



## Case Study

# Football Show Hits the Mark Thanks to New Data Centre

*Volltreffer as the viewers see it: presenter Max Schmiedl (standing at the desk on the left) with his studio guests. Meanwhile, an entire data centre is working away behind the scenes of ATVplus' football show.*



*Erwin Keil, specialist for TV production technology, demonstrates how, from the control room, producers can access all computers required for producing a TV show.*



*The Data Director: The Avocent AMX5010 KVM switch captures all user entries made by the production team and relays them to the connected computers.*

● **Vienna. October 2004.** The thought of a Saturday evening with no football on the box is unimaginable for millions of fans. And a football show with technical problems is inconceivable for producers and directors. A single 90-minute sports programme can contain dozens of match reports, interviews, graphics and live studio discussions. But what football fans never get to see is the data centre working away behind the scenes between the opening and final credits.

ATVplus, Austria's only commercial national broadcaster, has been televising the country's Bundesliga matches since the current season started. Fans meet up regularly at ATVplus on the football show *Volltreffer* ("Back of the Net!"), for which a brand new studio was built just a few months ago.

When Max Schmiedl, presenter of *Volltreffer*, and his team go on air, they place their complete trust in the first class technology solution supplied to ACT-Media Produktionsservice-GmbH by the Vienna-based system vendor AMEC Medientechnik Vertriebs-GmbH.

Some 44 servers provide all of the information required both on and off camera: from video servers providing reports from the football stadiums, to character generators which create captions displayed at the bottom of the TV screen and autocues providing the presenters with their scripts. All of this is backed up by a host of other computers that work in the background to provide additional facilities for the show.

To make sure *Volltreffer* is always on target, 16 staffers work behind the scenes on high-performance computers. They assess and edit incoming reports in the short space between the final whistle and the start of the show, and deliver them to the control room.

The control room is the studio's nerve centre, where decisions are made about which report goes on air and which of the studio cameras will transmit images to the viewers at home. Every Saturday the show features 11 pre-recorded segments, one live link, statistics containing graphics after each of the five match reports, and countless other types of text segments, all of which must be displayed on cue.

At the heart of all this behind the scenes work is a single piece of sophisticated equipment. It controls who does what on the production computers. Known as a KVM switch, this piece of hardware is the interface between operators and the computer technology. The importance of this switch interface is emphasised by Erwin Keil, managing director of AMEC Medientechnik, who explains that all of the essential systems in the video network depend on this single piece of equipment. The switch captures the signals from the keyboard, video and mouse (hence the acronym KVM) of each operator workstation and relays them to the relevant server. This allows technical staff to work as if they were accessing the computer directly –

regardless of which workstation they are actually working on.

This is essential for live broadcasts in particular, where error-free operation and reliability are absolutely essential. Describing the worst-case scenario, Keil explains that "if a workstation terminal breaks down, I can simply move on to the next unoccupied one and continue working as normal." If the error doesn't actually happen "on air," viewers won't even notice the breakdown.

The use of the KVM switch was certainly a leap of faith on the part of ATVplus. The first *Volltreffer* show went on air on July 14th but the AMX™5010 KVM switch, manufactured by US company Avocent, only arrived at ACT-Media the day before. "The show was practically broadcast from a building site," notes Keil. Using the system in a live show without thorough testing beforehand was certainly a gamble, he admits, but as he puts it: "What else were we to do?" However, their courage paid off and the first show broadcast without any problems.

Keil said the investment in the AMX5010 switch was absolutely essential for managing the sophisticated technology required for the football show. The AMEC team previously equipped ACT-Media's production environment with KVM switches from the Avocent XP series. Positive experiences with the equipment prompted Erwin Keil and ACT-Media's management to choose Avocent as the preferred supplier again when they required KVM switches with additional ports to support the *Volltreffer* production's extensive server farm. AMEC's hardware partner Weik Ordnungsmittel also recommended Avocent. "The AMX5010 met our exact requirements," says managing director Wolfram Weik who explains that "ACT-Media needed a device

that was highly reliable and able to manage the most diverse systems."

AMX developers even factored in the need for problem-free compatibility between the switch and the input device. The result is that the AMX5010 appliance is the only KVM switch capable of providing error-free transmission of jog-wheel control signals for Pinnacle's video editing system. Editors can use the jog-wheel to run video data backwards and forwards at any speed, just like a traditional film reel. This in itself is vital for precision editing of footage down to the exact frame.

Keil said one of the big advantages of the matrix switch is its unlimited parallel access – users can work simultaneously on any of the computers connected to it. Keil is also impressed with the fact that user access can be centrally managed, thus preventing both accidental errors and deliberate manipulation when the systems are in use.

"The incredibly high level of flexibility is yet another factor which separates the new KVM switch from the competition," said Keil. By allowing technicians to choose the systems they require for a specific show from the device pool, and providing predefined macros which contain all of the settings necessary for a production, the changeover to the new system was extremely smooth. "Setup times for switching from show A to show B have been reduced considerably," he added.

Meanwhile, the Avocent AMX system has also been used in other ACT-Media productions, including the entire children's schedule at ORF (Austrian Broadcasting Corporation), a children's talent show called *Kiddy Contest*, as well as the home and lifestyle programme *Schöner Leben* and the daily talk show *Barbara Karlich* also broadcast on ORF.

Erwin Keil concludes that the switch is reliable under the high demands placed on it by live television. "The matrix is rock solid," he said. The switch is reliable, capable and always on the ball – like a midfielder general on the football pitch.

#### **AMEC Medientechnik Vertriebs-GmbH**

AMEC Medientechnik Vertriebs-GmbH is a specialist in planning and building studio and post production facilities in the broadcasting and multimedia industry. The range of services provided by the Vienna-based systems vendor includes planning, installation and maintenance of technology for TV productions. In addition to television studios, the company, which was established in 1995, also equips fixed multimedia installations, including those at the Schönbrunn Zoo and the Siemens-Forum, an event centre in Vienna.

On the Internet: [www.amec.co.at](http://www.amec.co.at)

#### **Avocent**

Avocent is the leading worldwide supplier of KVM switching and connectivity solutions that allow IT managers to monitor and control entire server farms from anywhere in the world, both locally and via the Internet. The company's portfolio covers the complete market from specially configured enterprise solutions to sophisticated small office product solutions. Avocent Corp. was formed in July 2000 from the merger of Cybex Computer Products Corp. and Apex Inc. Apart from its headquarters in Huntsville, Alabama and other locations in the US, Avocent branches include Shannon (Ireland), London (England), Tokyo (Japan), Steinhagen (Germany), China and Singapore.

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