RAVENNA 2020 Webinar Series

(The “Remote” Sessions)

Remote Production in Real-Life

Tue, Dec 8, 2020
15:00 h (CET)

Presenter: Dirk Sykora, Lawo
Andreas Hildebrand, RAVENNA Technology Evangelist
• more than 25 years in the professional audio / broadcasting industry
• graduate diploma in computer science
• R&D, project & product management experience
• member of AES67 TG and ST2110 DG

ALC NetworX GmbH, Munich / Germany
• established 2008
• R&D center
• developing & promoting RAVENNA
• Partnerships with > 40 manufacturers

RAVENNA
• IP media networking technology
• designed to meet requirements of professional audio / broadcasting applications
• open technology approach, license-free
• fully AES67-compliant (built-in)
Dirk Sykora, Technical Sales Manager Benelux, Lawo AG
- Graduated with distinction at RITS National College for Audio and Movie Education, Brussels (Belgium)
- Passionately working as audio engineer for more than 20 years
- Background in Live, Studio, Broadcast
- First Lawo experience in 2004 at the Olympics Opening Ceremony in Athens, since then an enthusiastic Lawo fan
- Founded the Lawo office in BeNeLux in 2013

Lawo AG, Rastatt / Germany
- Internationally leading solution provider for professional broadcast technology
- Manufacturer of digital mixing consoles, routing systems, video solutions and turnkey systems
- Reliable partner for TV and radio stations, production companies, theatres and event organizers
- Founded in 1970 as an engineer's office for electronic equipment in Rastatt, Germany
- Foreign branch offices in Benelux, Canada, China, Norway, Singapore, Switzerland, UK and USA
- Sales partners in more than 40 countries
Remote Production

Agenda

Three case studies

• Football
• Interlink countries
• Daily news

• Goal of the project
• Technical implementation
• Difficulties and solutions
Remote Production
Football

2016 – Euro in France
Remote Production
Football - 2nd Division

Request for remote production Belgian football

• Proximus
  • Telco provider in Belgium
  • Rightholder
• Cooperation with Broadcast companies
  • Videohouse
  • NEP
Remote Production
Football - 2nd Division

Goal of the project

2nd division football match

- 6 camera onsite
- 2 commentary positions
- Audio / Intercom
Remote Production
Football - 2nd Division

1 Gb

1 Gb
Remote Production
Football - 2nd Division

Technical Implementation

V__Remote4

- Video / Audio streaming
- RAW / Compressed Video
- 10b / 1Gb
Remote Production
Football - 2nd Division

Audio

Cams

Monitoring

8 x HDSDI

2 x HDSDI

Intercom

Control cam
Remote Production
Football - 2nd Division
Remote Production
Football - 2nd Division

Audio
cams
Monitoring

Audio MTX

8 x HDSDI
2 x HDSDI

Proximus
MPLS network

1 Gb

Control cam

Control

Video MTX

MTX

MADI

8 x HDSDI

Intercom
Remote Production
Football - 2nd Division
Remote Production
Football - 2nd Division

Difficulties

• 1Gb connection – MPLS
• No PTP support
• Latency (commentary positions)
• Packet loss in network (routing)
Remote Production

Intercountry connectivity
Remote Production

Intercountry connectivity
Remote Production
Intercountry connectivity

Goal of the project
Remote Production
Intercountry connectivity

Technical Implementation

V__Matrix

- Video / Audio streaming
- RAW / Compressed Video
- 40b / 10Gb
Remote Production
Intercountry connectivity

Brussels

18 Video RX
2 Video TX

10Gb
10Gb

Luxembourg

2 Video RX
18 Video TX
Remote Production
Intercountry connectivity

Solution

- Full redundant 10Gb connection
- 18x Video TX
  - Lossless Compressed - 250Mb / stream
  - Only 4,5Gb used

- Latency of 20 video lines – not noticeable by operators
Remote Production
Intercountry connectivity
Remote Production
Intercountry connectivity

Difficulties

• First reaction of the IT department
• Assymetrical connection
Goal of the project

- Connect a new building to the existing infra
- Link between Brussels and Antwerp
- Full video and audio infra
Goal of the project
Network - Backbone

Viivoorde (Medialaan)

Antwerp (News City)
(PTP supplied by Viivoorde)
Remote Production

Daily News
Remote Production
Intercountry connectivity

Difficulties

• New location for daily use with the complete production team
• Installation onsite
  • No technical room
  • Silent solution
Questions?
RAVENNA / AES67 / SMPTE ST 2110 Resources:
www.ravenna-network.com/resources

Lawo AG:
www.lawo.com
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