The Case for AV Over IP with Open Standards

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What is AIMS?

AIMS
Alliance for IP Media Solutions

Not for profit trade alliance
Open to all
Funded by members
Common Goal
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.
Members List

96 Members
Building on a Strong Foundation for *Market Adoption*

One common goal… Distinct roles… Powerful Partnership
What is Meant by AV over IP?

- Move streams (audio, video, ancillary, control) through an IP network
- Synchronized (A <-> V and also different sources)
- Low-Latency (<1 Frame)
- Full-Stack: Publish, Discover, Subscribe, Stream and Control

Could be used in place of HDMI/DisplayPort/SDI
Real Quick: ST 2110 and NMOS

• SMPTE ST 2110 - Transport
  • Essence Streams
  • Timing
  • Description

• NMOS
  (Networked Media Open Specification)
  • Registration
  • Discovery
  • Subscribe
  • Control
ST 2110 / NMOS Balance

• Designed first for Broadcast Use Cases

- Highest Quality
- Lowest Latency
- Highest Reliability
- Efficient, but high bandwidth (uncompressed)
ST 2110 / NMOS in Pro AV

- ST 2110 is here: You can see it in action today!
- How Can we continue to evolve for Pro AV?

Flexible tradeoffs

Quality ↔ Bandwidth

The HDMI Experience

HDCP, CEC, EDID, HPD, USB, ...

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Success requires…

The highest performance possible (for the problem in front of you)

It’s all about Scale.

A clean API that’s simple to use and models the problem

It has to be better.
Open Standard?

Anyone can build any product from the standard

An engineer can build a “correct” product (conforms to the standard)
A Transport Lesson from the Past...

Intermodal Container

- Welded Corrugated Steel
- Riveted Aluminum
- Welded Corrugated Steel, Wider & Shorter
- Welded Corrugated Steel, Higher

Bureau International des Containers

ISO 668 Standard

- Length: 20 ft/6.1m x n
- Width: 8 ft/2.44m
- Height: 8 ft 6 in/2.59m or 9 ft 6 in/2.9 m (hi-cube)

- Welded Corrugated Steel
- Stackable, seawater and rain hard

https://en.wikipedia.org/wiki/Intermodal_container
“...the cumulative average treatment effects of containerization over a 20 year time period amount to about 700%...”

-- Daniel M. Bernhofen,
School of Economics, University of Nottingham
Transport Standards Revolutionized...

- Intermodal Transport Containers
- Standardized Track Gauges
- Networking Protocols
- ST 2110 / NMOS

Global Trade Exploded
Industrial Revolution
The information Age
???
Our Goal

SMPTE ST-2110

High Quality

Open

NMOS

Proven

adoption
Thank you

Questions?