Surviving Narrowbanding!
How I decided to stop worrying and love narrowbanding!

Simulcast Forum XVII
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Narrowbanding!

Lots of Problems

- Reduced coverage
- Loss of in-building coverage
- Lower audio
- NFPA/IBC coverage requirements
Narrowbanding
Be Happy!

- Solutions for the coverage problems
  - Audio processing
  - Simulcast
  - Sloppy cast
  - Multi-cast
  - Receiver voting
Audio Processing

- Low deviation = low audio recovery = low delivered audio quality (Even when adjusted correctly!)
- Problems with speaker-mics, users not talking up, system settings not correct
- Correct and accurate level setting is critical. Increasing the level can cause problems.
- Audio processing can help to compensate
- Often only needed for repeat audio as console processing makes up for lower receive audio
Audio Processing

- Where does it go?
  - Last common audio point before audio is distributed to the sites
  - If console audio processing not adequate, place one in the receive audio line.
  - Be careful “daisy-chaining” audio processing units
Simulcast

- Improved coverage without adding channels
- Variety of approaches including some lower cost options
- Simulcasting narrowbanding is working well
- Simulcasting is still all about the details and planning
- Receiver voting is a part of the system so talk back is also improved
Sloppy Cast

- Consider it experimental!
- Can improve in-building coverage in some specific applications
- Use with receiver voting.
- The closer to simulcast, the better it will sound
Multicast

- Not spectrum efficient
- Requires users to change channels
- If inputs are the same, use receiver voting
- Might be an interim step to simulcast
Receiver Voting

- An inexpensive way to boost portable talk-in
- Great for helping meet IBC in-building communications requirement
- When making system changes, be careful about taking voting receivers away
- Voting receivers can improve overall performance by about 6 dB over single receivers
Narrowbanding for Fun and Profit

- Many systems will require some additional work and enhancements to restore coverage
- Maintenance and attention to detail are much more critical
  - Level setting
  - Frequency tolerance
  - User training and procedures
- Many systems are working well
- Gives us something to do now that all that old equipment has been replaced.
Questions

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