



b.data Energy Management

Consumer-oriented energy accounting at
Mohn media Mohndruck GmbH, Gütersloh / Germany



MOHN Media Mohndruck GmbH is one of the world-wide leading and largest offset printers. Using state-of-the-art machines, MOHN media Mohndruck and its 2200 employees process 800 tons of paper and 8 tons of printing ink each day.

Media publications such as books, catalogues, brochures, newspapers, etc. are supervised by MOHN media Mohndruck from the idea right up to the delivery. MOHN media Mohndruck is integrated into the arvato AG, the service group of Bertelsmann AG. Three gas turbines (each with Pel 4.3 MW) and one steam turbine (Pel 6.4 MW) are integrated into the energy center for the power supply of the

production location Gütersloh. The generated heating capacity is used for heating purposes, air conditioning and for generating cooling water by using absorption chillers for internal and external clients.

With the implementation of the energy management and operating information system b.data, the following tasks are fulfilled in accordance with MOHN media Mohndruck's requirements:

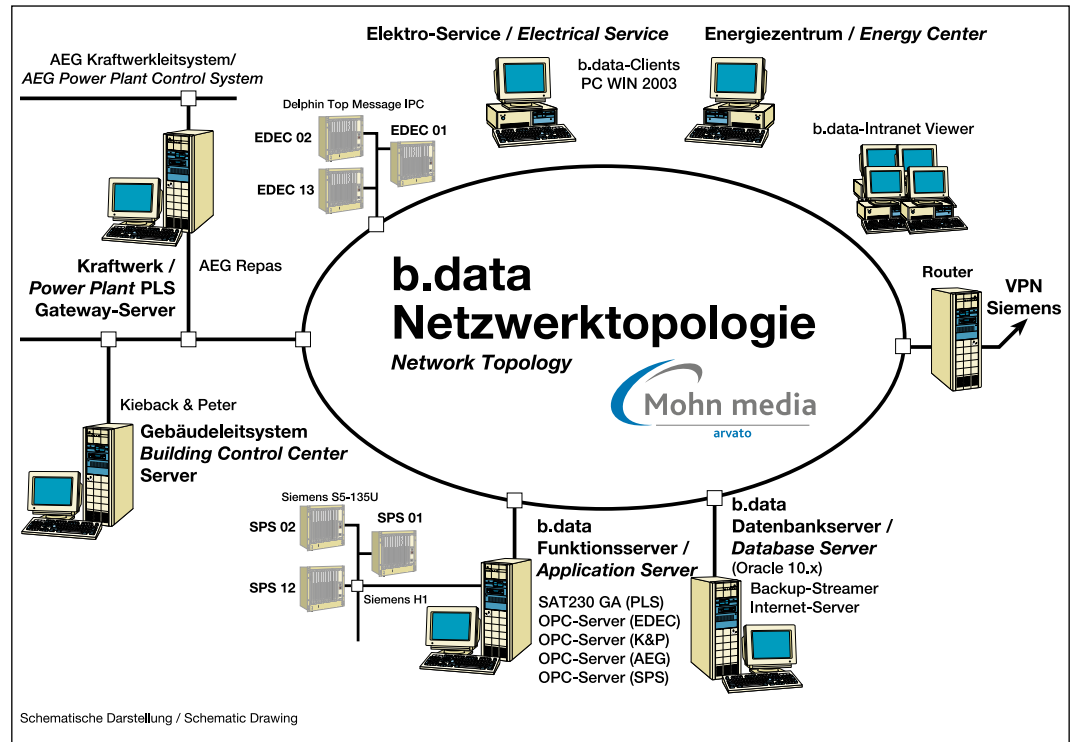
- Consumer-oriented energy cost allocation for the external and internal group companies located and supplied at the location Gütersloh
 - MOHN media Mohndruck GmbH

Energy Management

Answers for industry.

SIEMENS

- SONOPRESS (audio media and multimedia products)
- TOPAC (Packaging)
- Bertelsmann Calendar & Promotion Service
- AZ Bertelsmann Direct (service provider)
- Bertelsmann media Systems (Information technologies)
- Balancing of energy quantities of all media such as electricity, heat, water
- Allocation of unavoidable costs
- Energy controlling for the transparent verification of efficient utilization of energies
- Balancing of generation plants (e.g. power plant)



Network topology

System structure

At MOHN media Mohndruck, LAN (Ethernet TCP/IP) which spans the production facility and office environment is installed. This infrastructural foundation was ideal for the inclusion of existing data sources such as:

- Energy data recording concentrators
- Building management system (Kieback & Peter)
- Power station control system (AEG)

into the energy management system b.data. Due to the structured utilization of the TCP/IP report, there is no noticeable additional load on the network even with high levels of data traffic.

Concept and implementation

b.data uses the cross-works Process LAN as a basis and forms the gateway to the commercial data processing world. After the fully automated recording of operating data from the power station and building control system or from the field range, the data is selectively processed according to a freely parameterable energy and material flow model. This processed operating information on the individual media and plants is stored and archived at a central database system (b.data Warehouse) and is available to MOHN media Mohndruck for the following main tasks:

- Energy and material balancing (energy consumption, input materials)
- Plant balancing (combined heat and power plants)
- Determination of characteristic data (indicators for company benchmarks)
- Internal/external energy cost allocation and accounting with optional transfer to the central accounting system
- Consumption analyses and evaluation (electricity, gas, heat, input materials, etc.)
- Monitoring of current and historical energy flows
- Energy controlling (target/actual comparison)

Furthermore, due to the long-term archiving of the characteristic data and operating data in b.data Warehouse, a solid basis is formed for making decisions on the execution of refurbishments under consideration of economic issues.

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Completion period: 1998 / 2004

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