IP SHOWCASE THEATRE

CURATED BY VSF VIDEO SERVICES FORUM

# ST 2110 over WAN

Andy Rayner, Chief Technologist
Nevion
IBC Hall 1 Stand B71

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IP SHOWCASE THEATRE AT IBC – SEPT. 14-18, 2018

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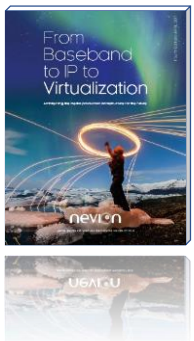


**VideoIPath**
*Management & Orchestration*

**Virtuoso**
*Software-defined media node*

***Back here on Sunday at 4:30pm***

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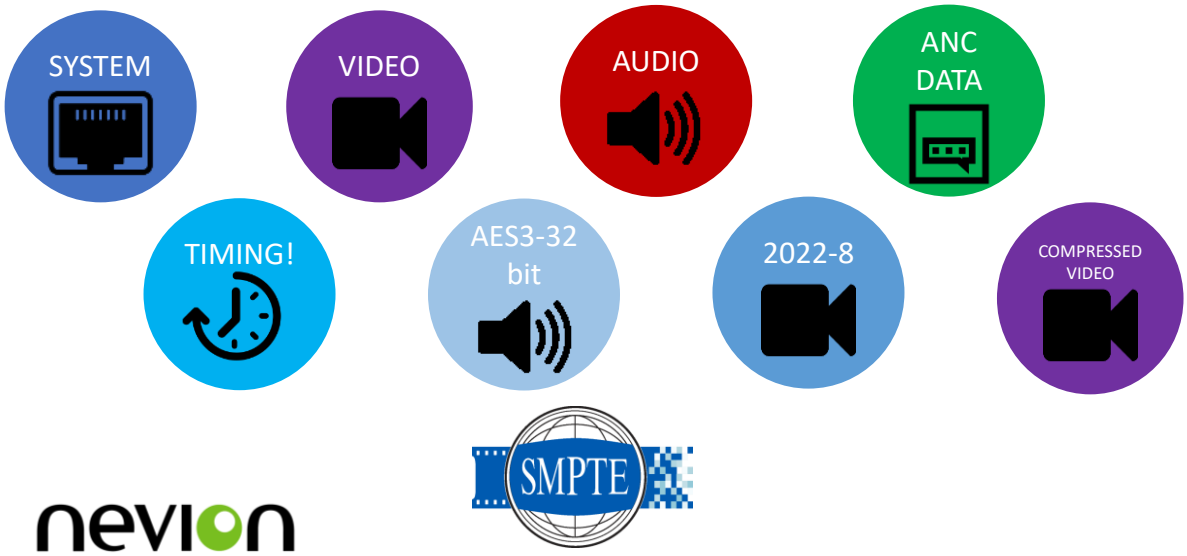
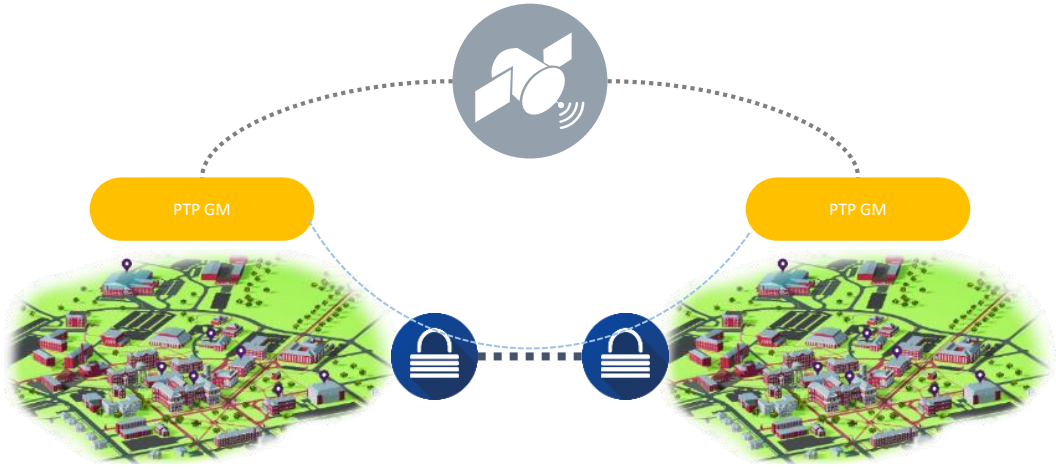
**Come and see us: Hall 1 Stand B71**

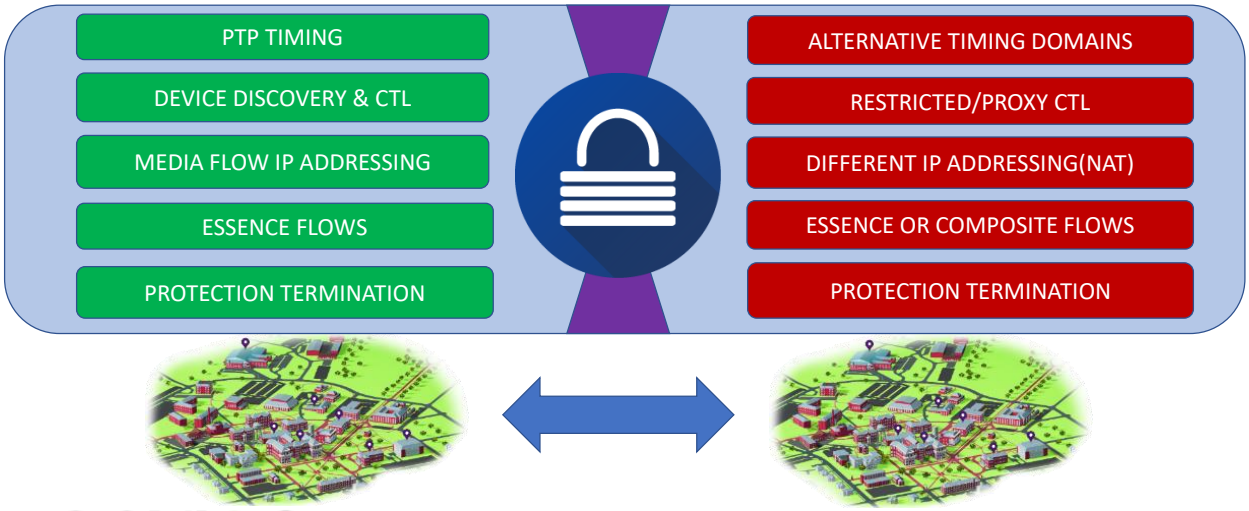
## SMPTE2110 – facility connectivity




## WAN interconnect



## Timing on the facility edge

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## ST2110 over WAN for inter-facility & OBs

- Flow protection
- Flow trunking
- Essence alignment
- Low latency handling
- Format conversion
- Compression

- Protection of other data flows
- Security
- PTP trunking
- Wan timing
- Associated control (NMOS) filtering and border proxying

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New activity group
Autumn 2018 onwards
Get involved: vsf.tv

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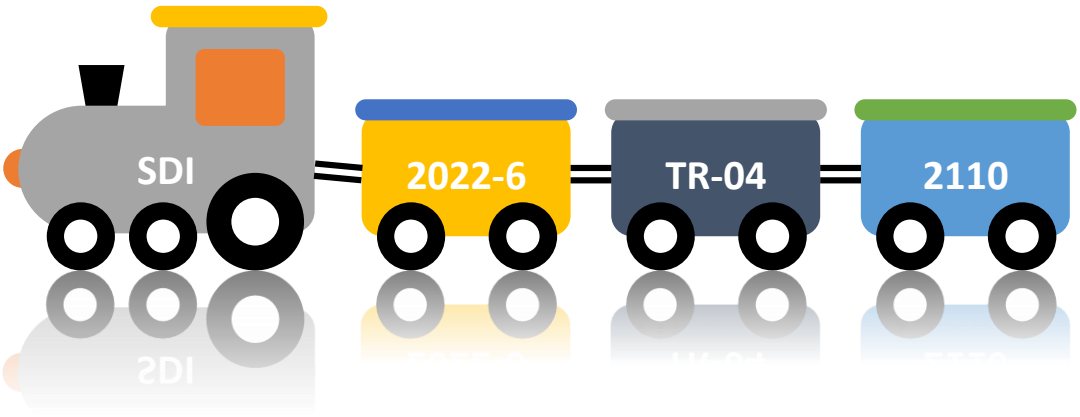
# The IP digital video **journey**

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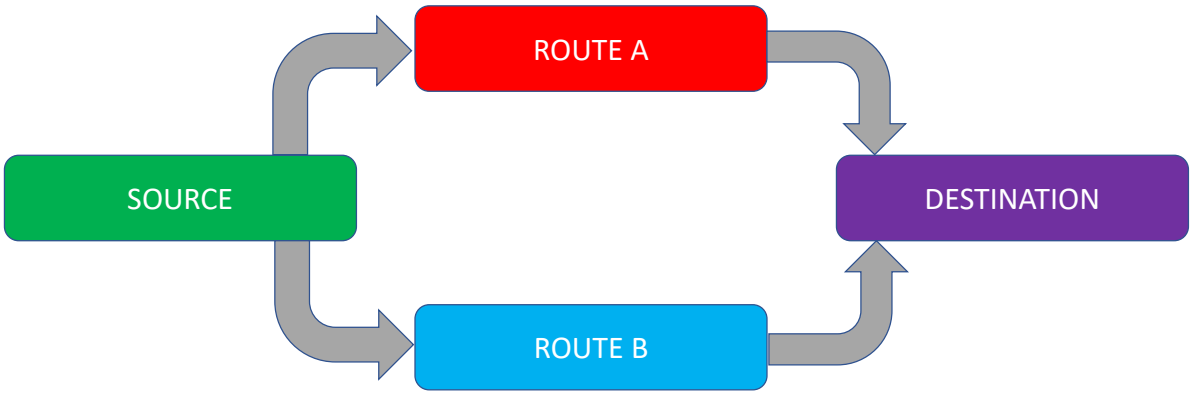
# Flow protection #1
# SMPTE2022-7 based

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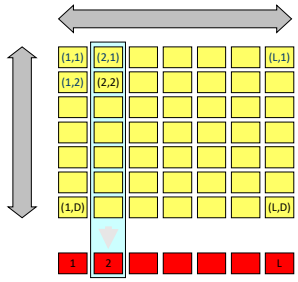
# Flow protection #2 - FEC




| | | | |
|---|---|---|---|
| n | n+1 | n+2 | n+3 |
| n+4 | n+5 | n+6 | n+7 |
| n+8 | n+9 | n+10 | n+11 |
| n+12 | n+13 | n+14 | n+15 |
| n+16 | n+17 | n+18 | n+19 |
| n+20 | n+21 | n+22 | n+23 |
| n+24 | n+25 | n+26 | n+27 |
| n+28 | n+29 | n+30 | n+31 |
| n+32 | n+33 | n+34 | n+35 |
| n+36 | n+37 | n+38 | n+39 |
| n+40 | n+41 | n+42 | n+43 |

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# Flow trunking

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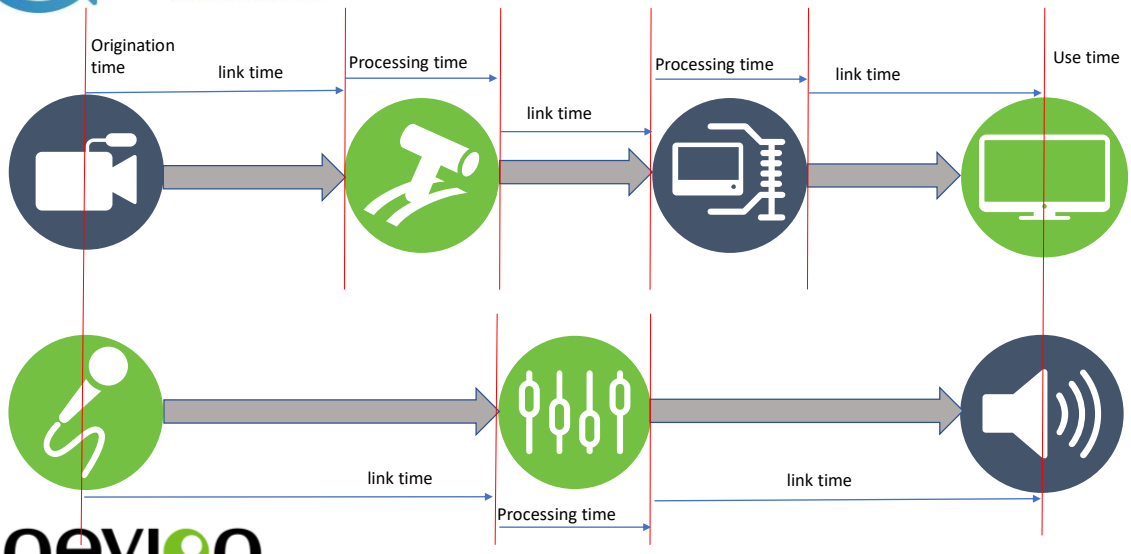
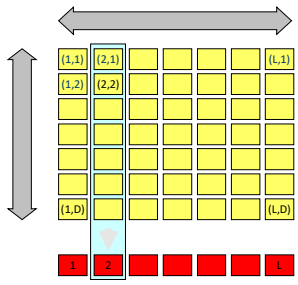
## Essence alignment at the edge




## Low latency protection & transport of low bit-rate signals




| | | | |
|---|---|---|---|
| n | n+1 | n+2 | n+3 |
| n+4 | n+5 | n+6 | n+7 |
| n+8 | n+9 | n+10 | n+11 |
| n+12 | n+13 | n+14 | n+15 |
| n+16 | n+17 | n+18 | n+19 |
| n+20 | n+21 | n+22 | n+23 |
| n+24 | n+25 | n+26 | n+27 |
| n+28 | n+29 | n+30 | n+31 |
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| n+36 | n+37 | n+38 | n+39 |
| n+40 | n+41 | n+42 | n+43 |

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# Transcapsulation

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# Compression

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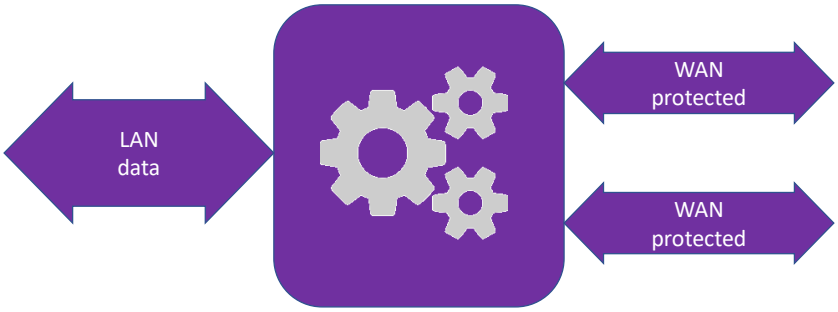
## Protection of other data

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## Security

**Connectivity Security**

**Content Security**

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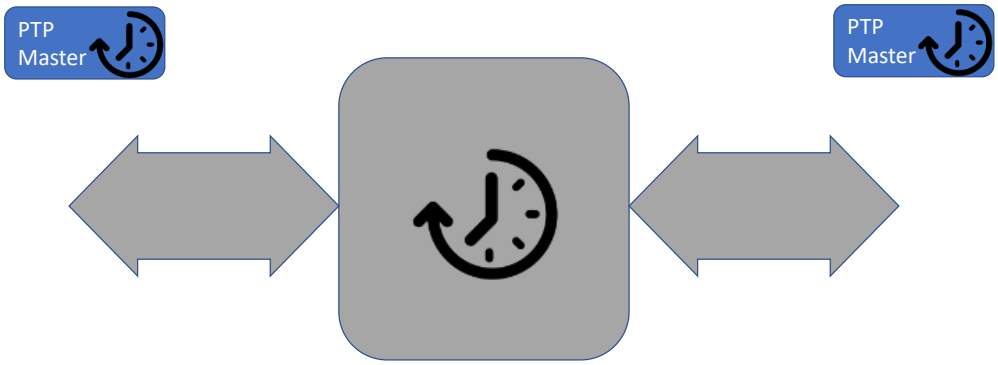
## PTP trunking

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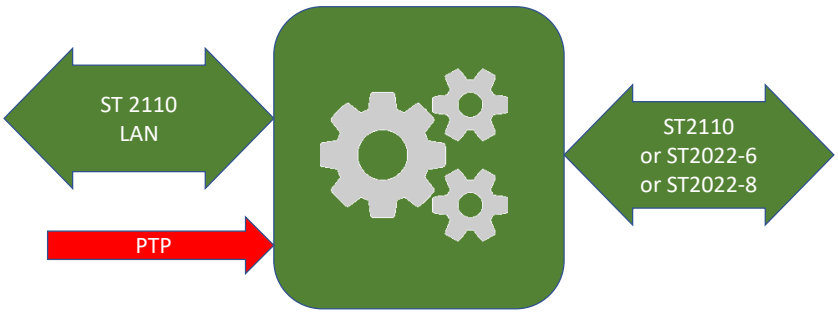
## Timing domains

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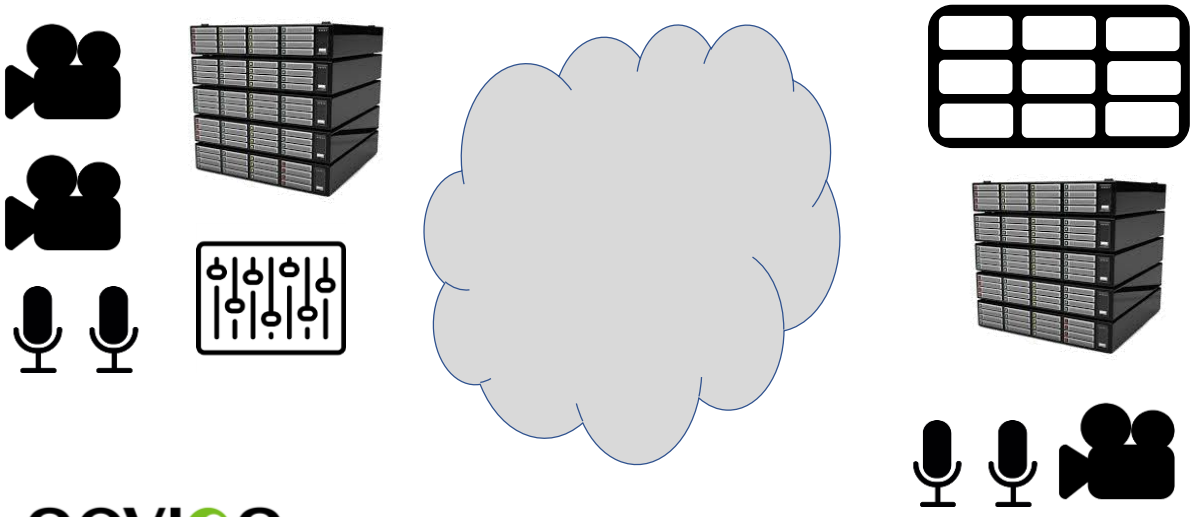
## Discovery & control - filtering & proxy



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## Please get involved

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Friends, please come over and join us for the best cup of tea at the show!

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VIDEO SERVICES FORUM
Thank You
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