

Application note

SOAP and FIMS in media environments

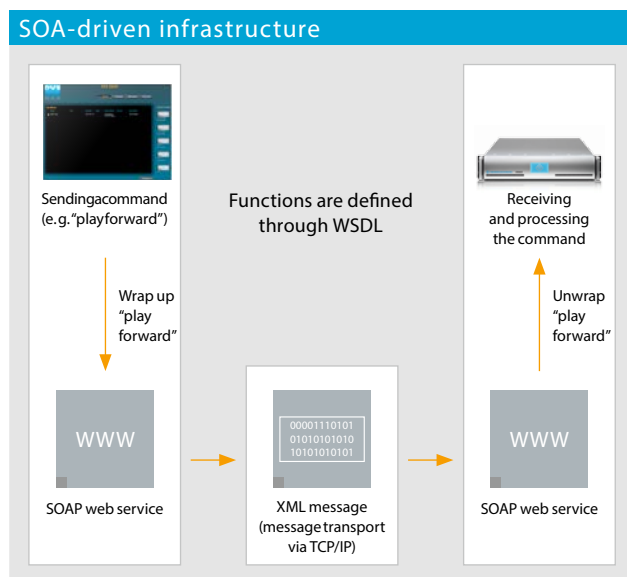
Case summary

Need: A future-proof API and framework to enable and streamline customized and automated workflows with Rohde&Schwarz DVS software applications

Solution: R&S®CLIPSTER, R&S®VENICE and R&S®Spycer with web service-based SOAP API and FIMS

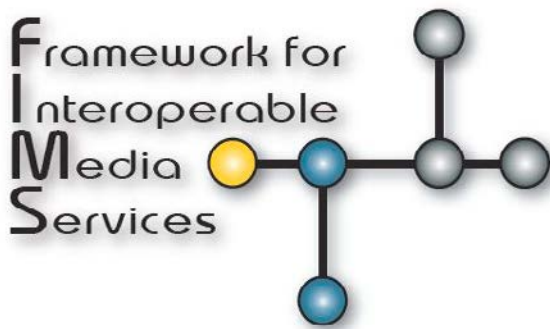
Background

Large media processing infrastructures in major broadcast facilities and post production houses are likely to be automated by software or customized tools that enable a streamlined workflow to manage and process huge amounts of footage every day. One way to improve efficiency, maintainability, and functionality is to design the overall infrastructure according to the Service Oriented Architecture (SOA) paradigm. In order for its customers to adopt CLIPSTER, VENICE, and Spycer into their SOA-driven media infrastructures, Rohde&Schwarz DVS offers SOAP API (Application Programming Interface) as a standardized interface for remote control.



Overview SOAP

Service Oriented Architecture is a paradigm improving the overall efficiency, maintainability and functionality of workflows by orchestrating the systems and processes using a superior control layer on the enterprise level. SOAP, originally defined as Simple Object Access Protocol, is a web service-based protocol to exchange information such as commands to control certain functions via remote. SOAP relies on Extensible Markup Language (XML) as the message format and functions as a transport mechanism that enables sending procedure commands from one application to another.



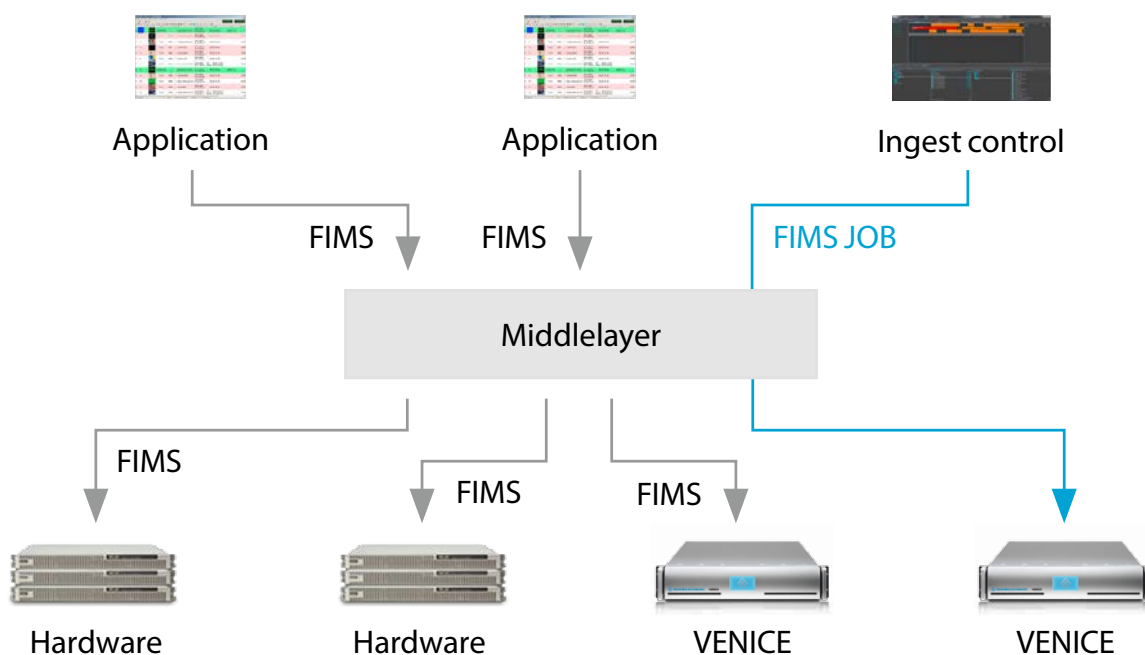
Overview FIMS

FIMS (Framework for Interoperable Media Services) is a standardized web server interface for media operations. It is currently being developed by the EBU (European Broadcast Union) in Europe and the AMWA (Advanced Media Workflow Association) in the USA, involving several major broadcasters worldwide. The main advantage of FIMS is its vendor independence, enabling seamless system interaction in workflows. Several companies participate, e.g. IBM, Sony, Harmonic and, of course, Rohde&Schwarz DVS. With its ingest and production server VENICE, Rohde&Schwarz DVS is the first company that features a FIMS-compliant interface in a system.

Using SOAP and FIMS

In order to use the SOAP interface to remote control CLIPSTER, VENICE, and Spycer, it is possible to either

implement the SOAP functionality into an existing software application or a stand-alone web-based application. One advantage of a SOA-driven infrastructure is the use of open formats instead of proprietary structures as system components. Our products rely on open standards. Project files, for instance, are being stored in the XML format, allowing customization on the user level. The available functions in CLIPSTER, VENICE, and Spycer that can be used via remote control are standardized using the Web Services Description Language (WSDL). With the SOA paradigm it is possible to orchestrate multiple CLIPSTER, VENICE, and Spycer installations from one single SOAP application. The conjunction of the SOA architecture together with FIMS leads to improved workflow flexibility. In the broadcast and post production business, the traditional architecture of a production system shows proprietary point-to-point connections. This not only slows down the workflow but also brings along high effort for the initial integration. Changing the workflow or its components becomes a very demanding task, followed by high costs and a general inflexibility. SOA architecture with FIMS on the other hand, offers versatile applications and services – thanks to one single, defined communication interface. This setup allows for easy changes in the workflow and its components. The benefits are clear: low costs and full workflow flexibility.





CLIPSTER

As the heart of your mastering, Rohde&Schwarz DVS's workstation CLIPSTER can be used in an even more efficient way with SOAP. CLIPSTER offers a variety of functions, controllable through the API. For example, SOAP offers control in the finalizing process for all available file formats. This even includes the fast generation of high-quality DCPs (Digital Cinema Packages) thanks to Rohde&Schwarz DVS's unique hardware acceleration. Furthermore, hardware-based zoom and pan can be automated this way. On top of this, multiple versions of the same footage source can be created in a single run when orchestrated via SOAP.



VENICE

VENICE is well-positioned as a future-ready ingest and production server for highly optimized file-based TV production workflows. The growing need for multiple video formats and codecs in a broadcast studio environment is easily handled with VENICE's flexible multi-format video and codec pipeline for each channel. Thanks to its open platform and file system architecture, VENICE can

seamlessly be integrated into any file-based broadcast production environment. VENICE offers continuous optimization of efficiency in your workflows – in a single system. VENICE is the first system worldwide to have integrated the open, web-service standard FIMS. VENICE offers several services via FIMS, e.g. "Capture" and "Transform". With its SOAP interface, VENICE can easily be automated. Templates facilitate the broadcast workflow by defining different types and lengths of production. Content can be imported, edited, automatically titled, managed and delivered to VENICE or third-party editing clients without latency. Running on an open source Linux® operating system, VENICE clearly follows the SOA paradigm.

Spycer

The SOAP API enables automation of and remote access to Spycer's powerful content control feature set. Especially when it comes to file system or network operations, Spycer provides a sophisticated functionality set. For instance, using Spycer's high-speed copying process with enhanced algorithms is an ideal way to move around data within the company infrastructure. With Spycer, scanning the content's metadata, extracting it into the database, as well as managing and finding footage on large storage installations becomes much more efficient.

Customize your workflow

Are you interested in more detailed information on how to use SOAP with FIMS to customize your workflow? Would you like to know which remote capabilities we can offer you? Don't hesitate to contact your local Rohde&Schwarz representative.

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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