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### MPX over IP

presented by:

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- Broadcast infrastructure is all about connectivity
- Advent of AoIP (Livewire), now AES67 standard
- MPX transom via linear or data reduced method





- Natural progression from MPX over AES
- Direct (Point-to-Point) or Distributed Point to Multipoint
- Linear implementation would consume extreme amounts of bandwidth: >3MB/s
- Very efficient data payload
- μMPX slashes the amount of bandwidth needed for distribution by nearly 84% to a remarkable 320kbps!



- Compatible with existing digital STL systems
- Lower cost data links
- Can be routed directly into the transmitter
- Collaboration with Nautel (at this time)

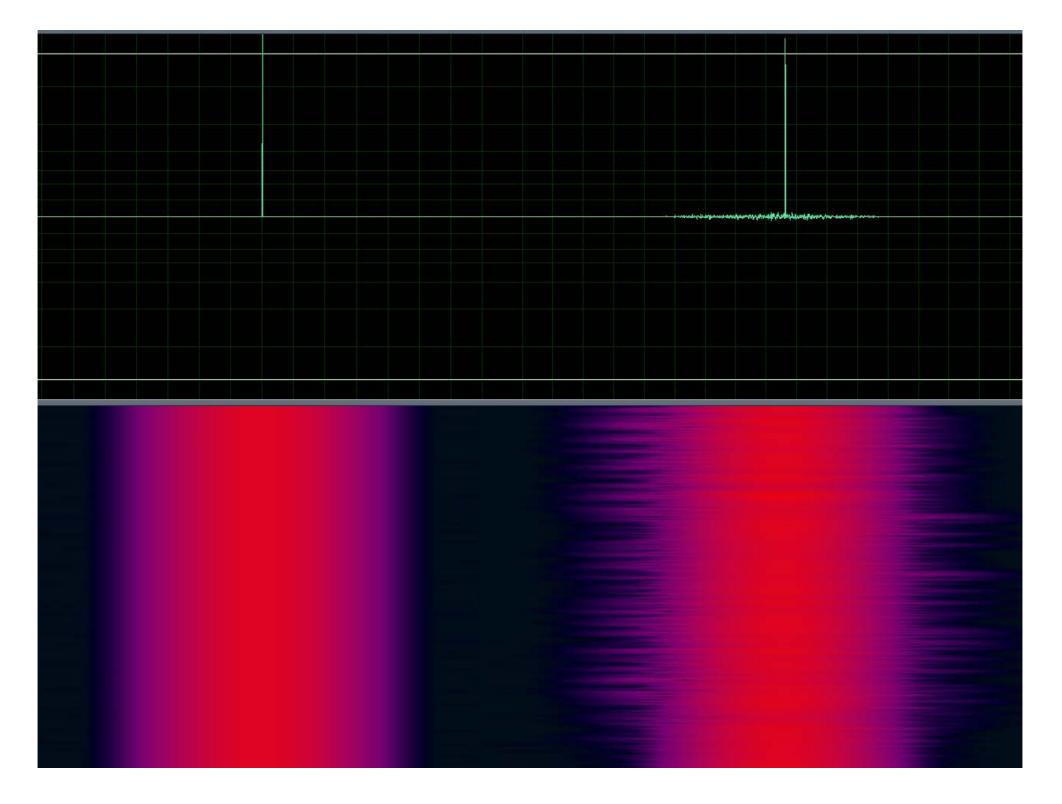


## New Codec Design

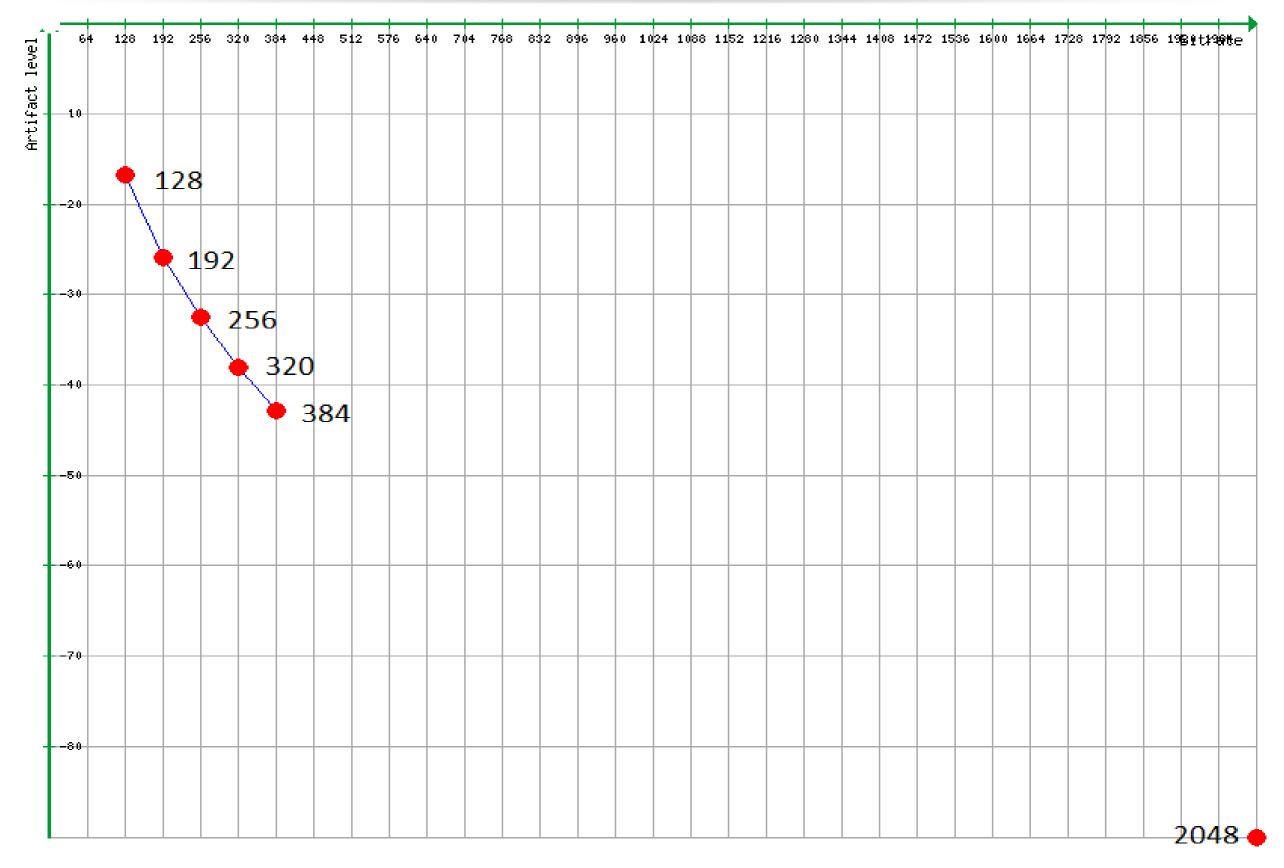
- High Definition coding yields transparent performance
- New Predictive analysis method
- Noise masking codec



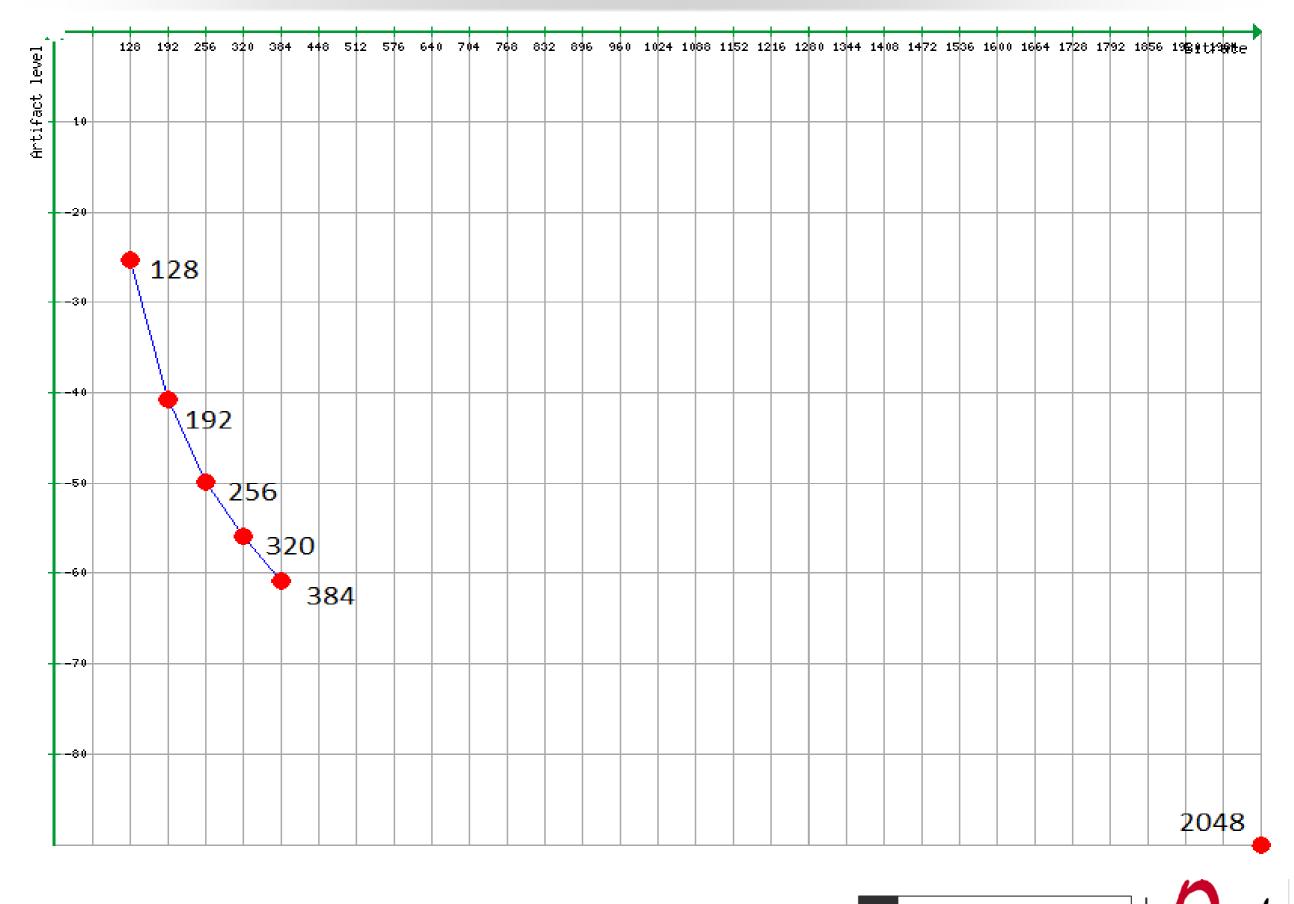












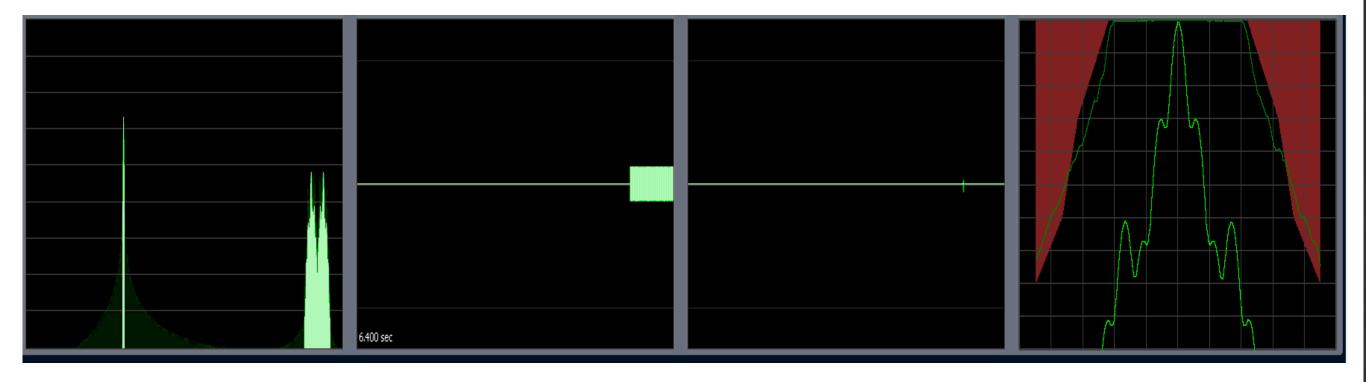


- Zero overshoots
- No aural artifacts
- Low delay









MPX spectrum

MPX waveform

Demodulated left channel 100% modulation Upto 140% modulation

RF spectrum



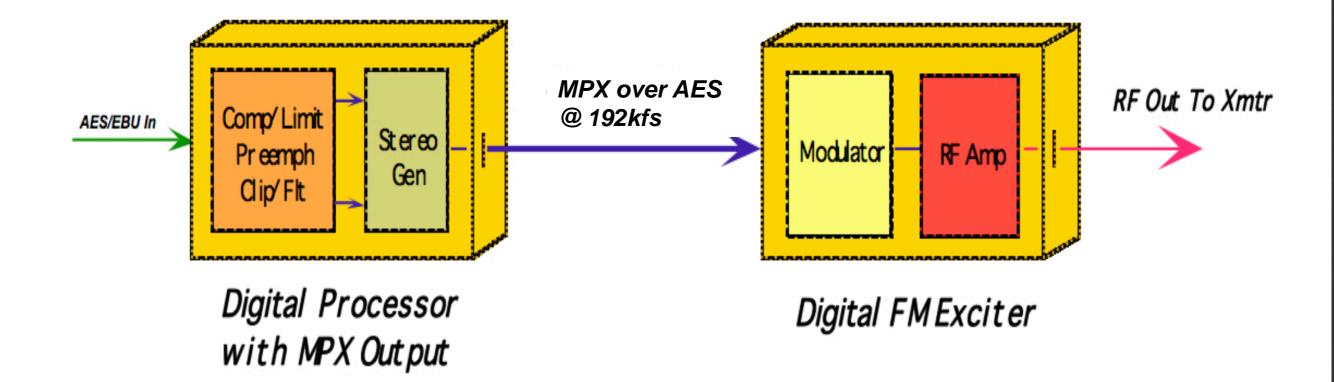


- Supports DSBSC/SSBSC FM-Stereo
- Supports RDS
- Supports Pilot embedding (It really is 1 louder!)

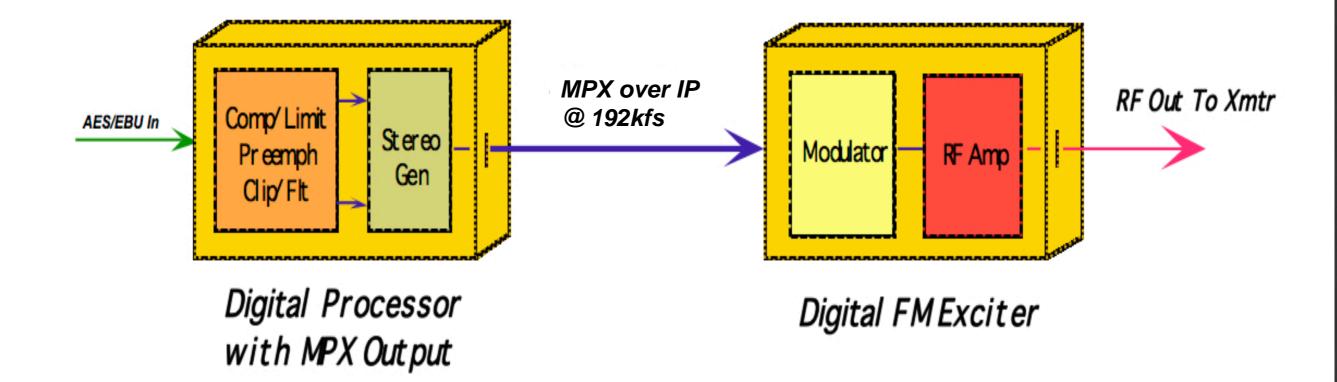


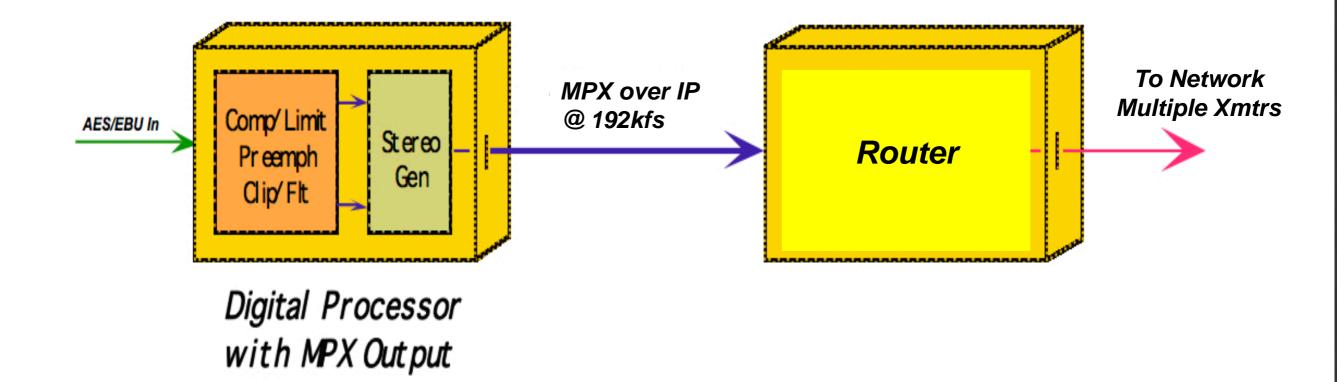
- Still some work to do
- Synchronization for boosters/repeaters
- Time stamping....



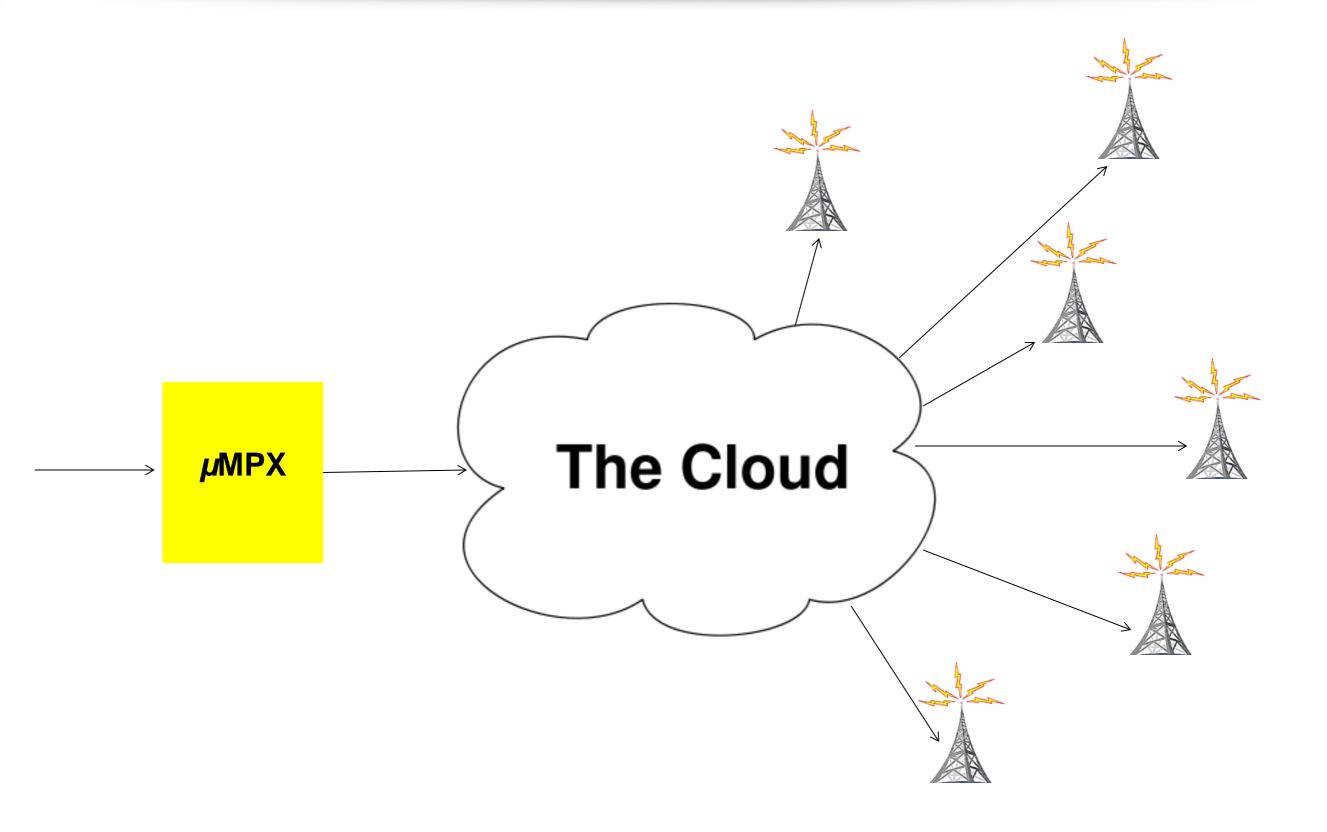














## **Crystal Ball Stuff**

- Innovation never sleeps
- The Cloud...
- Advancing the art of processing/transmission
- Processing, watermarks, and intelligence!!
- Broadcast META data?





### Thank You!

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