



Live IP Sports Production and Distribution

Case Study: Scottish Premier Football League (SPFL)

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www.cerberus.tech

Cerberus Tech Ltd

- Founded 2014 (2012).
 - Managed Services
 - 24/7 –  Network1™
 - Occasional Use -  LiveLink™
 - Products
 - Ateme SA
 - Cerberus Tech Ltd
 - Open Broadcast Systems Ltd
 - Zixi LLC
 - Member of the RIST Forum



Based in the south of England, in the middle of nowhere, just the way we like it!

Replacing Satellite, Fibre and Fixed Circuit Workflows

(or at least offering an alternative)

- Why are they used for large scale OU distributions?
 - Ubiquitous transport (Satellite)
 - Centralised 'meet me' location (Satellite, PoP, BT Tower etc)
 - De-coupling the responsibilities for delivery
 - **Expensive 'pay to play' infrastructure**
 - **Not** a zero cost option for reception



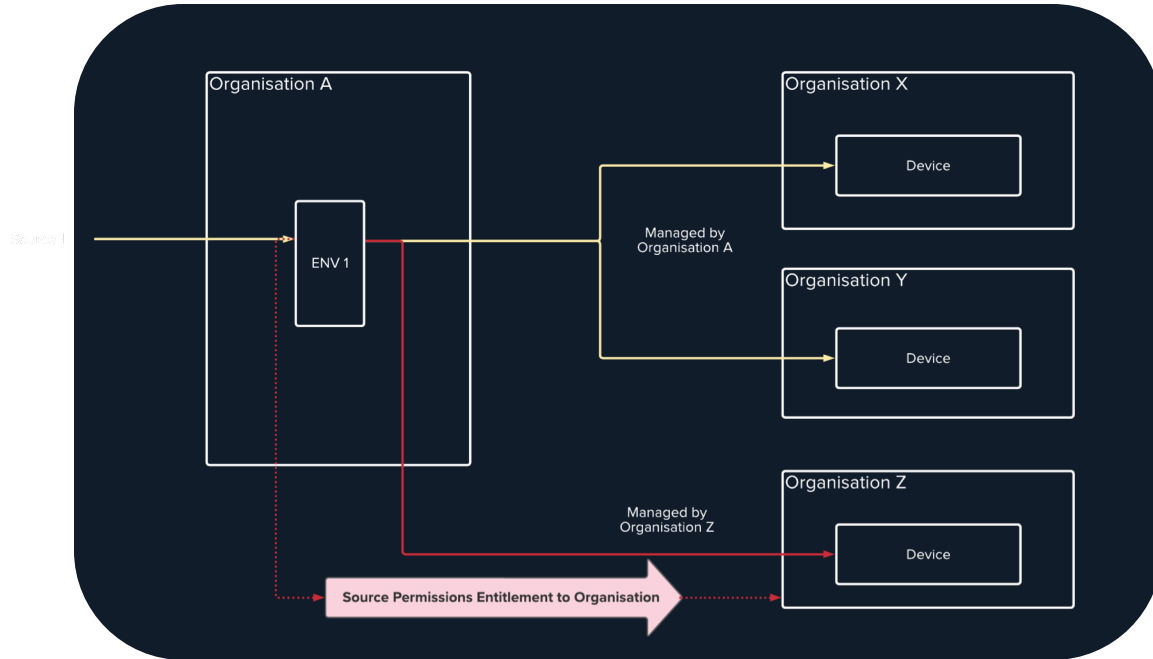
Look at that LNB!

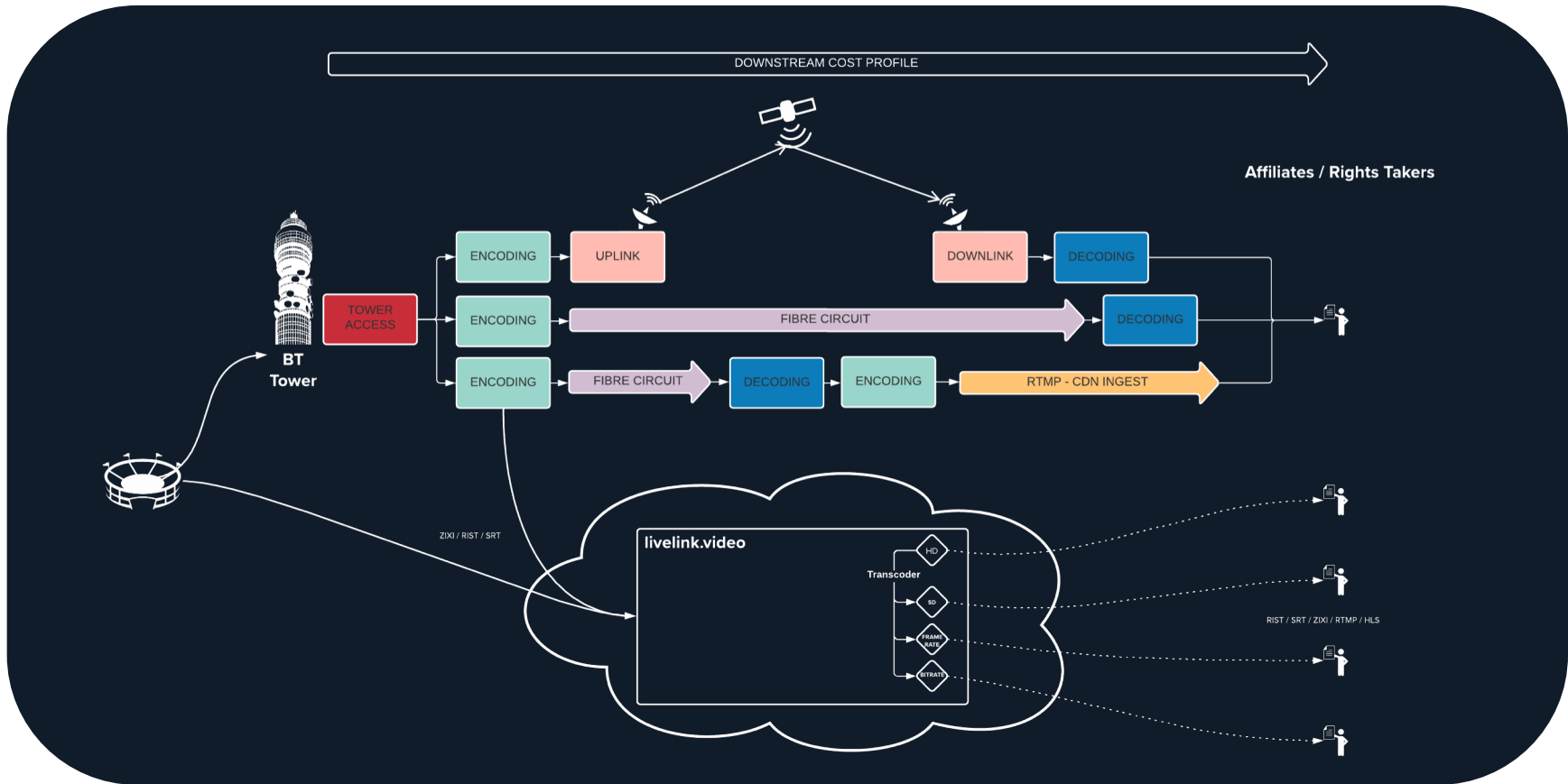
Ubiquitous Transport

- Cloud Selection & Availability of Bandwidth
 - It's only available if you know what you are doing
 - Equivalent to (if not cheaper than) erecting an antenna and installing the required infrastructure but the result is so much more.
- Protocol Selection: HLS, RIST, RTMP, SRT, ZIXI
 - Not always best for the job
- Competence with the technology / ease of use

Scaling Up

- Decoupling the responsibility
 - Treating the cloud like a satellite
- Rights entitlement
- Self management – One pane of glass
 - Contribute
 - Transcode
 - Distribute
- Lowering the downstream cost profile for content acquisition
 - Whilst increasing quality



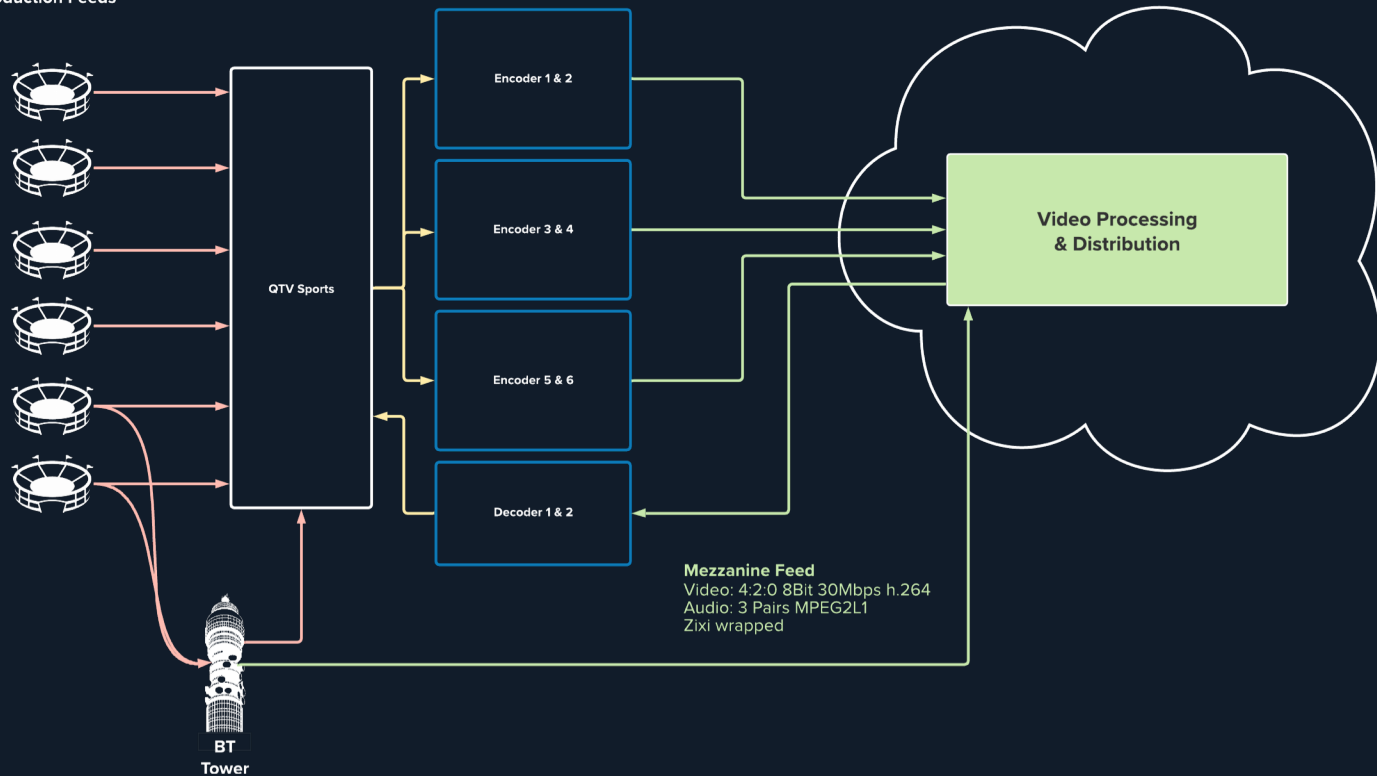


The SPFL



- Founded 2013 (1890)
- 12 Teams | 228 Matches | Aug- May
- Broadcast
 - Sky Sports: 48 Live Matches per season
 - BBC Scotland: Highlights package and 38 delayed Gaelic broadcasts (BBC Alba)
- QTV Sports
 - Production of 142 matches
 - Delivery to:
 - Broadcasters
 - Clubs
 - Stats
 - Clipping





Mezzanine Feed
Video: 4:2:0 8Bit 30Mbps h264
Audio: 3 Pairs MPEG2L1
Zixi wrapped

**Video Processing
& Distribution**

15Mbps
1080i50

8Mbps
1080p25

ZIXI

BBC Scotland

ZIXI/SRT

Sky Sports

ZIXI

Stream Digital

SRT

Stats Perform

RTMP

Grabyo

SRT

Bet Genius

Broadcast &
Highlights

Club TV

Statistics

Clipping

Betting

Sources

The screenshot displays the Livelink interface with a grid of 15 video sources. The sources are arranged in a 3x5 grid. The first two columns contain 'Grabbyo' sources (Grabbyo 1 to Grabbyo 6) and 'SPFL_BX_Enc' sources (SPFL_BX_Enc1 to SPFL_BX_Enc6). The third column contains 'Stats' sources (Stats 1 to Stats 6). The fourth and fifth columns contain 'SPFL_BX_Enc' sources (SPFL_BX_Enc3 to SPFL_BX_Enc4) and 'Stats' sources (Stats 3 to Stats 6). A green arrow points from the 'Original Source' label to 'Grabbyo 2'. A red arrow points from the 'Transcoded Variants' label to 'Stats 2'.

Livelink
BY CERBERUS.TECH

CHANNELS EVENTS DESTINATIONS SETTINGS

Environments: SPFL Organisations: QTV Sports

ADD CHANNEL REFRESH CHANNELS SHOW ALL

Grabbyo 1 CONNECTED

Grabbyo 2 CONNECTED

Grabbyo 3 CONNECTED

Grabbyo 4 CONNECTED

Grabbyo 5 CONNECTED

Grabbyo 6 CONNECTED

SPFL_BX_Enc1 CONNECTED

SPFL_BX_Enc2 CONNECTED

SPFL_BX_Enc3 CONNECTED

SPFL_BX_Enc4 CONNECTED

SPFL_BX_Enc5 CONNECTED

SPFL_BX_Enc6 CONNECTED

Stats 1 CONNECTED

Stats 2 CONNECTED

Stats 3 CONNECTED

Stats 5 CONNECTED

Stats 6 CONNECTED

Original Source

Transcoded Variants

Timeline

Destinations

The screenshot shows the Livelink interface with the 'DESTINATIONS' tab selected. At the top, there are navigation links for CHANNELS, EVENTS, DESTINATIONS, and SETTINGS. The user is logged in as SPFL, with QTV Sports selected. Below the navigation bar, there's a 'CHOSEN FILTERS' section with an 'ADD DESTINATION' button. A 'GO TO LIVE' button and a date selector for December 23rd 2020 are also present. The main table lists destinations, all marked as 'Connected'. Below the table is a timeline view for December 23rd 2020, showing scheduled items like 'Stats 6' and 'SPFL_BX_Enc1' through 'SPFL_BX_Enc6'.

Connected	Connected	Connected	Connected	Connected	Connected	Connected	Connected
StatsPerform_5	StatsPerform_6	StreamDigital_Rx1	StreamDigital_Rx2	StreamDigital_Rx3	StreamDigital_Rx4	StreamDigital_Rx5	StreamDigital_Rx6

Timeline View (December 23rd 2020):

- 16:14 - 16:50: SPFL_BX_Enc1 (FINISHED)
- 16:14 - 16:50: SPFL_BX_Enc1 (FINISHED)
- 17:00 - 20:00: SPFL_BX_Enc6 (ON)
- 17:30 - 20:30: SPFL_BX_Enc2 (SCHEDULED)
- 17:00 - 20:00: SPFL_BX_Enc3 (ON)
- 17:00 - 20:00: SPFL_BX_Enc4 (ON)
- 17:15 - 20:15: SPFL_BX_Enc5 (ON)
- 17:45 - 20:00: Stats 6 (SCHEDULED)

Destinations

Scheduled Item

Open for discussion

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