Case Study • MEDIAparc, Switzerland

When completed in 2019 by Swiss broadcasters RadioFr and La Télé, the 3,000-square-meter MEDIAparc facility just outside Fribourg became Switzerland's first all-IP media facility. Formally known as MEDIAparc Maison des Médias at Villars-sur-Glâne, the purpose-built facility boasts a 360° media offering the includes RadioFr in French, RadioFr in German, and RadioFr Music; La Télé Vaud-Fribourg; MédiaPub SA; the news website Sept.ch; digital media ad agency Skippr.ch; and FRiStyle, an online regional event advisor platform. SLG Broadcast served as the system architect and general contractor for the green-field project, which incorporates the latest in IP technologies.

Challenge

The broadcasters' goal in bringing various media departments under a single roof at MEDIAparc was to optimize office and studio space, as well as resources and production costs, and to encourage creative cross-fertilization for a truly 360° media offering. This converged model was designed to allow RadioFr and La Télé to engage audiences across multiple platforms, including radio, TV, social media, blogs, nonlinear consumption, and Facebook Live/Periscope Live, with a dedicated app connecting these experiences.

The primary challenge, undertaken by SLG Broadcast with its technology suppliers, was to implement state-of-the-art technology and IP-based infrastructure in a way that would meet these requirements while driving acceptance and easing the transition for operators — across diverse media formats and platforms — on a short timeline.

In this environment, critical technical requirements for MEDIAparc included versatility in handling audio and video essences, with accessibility from anywhere and production capabilities across the two on-air studios and the production studio.

Solution

By building MEDIAparc infrastructure on an IP-based network, SLG Broadcast ensured that all signal streams would be available anywhere on the MEDIAparc network, both inside the facility and within radio and television OB vans.

The non-blocking IP network is built around a 16-port Mellanox switch with a bandwidth of 40Gbps per port. Artel Quarra 10G PTP Ethernet switches with 1Gbps ports split up the network, supporting virtual "on-air lanes" (much like conventional audio busses) that represent content going to air for different stations. While each RadioFr radio station is operated independently, any one studio, or combination of studios, can serve any on-air lane. The newsroom and La Télé OB unit likewise can be connected to any of these on-air lanes.

Equipped with a high-end timing circuitry and design that minimizes time drift, the Quarra range of IP PTP switches provides exceptionally accurate IEEE 1588v2 timing, in turn helping to maintain and improve synchronization among end points, devices, and processes across the MEDIAparc network. Lawo's VSM broadcast control system, which manages all technical patching for the facility, allows operators to subscribe only to the streams they require.

Results

Quarra switches support standards-based timing (SMPTE ST 2110-10 and ST 2059-2) and are RAVENNA AES67-approved. They also boast support for IGMP v2/3, QoS, protection switching, VLAN, MEF service delivery and network OAM. The Quarra's straightforward configurability allows for quick provisioning, with preset configurations supporting the facility's largely automated operations.

By leveraging networking flexibilities introduced by the new MEDIAparc IP infrastructure and by ensuring sound PTP implementation with Quarra PTP switches, RadioFr and La Télé have been able to cost-effectively introduce new creative workflows that deliver a unique 360° media experience. In building a media-sharing economy across fixed and mobile production facilities, the broadcasters have realized greater agility and efficiency in creating engaging content across platforms.

The switching infrastructure at MEDIAparc provides ample capacity for the connection of new sources and inputs now and in coming years, as well as the flexibility to adapt as the media industry continues to evolve.

"Artel's Quarra PTP switches were the obvious choice for this project, where accurate timing and switching are essential to agile and reliable handling of audio and video across various configurations. They are proven performers with a robust feature set that will provide years of utility and value for MEDIAparc's 360° model."

Simon Groll, Technical Manager
SLG Broadcast

MEDIAparc Fribourg (CH)

LAWO C100/5 Multiviewer

LAWO C100/1 .... LAWO C100/4

LAWO V_Remote4

2 x 40 GB

each
1 x 40 GB

2 x 10 GB
Linqx DAC Splitter Cable

PTP-GMT/2

VSM PC

Mellanox
SN2100
CDM

PTP-GMT/1

4 x 10 GB
Optical Splitter cable

2 x 10 GB

Patchpanel

ARTEL
10G/2
Studio

ARTEL
10G/1 CDM

powercore1

mc²36

DELL Blade1

...

DELL Blade18

... powercore6

sapphire

Notes:

Primary IGMP Querier could be the SN2100
All switches shall run in PTP Boundary
ARG 10G/1+2 shall run in 2step

Studio area:
powercore1: Studio Fribourg
powercore2: Studio Freiburg
powercore3: Editing booth
powercore4: TV Audio Console
sapphire: Radio Production

Machine room:
powercore5: Radio Matrix 1
powercore6: Radio Matrix 2
VSM PC
PTP-GMT/2