Case Study
European Parliament in Brussels & Strasbourg

IP TO KEEP EUROPEAN CITIZENS IN THE LOOP
Lawo Material installed at the European Parliament:

Audio Gear
- 2x Nova 73 HD, handling over 3000 channels each
- 2x mc² 36 mixing consoles
- 1x mc² 56 mixing console

IP Devices
- Over 30x V.__link4 video and audio signal transport and processing modules, also used for lip sync (Brussels and Strasbourg)

Control
- 4x VSM Broadcast Control and Monitoring System (1 main, 1 backup each)
Streaming and IP for Transparency

The best way to keep the European flame burning—and to counter remarks to the effect that nobody actually knows what’s going on “in Brussels”—is to allow the public to follow the debates of the European Parliament.

To this effect, the European Parliament hosts a website called EuroparlTV (www.europarl.tv.europa.eu) where debates at the European Parliament in Brussels or Strasbourg can be streamed in the WMV (Windows Media Video) video format. The MP4 format (Moving Picture Experts Group) is scheduled to be added soon.

All material that can be streamed from this website is available in all official languages of the European Union (for which interpretation is provided), plus the original language. Up to 13 events can be broadcast simultaneously and are presented in three different qualities to accommodate different bandwidths.

Detailed instructions are available on the website to ensure that all European citizens with an internet connection can take advantage of this service.

The services provided by the EuroparlTV site are Live Broadcasts, Plenary on Demand, Committees on Demand, and Other events on Demand.
It Started With An Audio Router…

In 2013, Lawo was contacted by the European Parliament to submit a quotation for a new audio routing matrix in Brussels. The existing system did not allow the European Parliament to migrate from 24 to the requested 32 languages for interpretation. As debates and meetings take place in up to 40 different locations, at least 320 audio channels needed to be added.

Lawo proposed its Nova 73 HD audio router, which was duly installed and has been running like clockwork ever since. A VSM control and monitoring system was added for convenient patching of the required audio channels to the desired destinations at the press of a button on a hardware panel or a touch-sensitive screen.

The reliability and user-friendliness of Lawo’s solution and the client’s satisfaction with Lawo’s swift and efficient service quickly evolved into a partnership whereby Lawo became the European Parliament’s first port of call for any additional features and function requests.
...And Then Video And IP Came Along

In 2017, the European Parliament sent out a call for tender for the acquisition of web encoders for its Multimedia Center (the JAN building in Brussels). Lawo decided not to respond to this call, since web encoding is not part of its core business, and so another company won the tender. The project involved providing 2 SDI signals, each with 16 embedded audio channels, for a total of 32 language versions per stream for the European Parliament’s TV website. While in the past, SD picture quality had been deemed sufficient for such streams, the EP’s technical department wished to upgrade to HD.

For organizational reasons, the video and audio generated in the PHS building, where the audio and video equipment is located, need to be transmitted to the JAN building where they are encoded and streamed. This scenario proved more than the winner of the tender could muster.

Concurrently, the European Parliament’s interest had evolved—in the light of the growing momentum of IP as the transport medium of choice, it was decided to adopt a future-proof solution.

After consulting with Lawo Benelux, it became clear that installing V__link 4 video and audio signal transport and processing modules for WAN-based applications would provide the European Parliament with a comprehensive solution.

The V__link 4 (as well as its successor, the V__remote 4, and C100 modules with the appropriate software inside a V__matrix frame) is indeed able to encode HD video signals received via its SDI inputs and to embed up to 16 audio channels. The latter can be MADI signals originating from a different source into the video. The resulting data packets are transported from the PHS to the JAN building via a fiber-optic IP link.

A redundant network based on Arista switches is used as “pipeline” between the V__link 4 units at the PHS building and the fiber-optic IP line. A mirrored system (Arista switches and V__link 4 units) was installed at the JAN building where the data packets are received and encoded as two video streams for the website.

Alongside the conversion, embedding and transportation tasks of the V__link 4 units, Lawo’s VSM system provides PPM metering and thumbnails that allow operators to check which signals are available where, and to take corrective action where necessary.
Multimedia Assembly Line

The specificity of the setup at the European Parliament in Brussels is that the video signals (SDI) originate from the Broadcast division, while the audio signals (MADI streams) are contributed by the Conferencing division. This means that the video and audio signals are not in sync when they arrive at the V__link 4 units. Lip sync is nevertheless achieved via appropriate settings for the V__link 4’s built-in Delay parameters.

In combination with the embedding of 16 audio channels into the two video signals (for a total of 32 audio channels), the V__link 4 thus acts as a turn-key solution for the European Parliament’s needs. The “finished” data packets can be monitored and are transmitted along a main and a backup IP route providing SMPTE 2022-7 Seamless Protection Switching (“hitless merge”) to guard against downtimes if one switch or IP line fails to get the data packets across to the other building.

Lawo was able to deploy this solution in a matter of days in the Summer of 2017.
Emulation in Strasbourg

As mentioned earlier, the facilities in Brussels use a VSM system for the convenience of routing and switching the audio signals received and transmitted by the Nova 73 HD router in a user-friendly way, to monitor the levels, and to remotely control the existing video router. The V__link 4 units, however, are not yet remotely controlled via VSM.

Following the successful deployment in Brussels (Belgium), the European Parliament decided to roll out an identical system in Strasbourg where MEPs convene 12 times a year for four-day sessions. For historic reasons, the city of Strasbourg (France) is the official seat of the European Parliament, and all votes must take place there.

The Strasbourg system was installed in early 2018 and is again controlled via VSM.

This time, however, VSM takes care of all monitoring aspects, like PPM metering and thumbnails, signal routing, plus remote control of all V__link 4 units.

The convenience of this comprehensive approach, in turn, inspired operators in Brussels to extend the functionality of their VSM system along the same lines. This enhancement will turn VSM into an overarching control system for the entire setup and is scheduled for delivery in late 2018.

Small Steps Become A Giant Leap

Lawo’s European Parliament project in Brussels and Strasbourg is a good example of how a specific assignment—installing a more powerful audio router and an agile control system—can evolve into a much larger endeavor that enables the customer to cover all video, audio and transport bases for their specific application.

This project shows that the value of IP-based WAN links for the transport of video and audio is not limited to the broadcast world—any scenario where such data need to move from A to B (and beyond) benefits from an IP approach.
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