Case study
R&S technology at Studio Berlin

At a glance

Studio Berlin placed vital Rohde&Schwarz DVS technology at the core of its production system and main control room. In order to produce major German TV shows like "The Voice of Germany" to a five million audience, the Rohde&Schwarz DVS systems are responsible for the complete production cycle: 12 channels of R&S®VENICE provide smooth ingest and playout along with transfer and transform operations for delivery.

The R&S®SpycerBox ensures reliable online storage for the implemented VENICE systems. This grants Studio Berlin another competitive advantage over other service providers since their trained staff can easily move between different setups and scenarios that VENICE offers.

Studio Berlin benefits from the flexibility of the implemented systems and is able to react to the German broadcasters' demands with ease: state-of-the-art technology from Rohde&Schwarz DVS allows them to produce codec- and format-independent, adapting their production environment according to customer requirements.

1.) The main installation counts three VENICE systems plus a SpycerBox for the main HD control room

2.) The second installation, including one VENICE, is on remote location

3.) For the secondary HD control room another two units of VENICE were integrated

About Studio Berlin

Studio Berlin, founded in the early 1950s, has several subsidiaries and sister companies, e.g. Studio Hamburg and Pinewood Studio Berlin that was founded in 1998 as a subsidiary from Studio Hamburg.

Offering highest technical standards in its production environment, working on large entertainment or theme shows, TV series, magazine formats or international cinema, the company is involved at every step: from script development, planning, to implementing the full-service location, production, post production and delivery. Studio Berlin is well-known for its productions like "Günther Jauch", "Voice of Germany", "Let's Dance", "Anne Will", "hart aber fair" or its award-winning movie "Good Bye! Lenin".

"To handle the rapidly growing amount of data and the great number of different file formats and codecs, represents a major challenge for our file-based workflows. The Rohde&Schwarz DVS systems are the perfect solution: high-performance and reliability, a huge range of features and functions and easy to use for our operators."

Ralf Helbing,
Head of IT at Studio Berlin

ROHDE&SCHWARZ

Challenge

Being an independent full service TV provider, Studio Berlin is commissioned by diverse contractors with varying requirements: a multitude of incoming formats and an abundance of codecs and playout formats as well as diverse delivery requests.

Producing an impressive number of different shows, usually equipment has to be rented or bought to meet these complex demands. This leads to slow and cost-intensive workflows, which can be difficult when you have to comply with pre-defined specifications and deadlines.

Therefore, Studio Berlin was looking for a system that would allow them to react flexibly on the number of formats, codecs and workflows they were faced with – deriving from and to be delivered to several editing stations, cameras or other media. Their goal was to implement a system that would effortlessly switch from project to project and that would handle all involved ingest and playout formats with ease.

On top of that, transcoding capabilities and connectivity to editing environments were demanded, too. The complete package had to speed up their workflows considerably while allowing for a decisive competitive advantage.
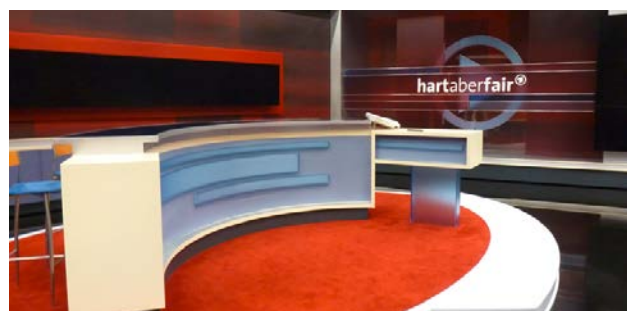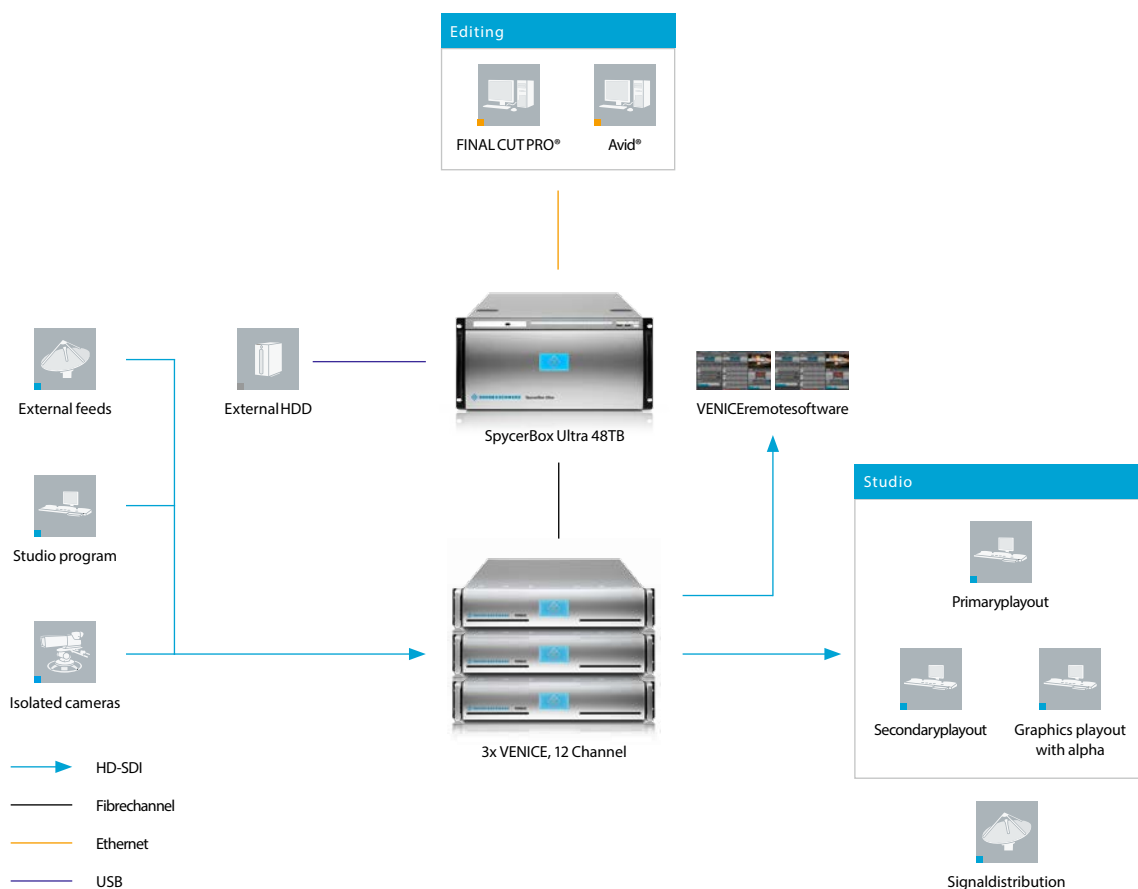
Solution

The product portfolio from Rohde & Schwarz DVS offered the ideal solution. With the integration of twelve VENICE channels and a SpycerBox several German shows are being produced, e.g. "Anne Will" or "hart aber fair". In a separate installation, another VENICE is being used for "Günther Jauch" – all of them major German TV shows.

Since 2010 the Rohde & Schwarz DVS equipment covers the key production tasks at Studio Berlin's production center. In its main installation the Rohde & Schwarz DVS systems are vital to the main control room: Three VENICE systems plus a SpycerBox for storage form a channel pool for a multitude of production jobs.

With VENICE, Studio Berlin implemented a system that proved itself to be so much more than a classical video server.

The three VENICE systems with their 12 channels effortlessly handle the multitude of incoming signals and codecs and play them out in any required format as well. Furthermore, the VENICE systems, being the core of the production workflow, became Studio Berlin's true time savers and smart media production hubs: No additional software is required, since VENICE includes ingest control, diverse control mechanisms and allows for different scenarios. Even material for last-minute changes, e.g. during live shows, are managed smoothly, since VENICE does not need to run complicated conversion processes. The delivery is carried out extremely fast, too, due to simple and comfortable settings.

Editing

FINAL CUT PRO®   Avid®

External feeds   External HDD   SpycerBox Ultra 48TB   VENICEremotesoftware

Studio program   Studio

Isolated cameras   Primaryplayout

3x VENICE, 12 Channel   Secondaryplayout   Graphics playout with alpha

→ HD-SDI
— Fibrechannel
— Ethernet
— USB

Signaldistribution

The VENICE systems displayed all their layers of functionalities and their all-in-box-concept: along with their ingest and playout capabilities, the transfer and transform categories were fulfilled in the control room. Their open system architecture allows fast and uncomplicated data exchange.

Workflow example

Studio Berlin used the VENICE GUI right from the start, abandoning the idea of installing a separate external controller. The VENICE GUI proved to be very fast, and intuitively – no additional cabling and investment became necessary. Studio Berlin benefits from VENICE's GUI when running back-to-back playout, compositing playlists or while ingesting program or isolated cameras – then even using direct streaming and physically seeing the ingest signal in the overlay without needing to install an external multiviewer in the VTR room. SpycerBox with its open storage architecture fits seamlessly into Studio Berlin's environment. Especially SpycerBox's high performance levels were an additional plus in Berlin. It fulfills two major requirements at the same time: On the one hand, the SpycerBox is implemented as VENICE's realtime storage via Fibre Channel.

On the other hand, thanks to its NAS configuration, SpycerBox connects to separate editing environ-

ments granting operators direct transfer options, abandoning the formerly required network of runners or tapes. It allows for fast data exchange between production and editing, e.g. with Avid® or FCP systems. Operators at Studio Berlin especially valued the reliable storage's ability to conveniently distribute data across the entire network with ease. Again, this led to smooth, connected processes.

The main benefit of VENICE is its flexibility: any setup can easily be adapted to another production scenario. Studio Berlin's environment is versatile in the following aspects: adjustable workflows that allow to rapidly adapt to changing surroundings and conditions. VENICE enables Studio Berlin to produce a show one day, then, on the next day, to completely switch to another production scenario.

At the German political talk show "Anne Will" eight channels are applied for ingest: record of the master
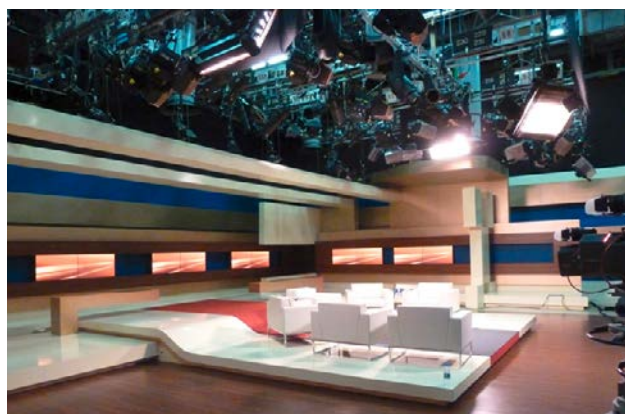
signal and the isolated cameras with XDCAM HD 422®. For primary and secondary playout, four channels are used. All establishing shots are bundled in one playlist.

VENICE supports alpha channel playout: The title sequence includes sophisticated transparency effects with respective logo animation. If the alpha channel is integrated in the file, VENICE handles this effortlessly – making separated file deliveries for key and fill obsolete.

When running secondary playout to screens on set with additional material, VENICE's channel grouping feature became vital at "Anne Will". VENICE enabled multi-monitor playout of background animations over several connected screens – being one of the visual key elements of the talk show.

Due to post production setup for "The Voice of Germany" huge editing suites were connected to the Rohde & Schwarz DVS systems. They proved to be the newly established production environment's vital artery: The data was effortlessly fed and used for playout during the show. Thus no additional gateway architecture was needed. Instead, connected processes were established. The producers of the show were especially happy with VENICE's proxy abilities: Right after the show all 12 camera signals could be delivered as proxy files, including the respective time-codes. This feature allowed for a complete overview and production clarity: VENICE includes the possibility to generate a proxy file during ingesting. This can be either carried out in a while-scenario, i.e. parallel to ingesting or after the actual event, including burn-in timecodes.

These connected workflows sum up what broadcasting is all about at Studio Berlin: saving time and money. Giving staff the creative freedom to make a TV show feel special and extraordinary – instead of keeping them busy with administrative jobs that are unnecessary when just a few clicks on a system

can handle that. With the integration of the VENICE systems along with the SpycerBox Studio Berlin gained exactly what they were looking for: speed and flexibility in their daily production environment.

Benefits

ı **Flexiblity:** Versatile workflows, rapidly adapting to changing surroundings and conditions. Complete openness between all connected systems, including storage architecture and editing systems

ı **All-in-one-box concept:** ingest, playout, transform and transfer capabilities all included. No additional equipment required

ı **Integrated software features for streamlining workflows:**

· Proxy file generation in parallel

· Playout and ingest control

· Transcoding

· System openness, e.g. for editing systems

ı **GUI:** allows for ingest and playout control, plus remote-control

ı **Competitive advantage:** speedy workflows, cost-efficient and future-ready

About Rohde & Schwarz DVS

For more than 25 years, Rohde & Schwarz DVS GmbH has been very successful in the professional film, video post production and broadcast markets. The specially developed and manufactured hardware and software are applied to the production of popular TV series, Hollywood blockbusters and in Digital Cinema. R&S®CLIPSTER was the first system in the world to make real-time 4K processing possible. The future-proof ingest and production server R&S®VENICE offers a flexible solution for modern, file-based workflows in broadcast environments.

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