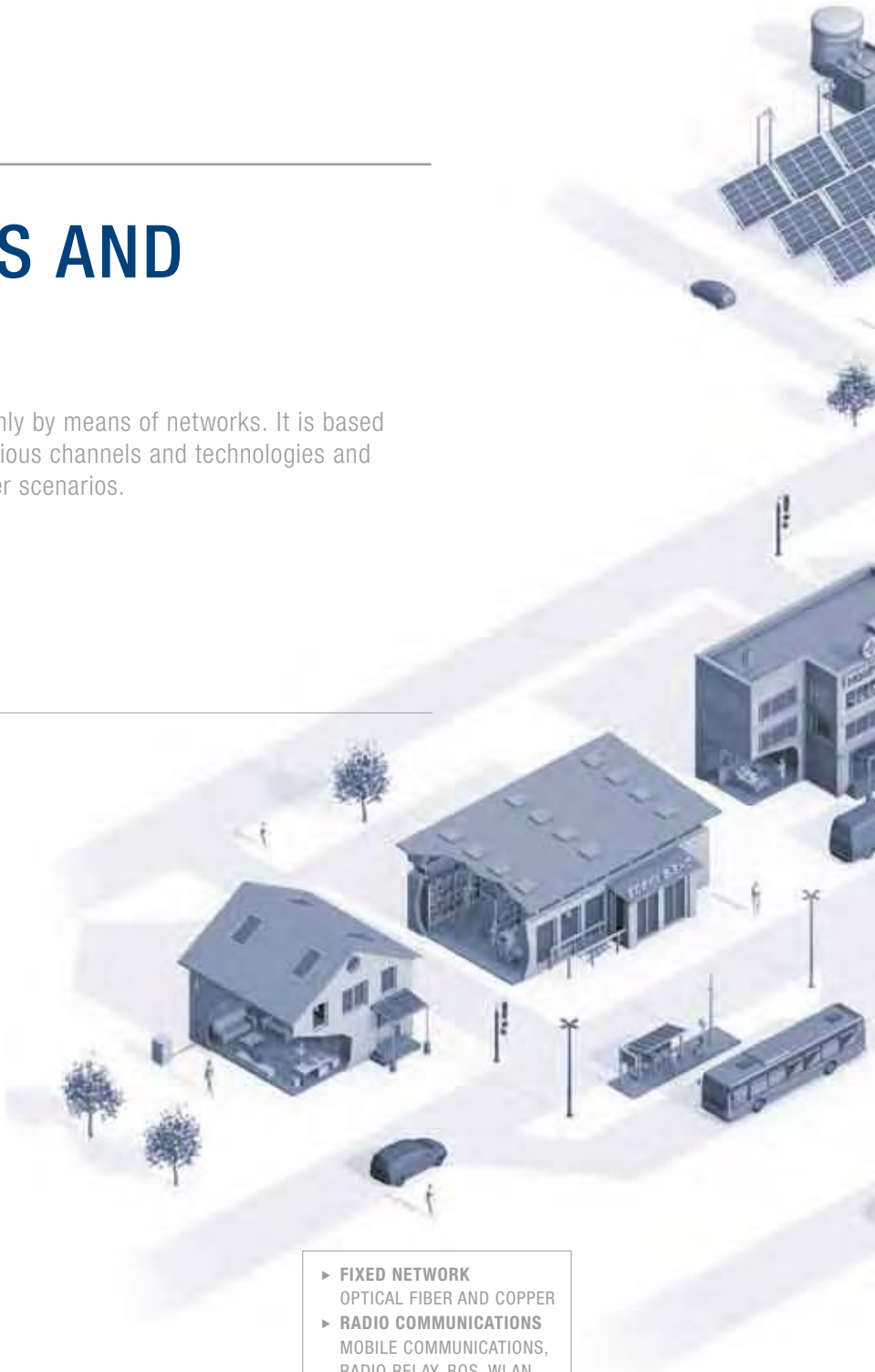
THOMAS HOFFMANN
MEMBER OF THE EXECUTIVE BOARD

NETWORK SOLUTIONS

TECHNOLOGIES AND APPLICATIONS

Data transmission is conceivable today only by means of networks. It is based on a complex infrastructure that uses various channels and technologies and enables different applications and transfer scenarios.

01



TECHNOLOGIES
euromicron

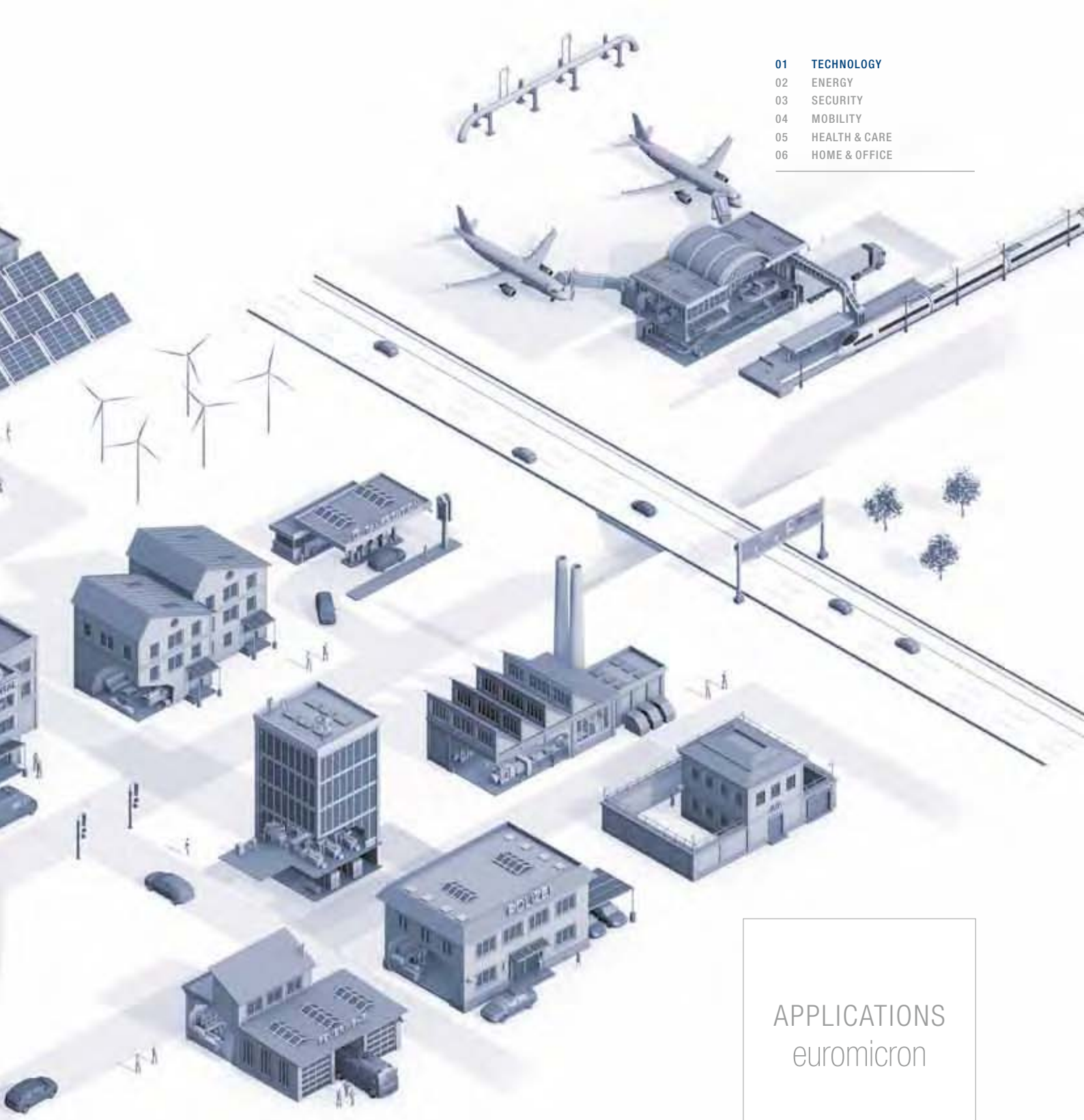
- **FIXED NETWORK**
  OPTICAL FIBER AND COPPER
- **RADIO COMMUNICATIONS**
  MOBILE COMMUNICATIONS, RADIO RELAY, BOS, WLAN

NEXT GENERATION SOLUTIONS

- VOICE / UC
- VIDEO
- MONITORING
- PHYSICAL SECURITY AND ALERTING DATA
- ALL OTHER TYPES OF DATA

MOBILE COMMUNICATIONS
Overlapping radio cells create flexible, reliable connections

OPTICAL FIBER
Leading-edge broadband technology for state-of-the-art data transport



APPLICATIONS
euromicron

COPPER
Tried-and-tested standard technology for conventional networks

RADIO RELAY
Ideal when there is visual contact between the sender and the receiver

BOS WIRELESS COMMUNICATION
Smooth wireless operation for public authorities and organizations that perform security tasks

ENERGY

TECHNOLOGIES FOR A CHANGING MARKET

02

Energy markets are changing. In future, countless small and large producers will feed the power they produce into a complex and ramified grid. Consumers will become producers, while charge systems will have an unprecedented degree of transparency.

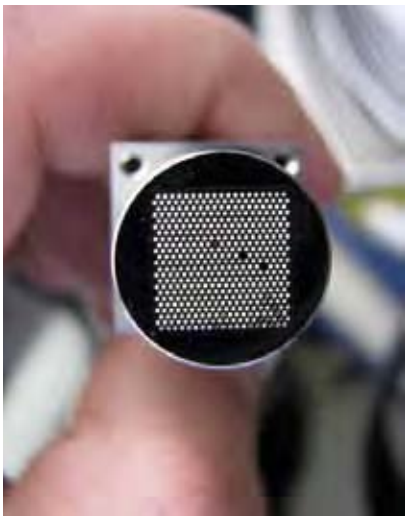
euromicron supports producers and network operators in this complex changing area with state-of-the-art components and systems that can be adapted to a very wide range of different environments. With surveillance systems at huge solar fields or an offshore wind farm, smart grid connections or communications systems – we help our customers tackle the challenges of the future innovatively.

POTSDAM, BRANDENBURG, GERMANY
52° 23' 45" N, 13° 3' 41" E

MINUTE BOREHOLES
WITH A GREAT IMPORTANCE

At the Leibniz Institute for Astrophysics, scientists are investigating the properties of what are termed "dark energies" in the universe. As part of that, they are trying to measure distant galaxies – a task that requires high-precision telescopes. EUROMICRON Werkzeuge GmbH developed and produced aperture masks that minimize tolerances in the instrument used.

Dark energy appears to act counter to gravity and is speeding up the rate at which the university expands. That was the finding that won the 2011 Nobel Prize for Physics. Scientists at the Leibniz Institute for Astrophysics in Potsdam are now investigating the phenomenon. As part of that, they are measuring the positions and speeds of galaxies with the 10 meter high Hobby-Eberly Telescope in Texas. It is optically connected to an astronomic instrument consisting of 75 high-performance spectrographs. The connection is implemented using a fiber-topic bundle with a total of 33,600 optical fibers. Precise and regular arrangement of the individual optical fibers is vital to the instrument's precision. This is ensured by aperture masks developed by EUROMICRON Werkzeuge GmbH. Joint development of them with the Leibniz Institute took almost three months.



Minute boreholes bundle the light.

The Hobby-Eberly Telescope in Texas.

SPECIALISTS ARE NEEDED

The result is nine-by-nine millimeter aperture masks that each have 440 boreholes in a specific grid. The specifications for their production are created in a specially developed machine program. The holes are extremely small – between 128 µ and 170 µ. "However, we could drill them as small as 50 µ," explains Head of Sales Holger Bäuerle. "Such a thin drill is barely visible to the naked eye. We can drill a hole in a hair with it." EUROMICRON Werkzeuge GmbH has proven its qualifications for scientific projects on many occasions with special orders in the field of precision lathing, drilling and milling. "We're well-known for such special applications; we have a true unique selling point here."

NORDERSTEDT, SCHLESWIG-HOLSTEIN, GERMANY
53° 40’ 14” N, 9° 58’ 51” E

BANDWIDTH FOR THE BROADBAND NETWORK

It’s been a longstanding and successful relationship: euromicron systems and the public utility Stadtwerke Norderstedt have cooperated closely for more than nine years in planning and operating network infrastructure and are tackling the challenges of the future.

ORDER
Design and implementation of the highly available fiber-optic telecontrol network. Replacement of the central node by two highly available redundant systems. Renovation of two points of presence (PoPs) and connection with 10 gigabit Ethernet

FOLLOW-UP ORDER
Porting of 12,000 telephone and Internet connections for wilhelm.tel GmbH

FURTHER OFFERS
Triple-play voice, data and video transport for households and in future smart metering

Almost a decade ago, Stadtwerke Norderstedt converted its network infrastructure to a powerful fiber-optic network. The local telecontrol network – one of the most complex areas in network technology, with high demands on availability and convergence – was also connected to it. euromicron systems GmbH in Hamburg supported Stadtwerke Norderstedt by supplying and installing the active components and also helped plan the network with its end-to-end solution competence.

TRIED-AND-TESTED SOLUTIONS

Since then, the concept and hardware have had time to prove their worth. Because the requirements demanded of the networks are constantly growing, the central network node had already been replaced by two highly available, redundant systems. Thanks to the intelligent energy management system, Stadtwerke Norderstedt can thus already offer a cutting-edge smart grid and smart metering solution.

Images from video cameras used in local public transport can also be transferred over the network. “Local public utilities will assume completely new tasks in future,” is the prediction of Thorsten Trapp, Head of the Active Technology Business Unit at euromicron systems GmbH in Hamburg. “We support public utilities in filling out and exploiting their innovative role cost-effectively.” euromicron additionally ported 12,000 telephone and Internet connections to the broadband network of Stadtwerke Norderstedt’s telecommunications company wilhelm.tel GmbH. “Once again, we proved we’re a partner who is proficient in all aspects of broadband technology,” adds Trapp.

SECURITY

WE COMBINE TECHNICAL EXCELLENCE WITH FARSIGHTED CONSULTING FOR YOUR SAFETY

03

Security is an issue of growing importance at enterprises and public institutions. Intelligent and powerful electronic alarm, fire prevention or surveillance systems protect property and people. The success of a security measure depends considerably on its technical design.

euromicron installs and integrates alerting systems at business and public organizations. We tailor our solutions to your needs: A museum requires different security measures than a bank. A prison or a data center has different potential dangers to those facing an airport. You profit from our wide-ranging experience in the shape of reliable and effective alarm systems.

FRANKFURT/MAIN, GERMANY
50° 06’ 36” N, 8° 40’ 45” E

SECURITY, CLEARED FOR TAKE-OFF

In international aviation, there is no issue more important than security. And the terminal extension A-Plus at Frankfurt airport is the test bed for cutting-edge security concepts. euromicron solutions GmbH is supplying showcase alerting technology at the new pier in the shape of innovative, yet rugged solutions.

Despite the millions of people who use the airport every day, security must be ensured

Eleven aircraft will be able to dock onto the new pier of Frankfurt Airport’s longest-serving terminal. 6 million visitors a year will then converge on the total space of 185,000 square meters. People and luggage come and go through a total of 700 doors, airlocks and hatches. Who can ensure security under such circumstances?

EXPERTISE IN AIRPORTS

euromicron solutions shouldered part of this huge task and worked with Fraport AG to develop and install a refined alerting system. “We had already cooperated successfully in the area of security for Frankfurt Airport in relation to the topic of ‘critical parts’ in the apron,” says the responsible key account manager at euromicron solutions GmbH. “It’s an advantage for Fraport that we have a broad technological line-up and also boast specialist airport know-how.”

In some cases, existing systems were expanded in the project, while completely new ones were implemented. Access control and escape door control are designed very specifically for the airport and its needs. The fact that they are fully freely programmable is an innovation that gives a living organism like the airport flexibility. “As a result, we can really fulfill customer wishes,” says the delighted key account manager, adding: “We contributed consulting expertise and a lot of suggestions for improvement to the project.”

The euromicron team often worked at night so that non-stop flight operations were not impeded. “That was truly great commitment,” are the words of praise from project controller Ronald von Brandenstein from Fraport AG. “euromicron did all in its might to ensure that the great challenge of providing alerting technology at the A-Plus pier was accomplished on time.”

BERLIN, GERMANY
52° 31' 24" N, 13° 24' 41" E

STABLE CONNECTION
AT HIGH AND LOW TIDE

Germany's water and shipping authorities are building a single network to monitor shipping along the country's coasts – and euromicron's subsidiary telent GmbH is creating the technical conditions for that at 120 locations.

The North Sea and the Baltic Sea are some of the busiest sea routes in the world. The Water and Shipping Offices maintain connection with ships, offshore parks, oil platforms and lighthouses and collect radar and positioning data, water level and operating data or video information using cable and wireless communications networks. Their key task: To ensure safe shipping operations and avoid disasters or pollution of the environment.

EXPERTS FOR RADIO RELAY

To improve the quality of data transmission in terms of security, availability and bandwidth, the Federal Water and Shipping Authority invited invitations to tender as part of its plan to standardize the enterprise network on the basis of IP technology with radio relay. telent GmbH won with the most cost-effective bid. "We were awarded this large project due to our great radio relay expertise," states Martin Neudek, Account Manager at telent. "However, another important factor in offering a competitive price was that we are a one-stop shop for infrastructure, planning and technology." Neudek knows: "The radio fields for radio relay links above the Wattenmeer are especially difficult to calculate." Telent took up the challenge and planned a total of 90 radio relay links. Some have already been put into operation successfully as part of the gradual replacement of the old individual networks.

euromicron's subsidiary also supplied the system cabinets that enable secure access to the enterprise network. A telent team also provided training for employees of the Water and Shipping Offices. As Neudeck notes: "That means the customer can support the network on its own."

Data transmission regardless of the tides

Mobility has become a mass phenomenon. Billions of people on our planet travel by plane, car or public transport every day. They are increasingly reliant on a technical infrastructure that enables traffic flows to be optimized and controlled safely.

Network solutions from euromicron support coordination of traffic in all types of mobility thanks to rugged components and intelligent concepts: In traffic control systems, for example, in airport surveillance or in passenger information systems in local or long-distance public transport, our highly available systems ensure that our customers can implement processes as planned.

MOBILITY

TREND-SETTING CONCEPTS
THAT MOVE PEOPLE

04

Connection to the hangar via fiber-optic cable

AVIANO, ITALY
46° 03’ 56” N, 12° 34’ 45” E

A GOOD ANTENNA
FOR CUSTOMER BENEFITS

If you have good local knowledge, then you have an advantage when it comes to buying things – and that is also true as regards technical components for an airbase. The US armed forces in Northern Italy benefited from the cooperation between euromicron solutions GmbH and euromicron’s Italian subsidiary Qubix.

The US airbase Aviano is located at the foot of the Alps in Northeastern Italy and is where the US army has its fighter planes stationed. The aircraft are accommodated in 24 hill-shaped hangars arranged around the airfield, which act as “garages” and service points. The service technicians use notebooks and WLAN so they can read out data from the aircraft’s software and analyze it. euromicron solutions GmbH delivered the necessary network infrastructure.

“We are a preferred contact for our American partner companies for such projects because we have know-how in American and European standards,” states Thomas Stretz, head of the euromicron solutions GmbH branch office in Bamberg. euromicron created the entire network infrastructure, connected the network to the data center and installed all the active and passive components in Aviano.

WLAN IN THE HANGAR

The hangar and data center are connected by fiber-optic cables. There are three antennas for the WLAN both inside and outside the bunker. Additional antennas further monitor security. They report unauthorized access to the network to the control station, which immediately triggers an alarm.

The cooperation with euromicron’s Italian subsidiary Qubix networking solutions S.p.A. ensured smooth local procurement of all the components in the project. “Good regional knowledge was an advantage,” explains Stretz. “Our customer benefits from short routes and customer proximity in the true sense of the word.”

LEIPZIG, SAXONY, GERMANY
51° 20' 16" N, 12° 22' 26" E

INVESTMENT SECURITY FOR DEUTSCHE BAHN

Service, Security, Sanitation – that is what is monitored by the 3S Centers of Deutsche Bahn at German trains stations. The goal is for passengers to feel well and safe at the stations. To ensure that, DB Station&Service AG is investing in a state-of-the-art system solution for controlling security infrastructures. euromicron's subsidiary telent GmbH is supplying a state-of-the-art control station platform for Leipzig Central Station.

People, crowds, shops, traffic – a large train station is a vast organism. So that visitors and passengers can nevertheless feel safe, communications and security technology that enables what is happening at the station to be monitored from central control stations is used. Now Leipzig central Station is to be fitted out with such a solution from telent: A modular information, communications and application platform – Mica – pools all security and communications systems in an integrated management system. Existing and new equipment and facilities, such as video cameras, emergency telephones and information pillars, as well as network management functions themselves are integrated via standard interfaces in a single IP network. From the control station, the dispatchers have central access to all events at the station and can control security or service staff and if necessary alert the police, fire brigade or emergency doctor.

TECHNOLOGY FOR THE FUTURE

Mica improves security and many other operational processes at the station. That benefits passengers and DB Station&Service AG itself. "It was especially important for our customer to deliver a flexible and scalable system that can also adapt to future requirements," says Dr. Stefan Kindt, Managing Director of telent GmbH, to stress the future-proof nature of the system. telent is responsible for delivering, installing and commissioning the necessary system technology and integrating it in the existing system and process landscape. Leipzig is the second project where telent has refreshed the 3S Centers: Mica has been used successfully at Munich Central Station since 2009.

Large stations need systems for security.

BERLIN, GERMANY
52° 31’ 24” N, 13° 24’ 41” E

SERVICE FOR THE TOLL SYSTEM
DENSE PRESENCE THROUGHOUT GERMANY

Germany’s motorways are equipped with a cutting-edge, satellite-aided toll system for trucks weighing 12 tons and above. euromicron’s subsidiary telent GmbH provides support for all terminals, control bridges and the mobile control units of BAG, the company responsible for federal autobahns, with its nationwide service network.

Germany’s location at the heart of Europe makes it the hub of international trucking. The burdens of the constantly increasing volume of traffic are to be cushioned at least partly by a autobahn toll. The company Toll Collect has operated the world’s first satellite-aided toll system, which calculates charges proportionally to the distance travelled, on behalf of the German government since January 1, 2005. In the free-flow toll system, trucks can move freely on the roads and are not confined to certain lanes.

DENSE PRESENCE

The service staff from telent GmbH have ensured from the outset that toll collection functions smoothly and the system runs stably and reliably. “From fleet management, maintenance of the toll terminals, repair work to the bridges, spare parts logistics to servicing of the technical units in the vehicles of the BAG – we carry out all service work for the customer Toll Collect,” states Martin Belovitzer, Account Director at telent GmbH. Two hours for the technical unit on the BAG vehicles and four hours for the toll terminals – tightly calculated deadlines that demand a closely-knit network of service staff covering the whole of Germany.”

telent’s team is in action 24 hours a day, 365 days a year. “We have set up spare parts warehouses spread across Germany to comply with the service level agreements,” says Belovitzer with pride. “The technology must be up and running at all times,” stresses the Account Director. “Then people wanting to dodge paying the toll don’t have a chance and the burdens on people, the environment and the roads can be compensated for.”

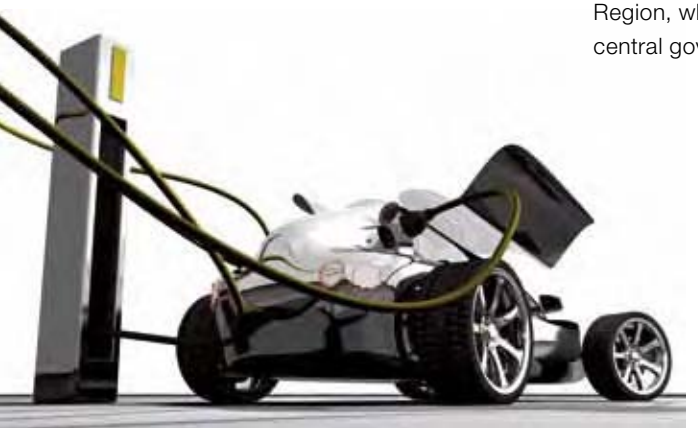
The trucks are not tied to specific lanes.

FRANKFURT/MAIN, GERMANY
50° 06' 36" N, 8° 40' 45" E

ELECTROMOBILITY: euromicron PARTNERS THE STATE GOVERNMENT OF HESSE

Electromobility is one of the most frequently discussed future topics in Germany at the moment. After all, the German government has set an ambitious target: one million electric cars on the country's roads by 2020. To make that succeed needs not only the vehicle technology, but also an information and communications infrastructure for recharging the vehicles, providing the billing systems and exchanging information between the e-cars and the transport network and power grid.

euromicron AG became a partner of the State Government of Hesse in the field of electromobility in January 2012. As a specialist for intelligent network infrastructures, the group contributes know-how in creating secure and state-of-the-art networks for electromobility. From test systems for charging columns to monitoring of the stations and grid capacities, euromicron can assist the state government with specialist know-how. A visible sign of this expertise is the "Strom bewegt Elektromobilität Hessen" (Electricity Moves – Electromobility in Hesse) logo. It certifies that euromicron is one of the 100 partners in the Hesse Model Region, which is being funded by central government.



The more charging stations there are in future, the more important the ICT infrastructure will be.

TEST SYSTEMS FOR FUEL OUT OF THE SOCKET

Electricity will be the fuel of the future – at least in the view of many carmakers, who are working flat out to develop e-vehicles intended to give large cities all around the world more air to breathe in future. And because these automobiles are fueled from the socket, attention is also being directed toward ensuring adequate numbers of service stations where they can be recharged.

In a pilot project presented at ELECTRONICA 2010, euromicron's subsidiary ELABO GmbH has developed a test system charging stations that examines all the technical regulations for outdoor operation and protection of persons. "We've got our nose ahead," is the comment of Thomas Seeger, Head of the Test Systems Division at ELABO GmbH, about the project. "Others are still at the development stage, but we're already producing our solution."

Healthcare and nursing pose great challenges for our society. We can overcome them better with the aid of state-of-the-art network technologies: After all, it is the technical infrastructure for security concepts, telephony services, monitoring systems and networked workplaces that permits the standard of care we now expect from modern care institutions.

HEALTH & CARE

TECHNOLOGY, IN THE SERVICE OF PEOPLE

05

One thing is clear, especially in healthcare: Technology must serve people. In this spirit, we are developing systems that help hospital and care staff to focus on the needs of patients. We create cross-system, holistic and future-oriented solutions that unite convenience and quality with the required standard of medical care.

HAMBURG-EPPENDORF, HAMBURG, GERMANY
53° 35' 64" N, 9° 59' 68" E

PRECISION LANDING FOR PATIENTS

It is regarded as the most modern hospital in Europe – the University Clinic of Hamburg-Eppendorf (UKE). The operating theater section and the wards of the clinic's new building have now been equipped with a monitoring system from Dräger. It decided in favor of mini-switches from euromicron's subsidiary MICROSENS in creating the system.

Vital functions are monitored over the network.

Keeping watch over patients' vital functions can save lives. Around 100 wards of the UKE's new clinic have now been equipped with the option of connecting monitoring systems. The network is based on fiber-optic technology – and the switches and converters from MICROSENS therefore offered the right technology. "The network is a qualified one designed for running medical products," explains Antonio Di Salvio, Account Manager at MICROSENS. "Consequently, our components were tested in advance by Dräger and to determine whether they were compatible with the monitoring system." Then everything had to go very quickly, since relocating a large clinic is a balancing act in terms of logistics and scheduling and must run absolutely smoothly.

PATIENTS BENEFIT

MICROSENS supplied pre-assembled voltage connection cables, fiber-optic cables and switches in specially designed surface-mounted housings which blend with the ceiling supply systems from Dräger. "Delivery of technically perfect components exactly on time was important for the clinic – and we made a precision landing for our customer," says a delighted Di Salvio.

Around 50,000 in-patients a year are treated at the UKE and a further 70,000 out-patients, plus around 43,000 emergencies. Many complex operations in Hamburg and its environs can only be performed in the UKE – such as life-saving heart, lung, liver, kidney and bone marrow transplants. Many patients now benefit from the security a monitoring system offers.

CANNES, ALPES-MARITIMES, FRANCE
43° 33' N , 7° 1' E

HIGH-SPEED CONNECTIONS FOR HEALTHCARE

What does the hospital of the future look like? The answer to that question is given by the new hospital in Cannes – the first of its kind in the whole of Southern Europe to be designed and equipped completely on the basis of optical fibers and IP. euromicron played a part in this showcase project. One of the key technologies – the installation switches – was developed and supplied by its subsidiary MICROSENS.

60,000 square meters and 882 beds – those are the impressive figures for the hospital center Pierre-Nouveau-Les-Brousailles in Cannes. At least just as impressive is the state-of-the-art technical equipment: End-to-end optical cabling and use of IP for transferring data enable a wide range of cutting-edge applications – from use for medical purposes, to administration and building services to patient entertainment.

Yet even though leading-edge optical cabling is available – many terminal devices and medical facilities which are vital to a hospital are based on copper technology. The solution for this balancing act – including in terms of cost effectiveness – is euromicron's Fiber-to-the-Office (FTTO) concept. The optical fibers are led as closely to the user as possible and the peripherals are connected by copper cable. The connecting elements between the two transmission media are the compact switches from MICROSENS, which are installed without tools simply by being snapped into cable ducts or floor boxes.

The first hospital in Southern Europe to be equipped completely on the basis of optical fibers and IP is located in Cannes.

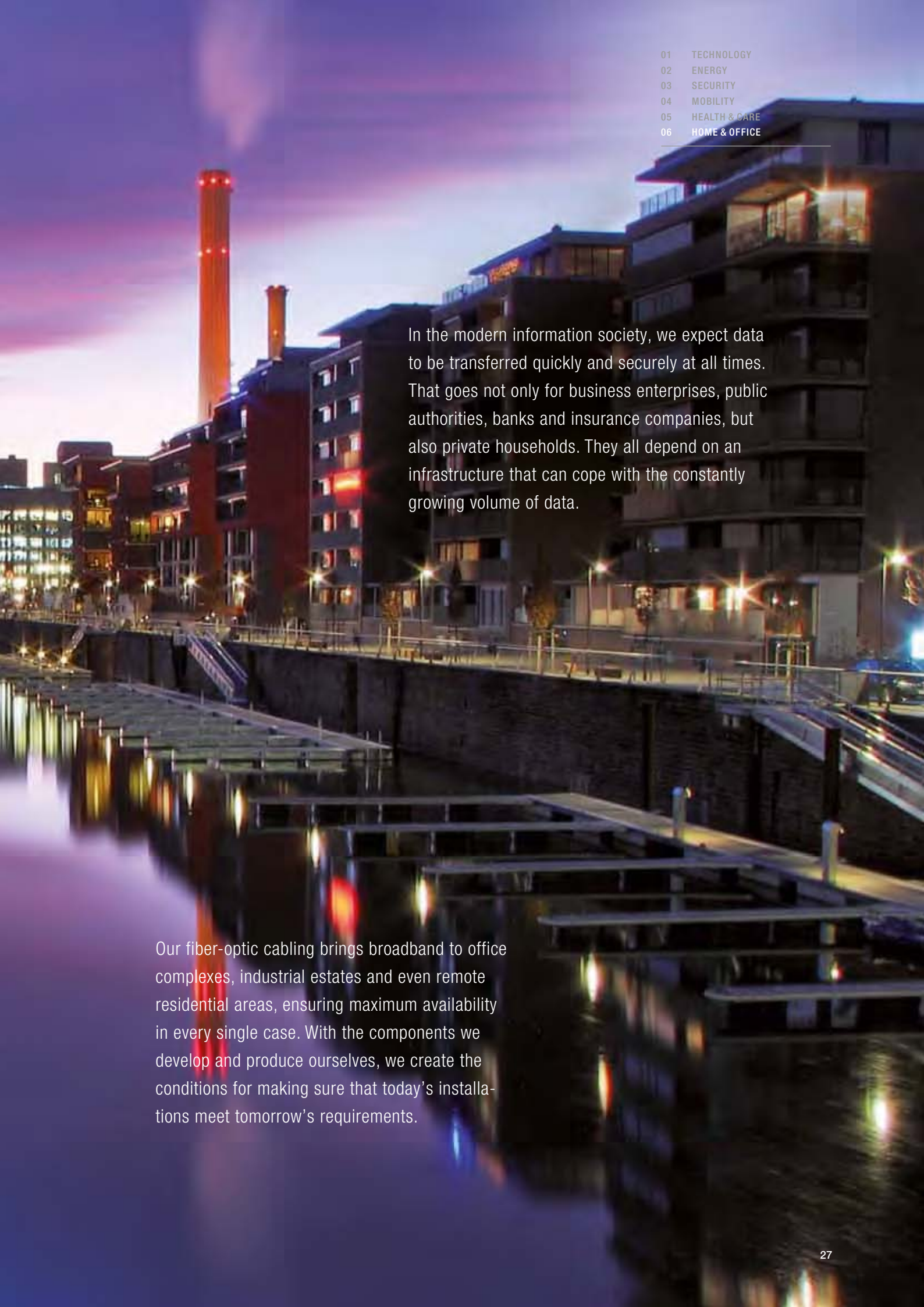
1,400 switches from MICROSENS are used in the hospital in Cannes. "To cater for all applications in this modern hospital, we even adapted and further developed our products for this project," states Géraud Danzel d'Aumont, Head of the Southern Europe Region at MICROSENS. More than 500 access points with reduced radiation ensure comprehensive network coverage at the hospital.

The patients access a multimedia terminal – which offers services such as phone, Internet access, radio, games and many programs via IPTV – from their bed over the fiber-optic network. However, optical fibers and switches are also installed in the medical sphere in the holders of surgical and anesthetic systems.

HOME & OFFICE

WE SMOOTH THE PATH TO INFORMATION SOCIETY

06



In the modern information society, we expect data to be transferred quickly and securely at all times. That goes not only for business enterprises, public authorities, banks and insurance companies, but also private households. They all depend on an infrastructure that can cope with the constantly growing volume of data.

Our fiber-optic cabling brings broadband to office complexes, industrial estates and even remote residential areas, ensuring maximum availability in every single case. With the components we develop and produce ourselves, we create the conditions for making sure that today's installations meet tomorrow's requirements.

MAINZ, RHINELAND-PALATINATE, GERMANY
49° 59’ 49” N, 8° 15’ 22” E

SATISFIED CUSTOMERS AT SPARKASSE MAINZ

The Sparkasse Mainz has been an important partner to citizens, regional business and municipal corporate bodies in the Rhinehessen region since 1827.

TASK
Standardization of the communications infrastructure in two main and 14 other branches

SERVICES
Connection with remote locations, common platform for data and voice (Voice over IP), connection to an IP VPN (Internet Protocol Virtual Private Network) of Deutsche Telekom

SPECIAL ASPECT
Use of MPLS technology

For more than ten years, the branch office of euromicron solutions GmbH in Mainz has been helping the savings bank in its business processes with its communications technology.

Savings banks are distinguished by being close to customers and Sparkasse Mainz is no exception with its 27 branches in its sales territory. euromicron installed a new communications system for the Sparkasse to integrate all the branches. A Siemens HiPath 4000 system was chosen for this.

As part of this modernization, extensive application solutions were also integrated, such as unified messaging, GSM integration and call center solutions.

TELEPHONY AT NO COST

These application solutions enable a standardized means of making internal phone calls free of change across all locations and so have helped slash operating costs.

GREATER CUSTOMER SATISFACTION

Renovation of the communications structures also permits flexible assignment of staff. Now it is possible – regardless of the location – to connect a caller directly to the responsible contact person. 50% of inquiries from customers are now clarified when they call for the first time. “The benefits for the bank are obvious. Customers are more satisfied and costs are cut.” Apart from the order to modernize the system, euromicron has also been tasked with supporting it.

As is typical for a bank, above all the security requirements in this project were high. From encrypted voice connected to remote maintenance via secure connections – the bank and its customers can rely on their data being protected and safe.

STEINFURT, NORTH RHINE-WESTPHALIA, GERMANY
52° 09' 25" N, 7° 20' 49" E

UTILITIES TAKE FIBER OPTICS TO THE COUNTRYSIDE

Electricity, gas and water – the bread and butter of local public utilities. This portfolio may well include rapid data transfer in future: Especially in rural areas, all households and business enterprises are waiting for future-proof broadband coverage.

It's impressive just what is possible today: High-speed Internet in the office, IPTV and video on demand in each household. That, at least, is the vision of full broadband coverage in Germany. Yet rural regions in particular are far removed from achieving that. That's mainly due to the high investments required. "Nationwide fiber-optic expansion in Germany will probably cost in the range of 40 to 50 billion euros," states Dr. Petra Hesselbarth, Director of Business Development for Broadband Networks and the Energy Industry. "No one – large carriers or the government – can shoulder that alone. As a result, expansion outside conurbations is sluggish."

NEW ROLE OF UTILITIES

This large sums needed are due to a considerable extent to underground construction measures for the fiber-optic network. In this connection, the utilities acquire a completely new role. "The existing supply lines mean we already have direct access to all buildings. As a result, we can improve what we have to offer citizens and give our municipality a source of revenue that pays off for citizens and strengthens the municipality's independence – a classic win-win situation," says Rolf Echelmeyer, Managing Director of Stadtwerke Steinfurt. And he knows what he's talking about: Together with euromicron systems GmbH, Steinfurt has proactively made the network infrastructure state-of-the-art. To enable that, euromicron has developed an implementation concept that integrates existing empty pipes and fiber-optic links and so keeps down the new investments required by the municipality. Enterprises and citizens are already benefiting from broadband transmission. That is a great advantage for Steinfurt in the struggle by municipalities to create better conditions so as to attract business. "We support municipalities from start to finish," states Dr. Hesselbarth. "We've put together a comprehensive package ranging from consulting to implementation."

NETWORK TOPOLOGY
Point-to-Point

MAIN COMPONENTS
Ethernet switch in the central office with firmly assigned optical fibers for each business customer

SERVICE
Bandwidth of 100 MBit/s

FLEXIBILITY
Passive distributor technology enables local connection of new customers, increase in the number of ports thanks to active components

ERFURT, THURINGIA, GERMANY
50° 58' 45" N, 11° 0' 49" E

HIGH SPEED ENHANCES RESIDENTIAL AMENITY

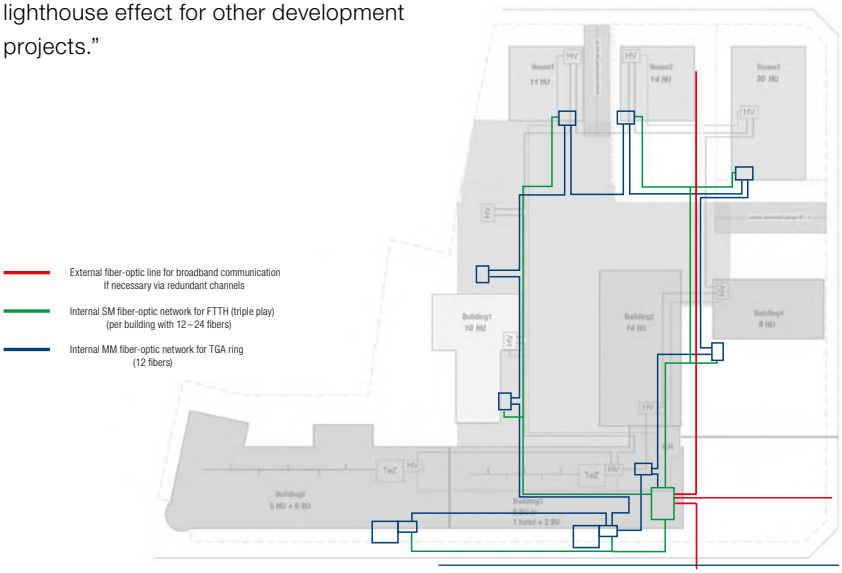
What makes a good residential area a true top address? In the Dichterviertel (Poets' Quarter) in Erfurt, the investors decided among other things in favor of state-of-the-art fiber-optic technology. Transport rates of 100 megabits per apartment add the multimedia icing on the cake for the up-market residential properties on the 17,000 square meter estate.

The infrastructure for powerful data transfer is taken as granted when a new residential area is developed nowadays. The investors in Erfurt soon made up their mind: A link-up between Thüringer Netcom, Thuringia's largest broadband network operator, the carrier MyGate, for voice, Internet and TV transport, and euromicron is to develop the Dichterviertel. euromicron assumed overall planning of the project, coordination of all fiber-optic installations and installation at the end customers. "This is an exciting project for us because the infrastructure to be provided was really out-of-the-ordinary," states Tobias Jahn from ssm euromicron GmbH.

MEDIA DIVERSITY AT HOME

Transport rates of 100 megabits are delivered to each apartment thanks to top-class fiber-optic technology. Internet, telephony over IP, IPTV, video on demand and gaming – that is possible simultaneously in all rooms in the Dichterviertel. A special supply solution from euromicron ranging from digital TV, IP radio to wireless communication rounds out the worry-free package. Tobias Jahn states: "Our goal was to give the customer an overall solution that can also have a lighthouse effect for other development projects."

euromicron has also successfully collaborated in the charge solution that was able to fend off a major competitor virtually across the board. Tobias Jahn is pleased at that: "It speaks volumes." Tobias Kahlo, Managing Director of the co-investor, the engineering firm ARING, is also enthusiastic: "Our concept of enhancing the residential estate by state-of-the-art transmission technology is bearing full fruit."



The smart home has already been achieved in the Dichterviertel in Erfurt. The transmission technology is available.

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CONTACT

Marketing and group projects:	Dr. Tina Schäfer Phone: +49 69 63 15 83-0, Fax: +49 69 63 15 83-20 E-mail: info@euromicron.de
Concept, design and production:	mpm Corporate Communication Solutions, Mainz www.digitalagentur-mpm.de
Photos:	M. Hildebrand Photographie R. Wagner, Max Planck Institute for Physics

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In cases of doubt, the German version is authoritative.

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euromicron Aktiengesellschaft
Speicherstraße 1
60327 Frankfurt am Main
Germany
Phone: +49 69 63 15 83-0
Fax: +49 69 63 15 83-17
www.euromicron.de