NMOS and ST 2110 for AV over IP in Pro AV: How and Why?

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Formerly Co-Founder of Tightrope Media Systems (20 Years)

Extremely Happy to be here!
Currently in Pro AV...

Some of the Marketing/Proprietary “Standards”...

- NewTek NDI and NDI|HX
- SDVoE Alliance
- HDBaseT

Proposed Open Standard

- ST 2110
- AIMS

Adding profiles and standards that are reducing cost and widening adoption.
Broadcast Roots

- Highest Quality (uncompressed)
- Highest Reliability (redundant)
- Lowest Latency (source synchronous)
- Composable (layered architecture)

Layers and Components

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<tr>
<th>Application</th>
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<tr>
<td>(NMOS Broadcast Controller)</td>
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<tr>
<th>IS-04: Node, Device, Flow, Discovery and Registration</th>
<th>IS-05: Connection Management</th>
<th>IS-06: Network Flow Control</th>
<th>IS-...: Other AMWA Specification</th>
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<tbody>
<tr>
<td>NMOS: Network Media Open Standard</td>
<td>Network-Transparent (RESTful) Application Programming Interface (API)</td>
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-10: Timing and Synchronization
-20: Uncompressed Video
-30: Uncompressed Audio
-40: Ancillary Data

ST 2110 Transport
Low Latency, Synchronized Media Data Streams
What is needed for AV over IP for Pro AV?

**Flexible tradeoffs**
- Quality
- Bandwidth
- Latency

**Dynamic Behavior**
- HDCP, CEC, EDID, HPD, USB, ...

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**Building the Profile**

- **Compression**: video and audio
- **Security**: stream encryption (HDCP, etc.), authentication, access control
- **Timing**: flexibility for constrained / shared networks
- **Control**: interoperable for common use cases (HPD, EIDID, CEC, PTZ, USB, etc.)
Success is...

- Highest performance for the specific pain that you are relieving
- Simple, transparent, and scalable interoperability
- One clean and simple API that models the problem
- It is better than what it replaces

The Gutenberg Press (replica)

The Goal of AIMS...

To foster the adoption of one set of common, ubiquitous, standards-based protocols for interoperability over IP in the media, entertainment and pro AV industries.

Thank you

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for more info, please visit: aimsalliance.org

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