

MEDIEN DAS MEDIEN MAGAZIN BULLETIN

DISTRIBUTION / EMPLOYEE-TV



AS PART OF THE REORGANISATION OF THE **PROSIEBENSAT.1** GROUP LAST YEAR, PARTS OF THE TV STATION'S HEAD OFFICES IN GUTENBERGSTRASSE, UNTERFÖHRING WERE COMPLETELY REBUILT. DURING THIS PROCESS, THE MAINZ SYSTEMS INTEGRATION COMPANY BFE INSTALLED A HIGHLY SOPHISTICATED IPTV SYSTEM AS INHOUSE-TV. 104 MONITORS OVER FOUR FLOORS ARE USED FOR INFORMATION AND COMMUNICATION ACROSS THE TV STATION. THE MAJORITY OF THE IPTV TECHNOLOGY USED COMES FROM TERACUE AG- BROADCAST AND IPTV SYSTEMS.

AV-Matrix with no limitations

➤ When Thomas Ebeling took over as Chair of the Management Board at ProSiebenSat.1 Media AG in March 2009, it was one of his most important goals to network the individual group TV stations with each other in a synergetic manner. On the one hand, it was about saving money and, on the other hand, about achieving better use of the available resources. This naturally had a serious impact on the corporate structure. The responsibilities within the group were reorganised across the TV stations. Activities that had, until then, been separated according to TV stations at management level, in marketing and other departments were merged and the TV station bosses no longer reside in separate buildings today but have been moved closer together in one building complex on one floor. Better communication with each other is called for.

This is made easier thanks to the redesign of space at Gutenbergstrasse 3, Unterföhring. The ProSiebenSat.1

parts of the building there were completely renovated in 2009 and adapted to the new structure. Today, the office floors are light, friendly and transparent. ProSiebenSat.1 supports its communication-oriented spatial concept by using innovative technology.

On the initiative of the corporate group marketing department, those responsible for building services and the architects planned the installation of displays as information and communication stations on each floor. However, they were not really familiar with the technology required for this. This is where ProSiebenSat.1 Production got involved. The ProSiebenSat.1 group subsidiary was looking for a professional solution for efficient "Inhouse-TV" and finally commissioned BFE with the implementation of an IP-based system.

The Mainz systems company, in turn, sought support, technology and expertise from Teracue.

The IPTV specialists are not unknown to

ProSiebenSat.1. "We have been nurturing good contacts to Teracue for many years for broadcasting issues," explains Thomas Schwarz, Head of the Media Base System Department with 20 employees. It is responsible for broadcast technology at ProSiebenSat.1 Production and currently also for technical support of the IPTV system at Gutenbergstraße, Unterföhring. The corporate group's marketing department provides the content for employee TV.

GREAT FLEXIBILITY AND SCALABILITY

The ProSiebenSat.1 employee TV is distinguished by great flexibility and scalability. It obtains its content from different sources.

The satellite channels are fed into the IP network via DVB-100 TV gateways from Teracue. These generally comprise channels from SAT.1, ProSieben, kabel eins and Sixx. "In principle, any other satellite channel could of course also be fed in," says Peter Ehlert, responsible for Solutions Architecture and Postproduction at Media Base Systems.

A PC system with a PowerPoint application running serves as a second signal source. Here, the corporate group's daily canteen menus and current TV ratings are presented. The PowerPoint screen contents are fed into the network as multicast HD signals and are available there as streams, like the DVB TV channels. An encoding and streaming software application, the "MC-SCREEN" Multicoder from Teracue is used here. It guarantees that the images shown on the PC's PowerPoint reach the network as IPTV streams. The screen display is captured in native resolution, without any scaling or conversion and can be supplied in HD resolution up to 1080p. Even 2K HD is supported. Flash streaming is also possible using the Wowza Media Server.

The third source of the ProSiebenSat.1 employee TV is an iCue Server that acts as a multi-channel playout server. Trailers and image clips produced on a daily basis are played out from it. Currently, five channels are played out in parallel. "The system is very flexible though. You can easily increase the number of channels to 10 or 20," says Karl-Heinz Wenisch, CTO and co-owner of Teracue.

iCue is a kind of unique TV station for streaming media with integrated video archive. The iCue streaming system makes it possible to digitally distribute, manage and record from TV channels and camera signals. It can be used for

live video and video on demand with MPEG-2 and H.264 SD/HD for intranet IPTV.

The trailers used for employee information are produced classically and sent to the transcoder as a file, which configures the used transport stream's profile, MPEG-2 SD with 4 to 6 Mbit/s. After conversion by the transcoder, the material is placed on the server indexed and/or provided with metadata. It is then available for use in playlists and for streaming.

"So, with ProSiebenSat.1 Inhouse-TV, a real production



takes place, even if it is with a very streamlined personnel structure," says Ehlert. "In principle, everything can be controlled from one PC. One person is enough to allocate the content to monitors and play it using appropriate playlists," reports Ehlert. In the meantime, 104 LCD monitors in total (Sony Bravia 40") are connected to the Inhouse-TV system. The monitors integrated into the walls can be found in the reception area, the lift and in the corridors of the four floors, i.e. in the management areas as well as in the editorial, marketing and postproduction areas.

The lift playout consists of a PowerPoint presentation which shows the menu and broadcast stations viewing figures alternately in 30 second cycles.

"We are receiving excellent feedback about the information offered on the displays. It is noticeable as soon as something stops working somewhere. Then there are complaints straight away," emphasises Ehlert.

IP-COMPATIBLE SET TOP BOXES

All the displays in the company are fitted with their own IP-compatible set top box, which receives all IP streams on

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the network. The monitors are connected to the set top boxes using HDMI cables.

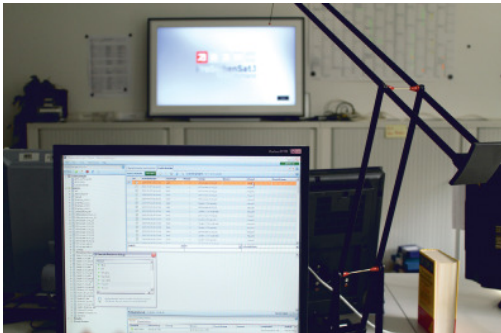
“As each monitor has its own set top box, it is also easier to control it remotely. Theoretically, you can compile a separate playlist for each individual set top box. Or you can



also merge groups of monitors and allocate certain programme contents to them,” reports Wenisch. “Each individual set top box can be

controlled and its status can be checked using the management software.”

The set top boxes used come from the manufacturer



Amino (Model A130).

Wenisch: “We have been using them for seven years and have had excellent experiences with them. They are

probably the most widely used IP set top boxes. Amino supplies the boxes with basic software. We only had to develop and integrate the set top boxes' control protocols for the IP-based remote control.” Teracue developed a graphic interface for infrared remote control for this.

With this, it is possible to set it up so that each set top box can directly access the iCue Server. This means the system cannot only be controlled remotely from a central location but can also be controlled on site using remote control. However, this option is not currently in use yet at ProSiebenSat.1.

Playlist, scheduling and controlling the set top boxes is managed using the IP-based remote control and configuration application “ElementManager” from Teracue. The

encoder, set top boxes and displays can be remotely controlled using this. The ingest in the iCue server, playlist compilation, broadcasting as well as monitoring and switching the set top boxes is managed in the Inhouse-TV control room. Wolfgang Hess, Head of On Air Promotion Department at ProSiebenSat.1, is responsible here.

The technology used in the control room is very manageable. There is merely a computer with MC-SCREEN for generating the lift playout, a large control monitor with set top box, a PC with ElementManager for scheduling and playout and a workstation with Teracue's iCue player for the ingest.

Any of the five current company channels can be played out from the control room, also including campaign, image and announcement trailers, which are supplied weekly by the SWPs (Senior Writer Producers). One channel is also used for poster loops, another for season- and event-oriented mood images.

The live programmes as well as the clips from the iCue Server are currently only presented on the monitors in SD quality with ProSiebenSat.1 Inhouse-TV. “However, the system per se could distribute HD signals just as well. An extension to HD is not initially planned though,” says Schwarz. Other channels could also be fed in via additional DVB TV gateways. “Our IP encoders could be used to feed in SDI signals, for example, if an event is taking place in the building and live images are to be displayed on all the monitors from it,” reports Wenisch.

He makes it clear: the Inhouse-TV IP network used at ProSiebenSat.1 works like a very flexible AV matrix. “The system works like a crossbar but without limiting sources and sinks. It is fully scalable. Other TV stations can be fed in at any time using additional TV gateways or encoders.

The number of displays and set top boxes in the system can also be extended as much as you like. The network is transparent for all input signals (DVB/TV, SDI, DVI, PC). Nothing has to be specially converted. The set top boxes' decoders automatically do this. Each signal can be called up using this at any location in the network,” he summarises. The whole system is already HD-capable now.

In this respect, the technical concept of ProSiebenSat.1 employee TV is an outstanding example of the entire corporate group's new strategic direction, in both technical and organisational matters.

› Eckhard Eckstein

REFERENCES/CUSTOMERS.

Reference installations of our systems are open to on-site visits.
Please get in touch with us if you would like to see our products working in reality.


Finance: digital company TV

Dresdner Bank, Kleinwort Wasserstein – Frankfurt
E.ON AG – Düsseldorf
E-Plus Service GmbH & Co. KG – Potsdam
Raiffeisenbank – Kleinwalsertal
CSOB Bank – Prague
NXBP Bank – Paris
Süddeutsche Zeitung – Munich


Video monitoring: control stations

DLR German Aerospace Centre – Oberpfaffenhofen
EADS Astrium – Bremen
GCC – Galileo Control Centre - Oberpfaffenhofen


Control and operation centres

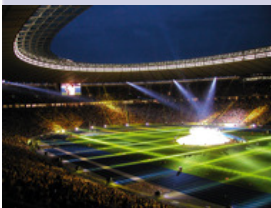
SIMOS integrated control centre – Stuttgart
Saxony's State Ministry of the Interior for Disaster
Prevention – Dresden
Carl Zeiss Optronics GmbH – Oberkochen


Medicine and campus TV, Tele-Medicine

Karl Storz Systemtechnik GmbH - Tuttlingen
University Hospital of Würzburg
Medical Faculty of the University of Erlangen – Nuremberg
Eberhard Karls University in Tübingen


Documentation and training

Fachkrankenhaus Coswig of the Technical University
of Dresden
Medical Faculty of the University of Greifswald
Centre for Ophthalmology at the University of Cologne
UCC Faculty for Sign Language – Denmark


Stadium and event TV

Olympic stadium – Berlin
Mercedes-Benz Centre – Stuttgart
Esprit Arena – Düsseldorf
SAP Arena – Mannheim


Monitoring, editorial TV and compliance recording

PLAZAMEDIA GmbH – Ismaning
ProSiebenSat1 Production – Munich
N24 – Berlin
Ministry of Treasury – Rome
TV Markiza – Slovakia


Video monitoring for control and command centres

Police, Government, Armed Forces, Defence,
Intelligence customers