



The Origins of Audio over IP and the Need for Standards

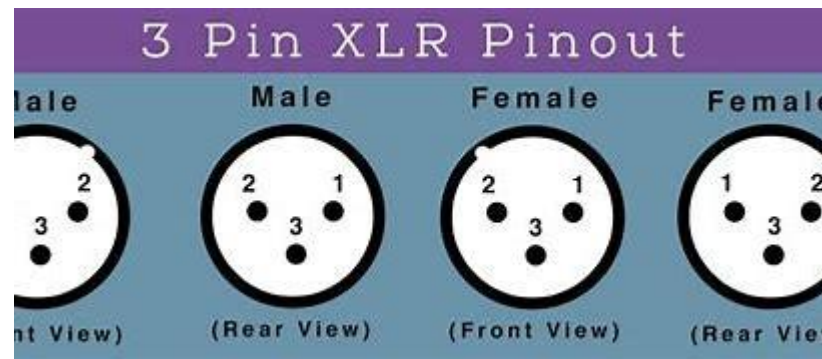
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What is Interoperability?

- 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

Origins of Interoperability in AV

- 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.

CobraNet®

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- But CobraNet was sold and became outdated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



Multiple Networks, No Interoperability

- 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



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Alliance for IP Media Solutions (AIMS)



- 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

One Interoperability Standard



- 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
- Lets 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



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Thank you

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