The Origins of Audio over IP and the Need for Standards

Richard Zwiebel
VP, Systems Strategy, QSC
Feb. 6 2019 Amsterdam
What is Interoperability?

• It is the ability for divergent solutions to communicate with each other.
• This first became apparent in the installed systems AV industry with audio
• Now it is becoming a need in video as well!
• This session will discuss interoperability from various perspectives including Broadcast, Installed AV, Live Sound and AUDIO and VIDEO
In the “old days” everything was analog

- Audio used a few connectors such as XLR’s RCA’s and Phone plugs
- But the signals were mostly the same, there was balanced and unbalanced audio
- The big “interoperability controversy” when I was young was “pin two or pin three”
Origins of Interoperability in AV

• Video was analog in the beginning as well
  • People used BNC’s for professional video but also RCA’s and specialty connectors.
Then, in 1996 along came CobraNet
- I was very involved in it, actually presenting the idea of using a network for audio transport to much of the industry
- Most thought I was crazy!
- Many said it could not work!
- It made it possible to run audio over a network
- Interoperability was automatic as almost everyone used it; the only game in town.
The Beginning of the Need for Interoperability

• So, for quite a long time, nobody really thought about interoperability
• But CobraNet was sold and became outdated
• One by one, companies developed networks
  • Livewire
  • RAVENNA
  • QLan
  • Dante
  • AVB
• While these were all very similar IP based solutions you could not pass data between them
Engineers from a number of companies got together through the AES to find a way that allowed the networks to communicate with each other.

AES67 was created.

But engineers are not generally marketers.

So, the Media Networking Alliance was formed to promote and support the use of AES67.
• While things were going well at MNA, another organization was rapidly growing in the broadcast market
• MNA joined some trade show demonstrations with AIMS
• AIMS was covering both audio and video and doing a GREAT job at it.
• AIMS was including a standard for both audio and VIDEO!
• So, in 2017 the Media Network Alliance became part of AIMS
• After all, if interoperability is the goal, then we should be one, stronger organization that provides better support to our industries
• The broadcast industry has embraced the standards that AIMS supports.

• The Installed Systems AV industry should make use of the strong standards already being embraced by the Broadcast Industry.

• We already use AES67 and it makes sense to follow suit with SMPTE 2110.

• Let’s have one interoperability standard for ALL Professional audio and video networking!

• The “rest of the world” uses non proprietary open standards, let’s do the same!
Standards from Standards Organizations
Thank you

The Origins of Audio over IP and the Need for Standards