



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 NetworkX 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

Agenda

Three case studies

- Football
- Interlink countries
- Daily news
- Goal of the project
- Technical implementation
- Difficulties and solutions

Football

Remote Production Football



Remote Production

Football - 2nd Division



Request for remote production Belgian football

- Proximus
 - Telco provider in Belgium
 - Rightholder
- Cooperation with Broadcast companies
 - Videohouse
 - NEP

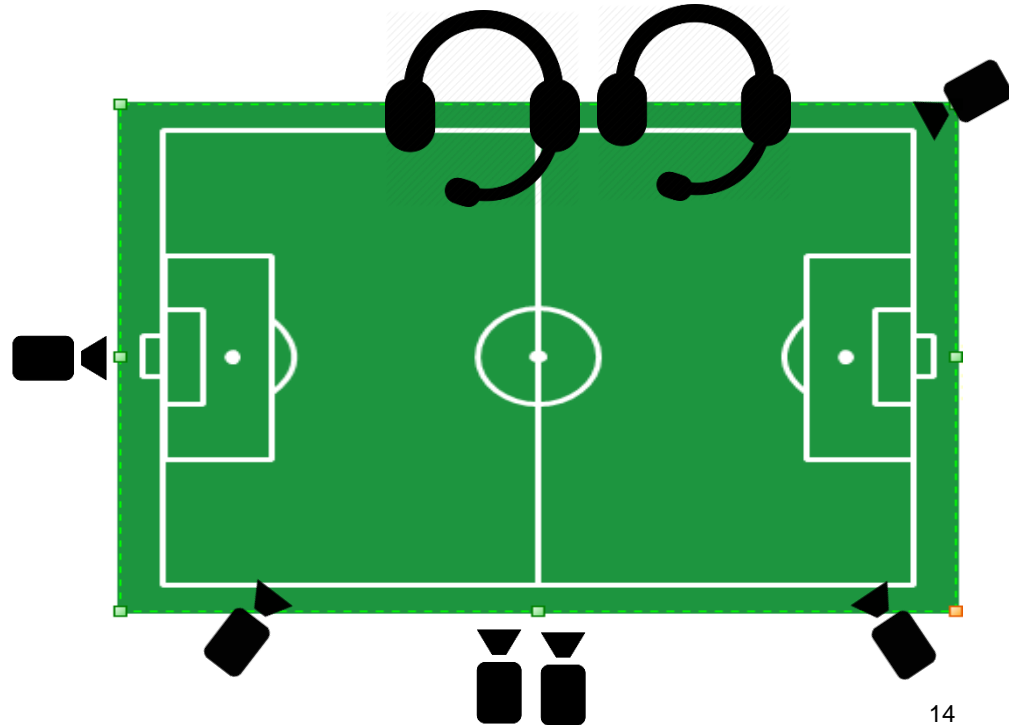
Remote Production Football - 2nd Division



Goal of the project

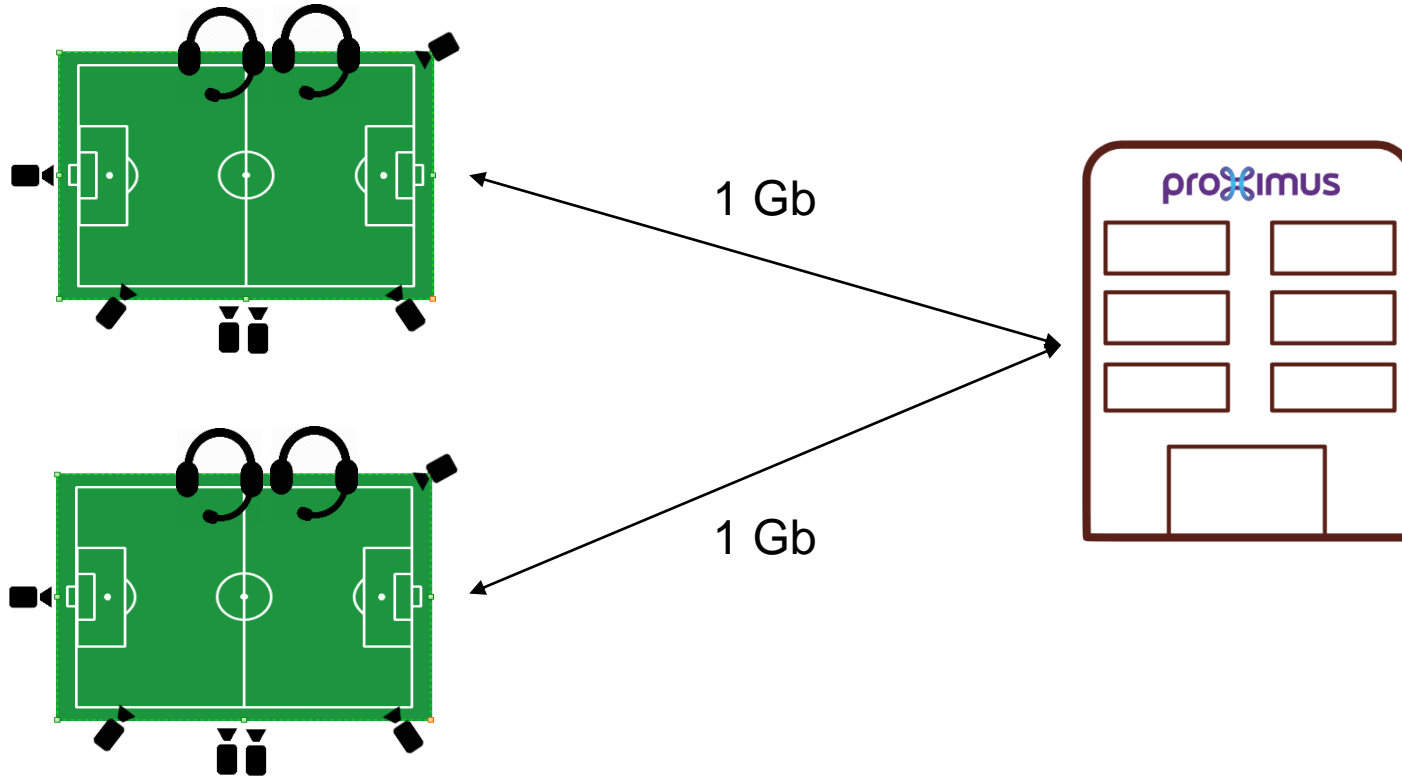
2nd division football match

- 6 camera onsite
- 2 commentary positions
- Audio / Intercom



Remote Production

Football - 2nd Division



Remote Production Football - 2nd Division



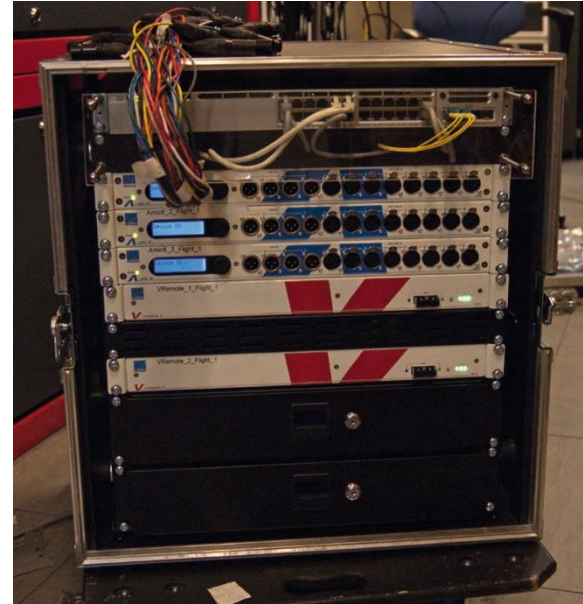
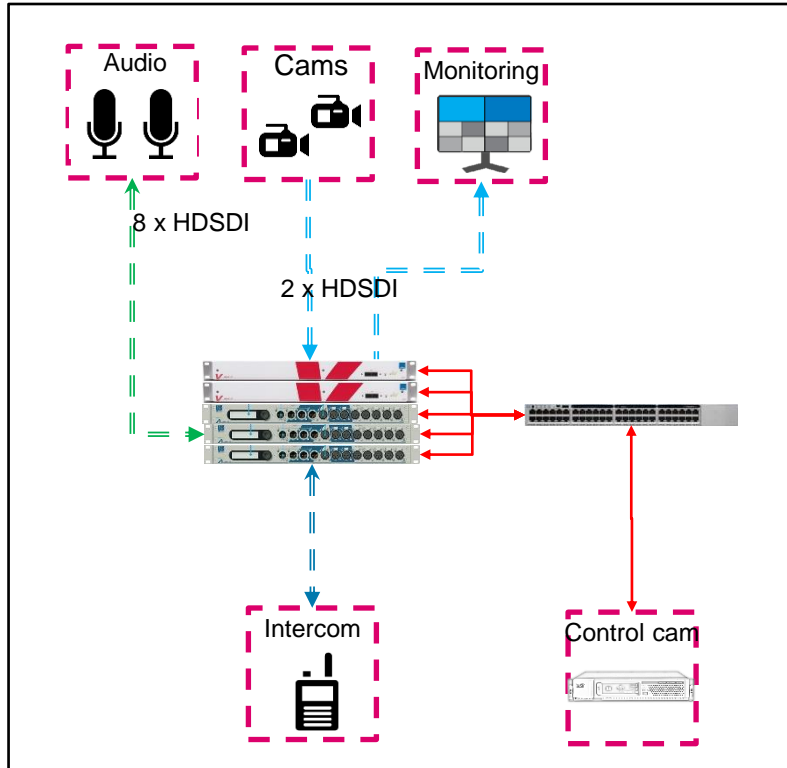
Technical Implementation

V__Remote4

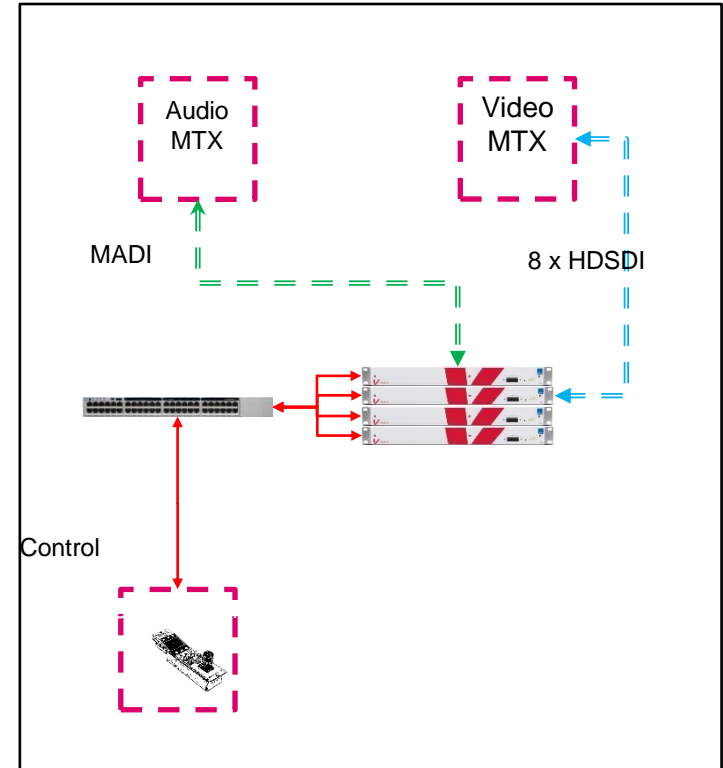
- Video / Audio streaming
- RAW / Compressed Video
- 10b / 1Gb



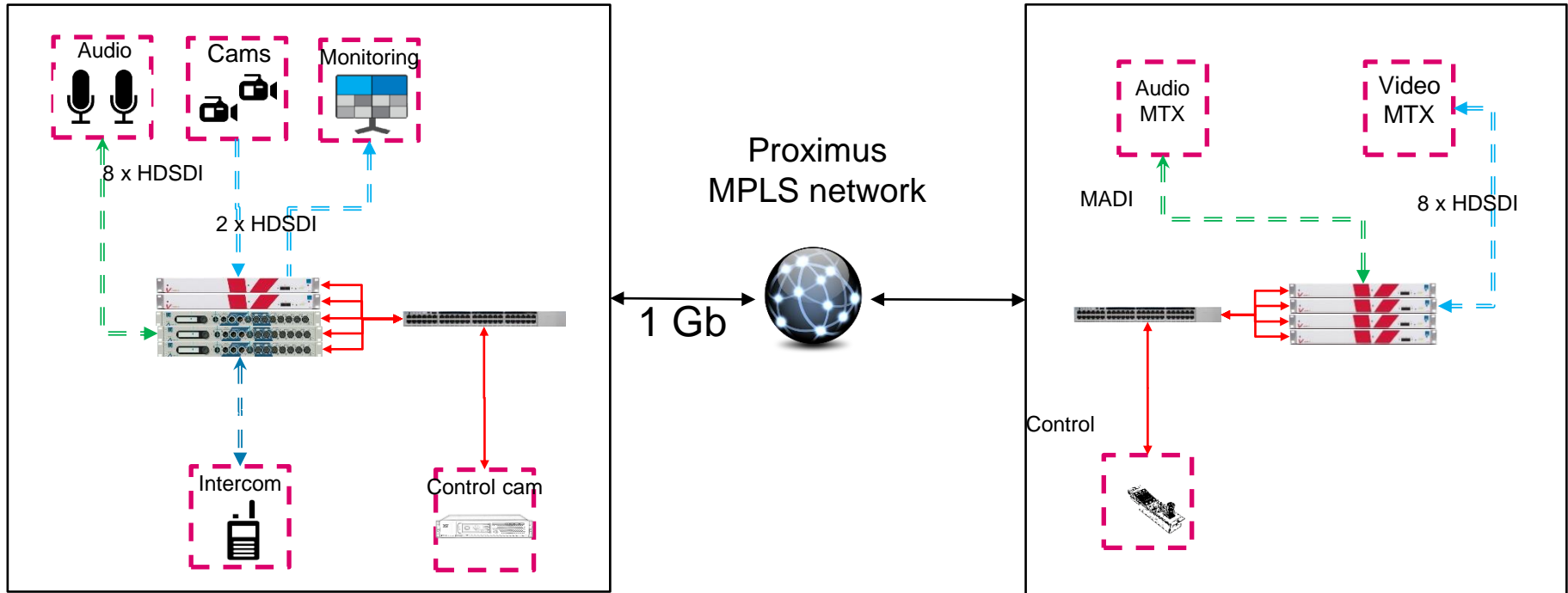
Remote Production Football - 2nd Division



Remote Production Football - 2nd Division



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)

Intercountry connectivity

Remote Production

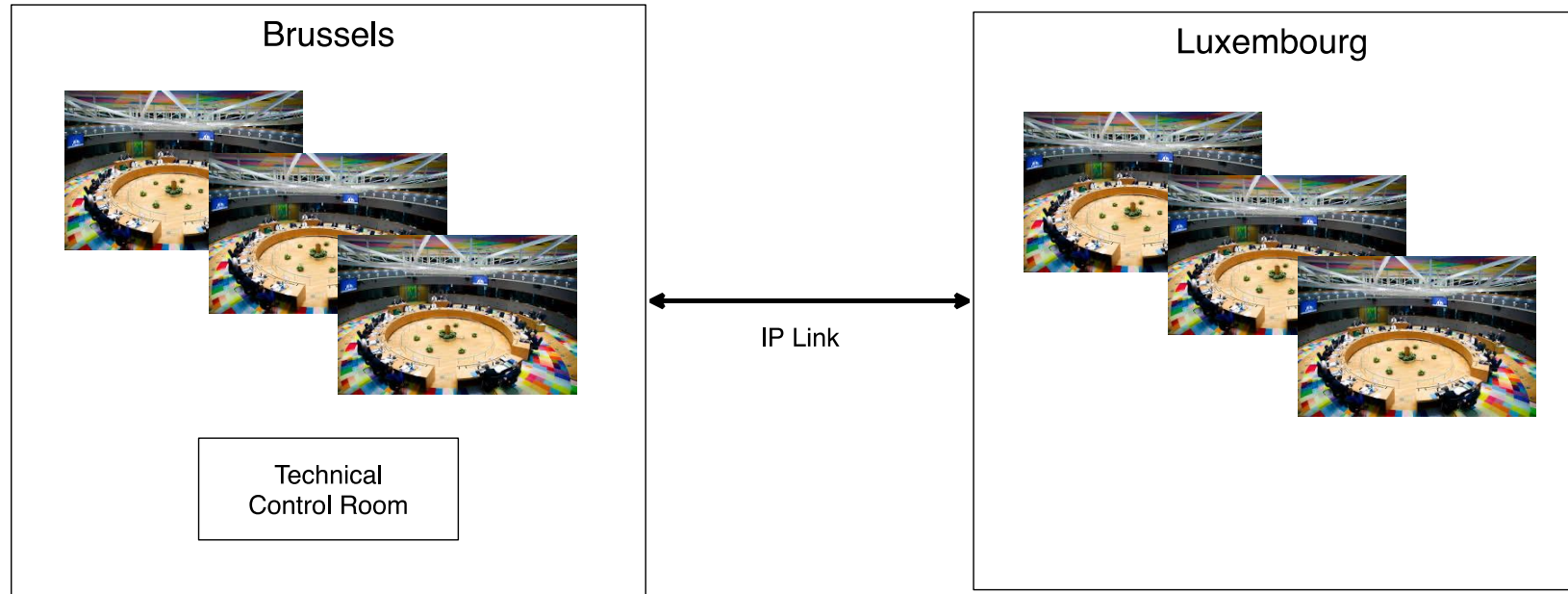
Intercountry connectivity



Remote Production

Intercountry connectivity

Goal of the project



Remote Production

Intercountry connectivity



Technical Implementation

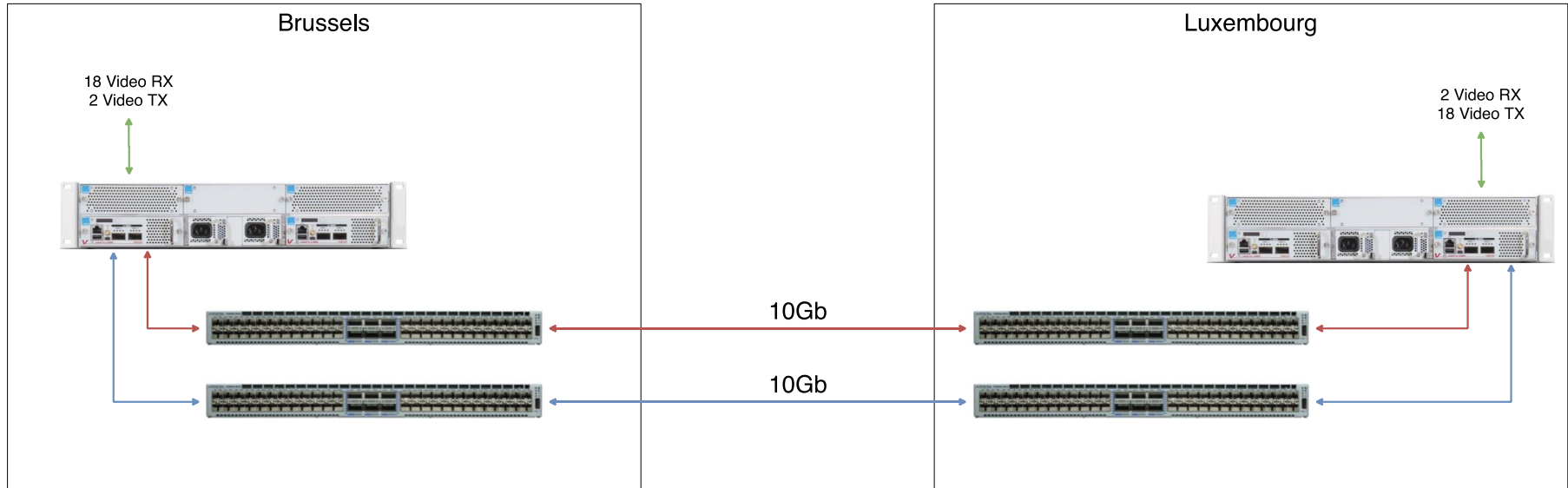
V__Matrix

- Video / Audio streaming
- RAW / Compressed Video
- 40b / 10Gb



Remote Production

Intercountry connectivity

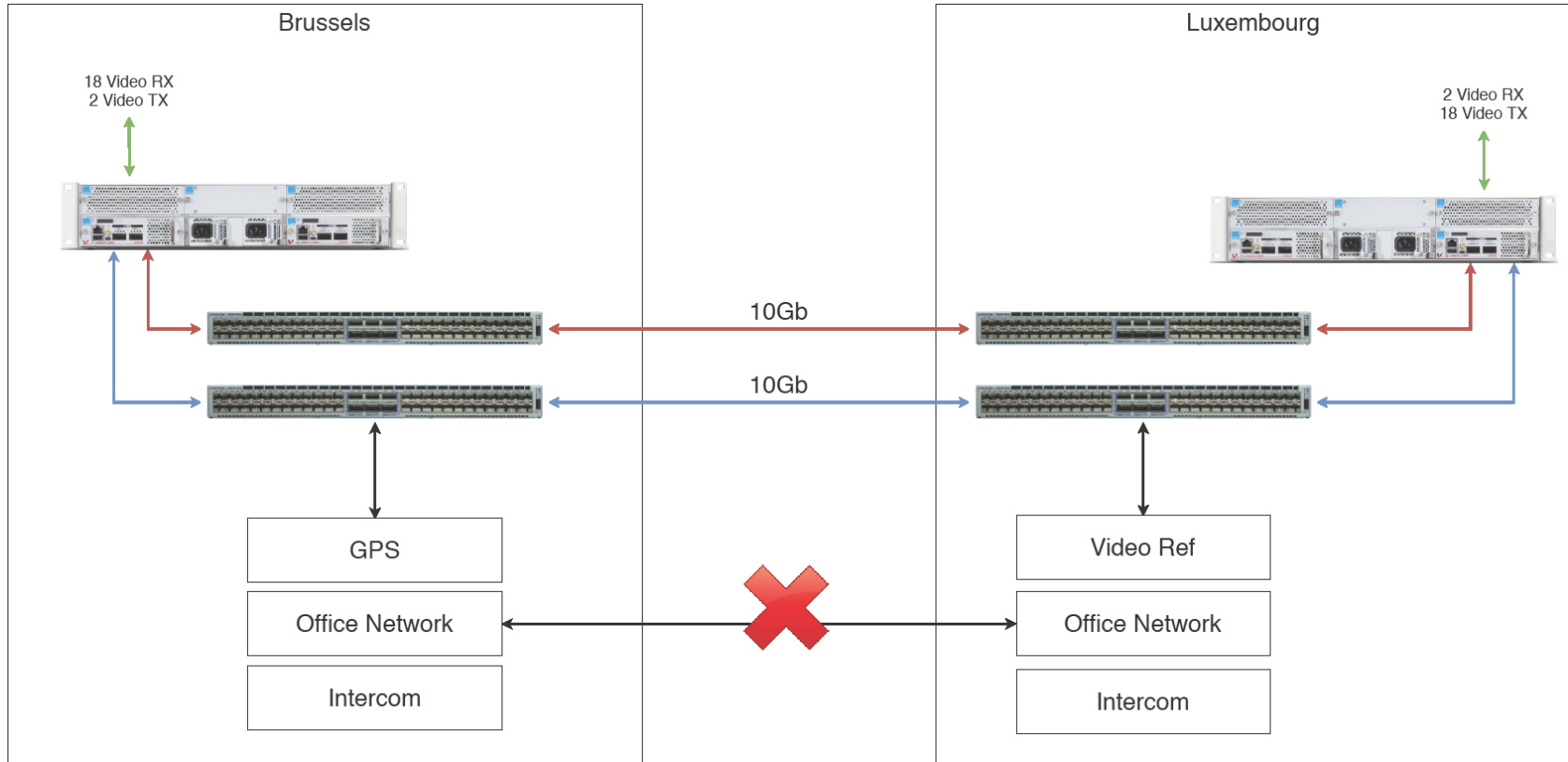


Solution

- Full redundant 10Gb connection
- 18x Video TX
 - Lossless Compressed - 250Mb / stream
 - Only 4,5Gb used
- Latency of 20 video lines – not noticable by operators

Remote Production

Intercountry connectivity



Difficulties

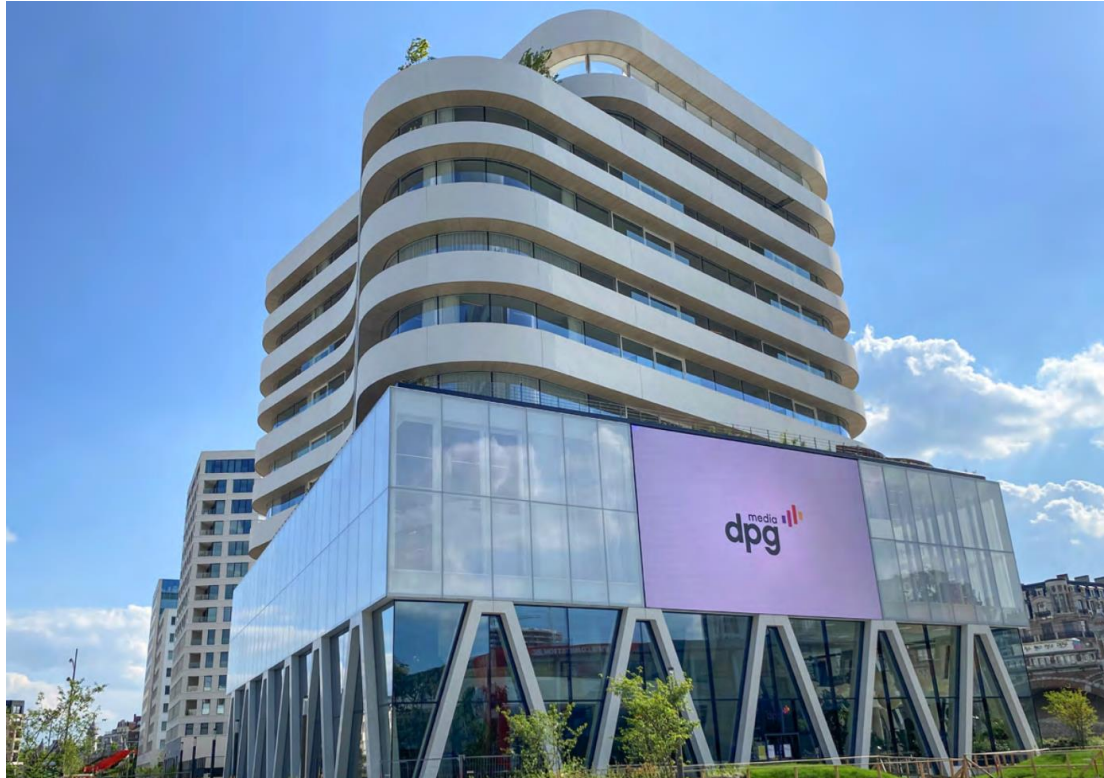
- First reaction of the IT department
- Assymetrical connection

Remote Production



Daily News

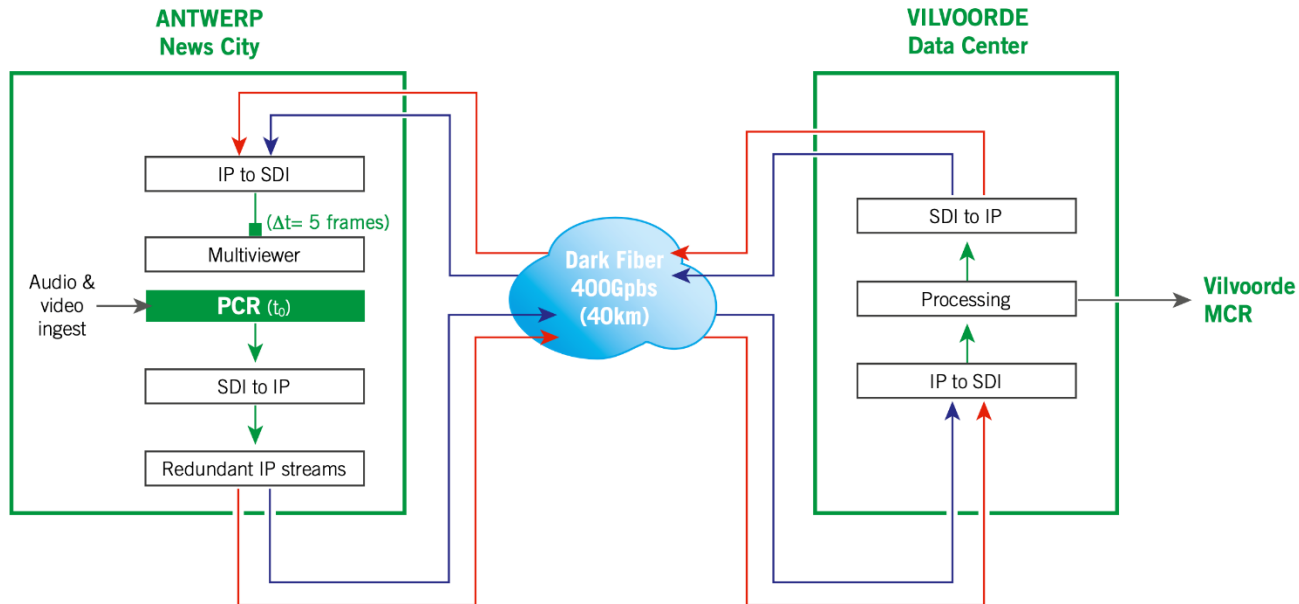
Remote Production Daily News



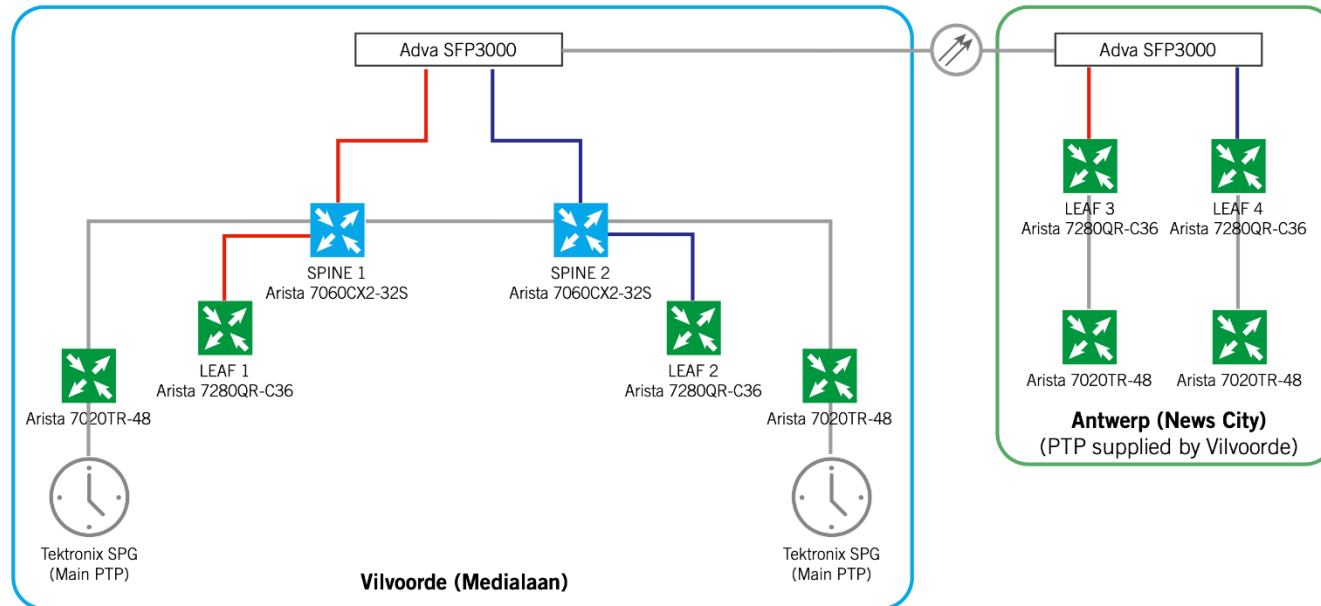
Goal of the project

- Connect a new building to the existing infra
- Link between Brussels and Antwerp
- Full video and audio infra

Goal of the project

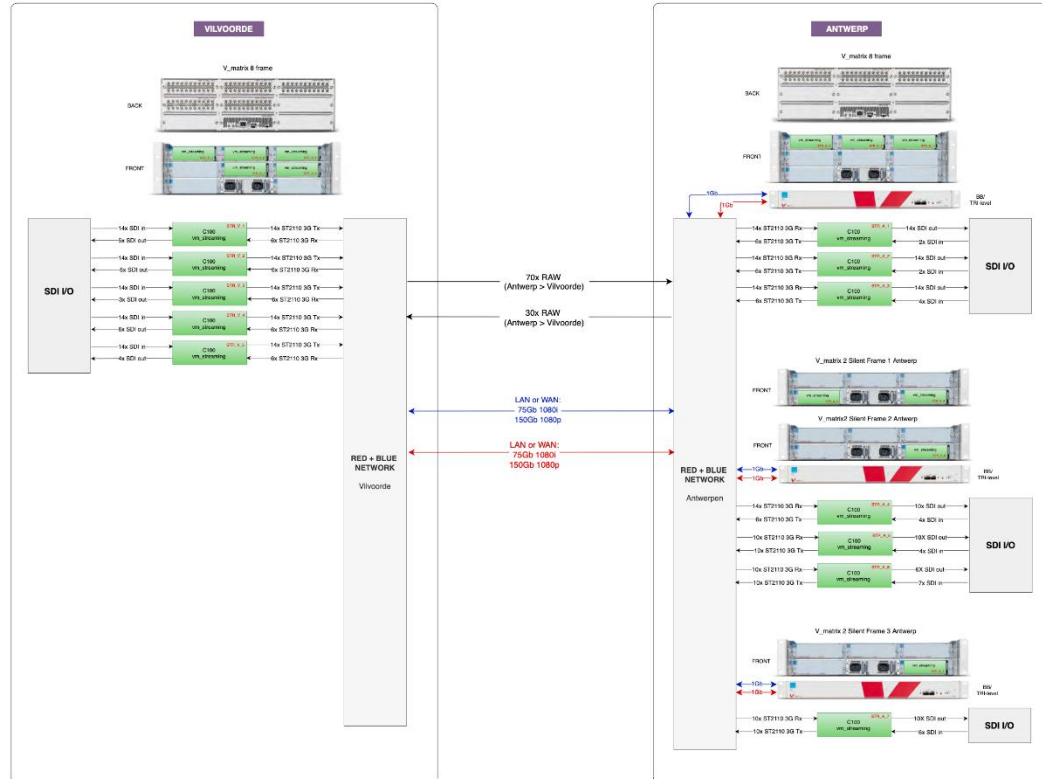


Network - Backbone



Remote Production

Daily News



Difficulties

- New location for daily use with the complete production team
- Installation onsite
 - No technical room
 - Silent solution



Questions?



More answers...



RAVENNA / AES67 / SMPTE ST 2110 Resources:

www.ravenna-network.com/resources

Lawo AG:

www.lawo.com

You've made it!

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CELEBRATING 10 YEARS
RAVENNA
AES67 & ST 2110 built-in

www.ravenna-network.com