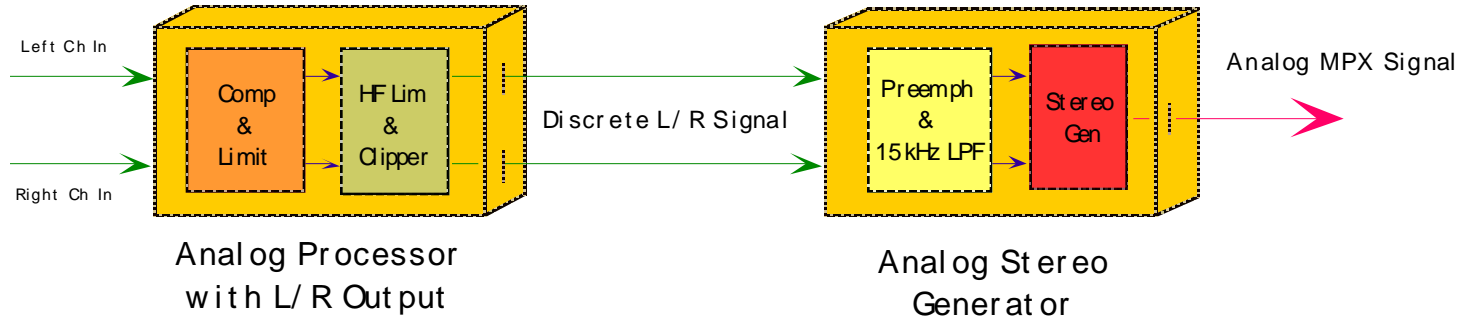


OmniaDirect: MPX Over AES

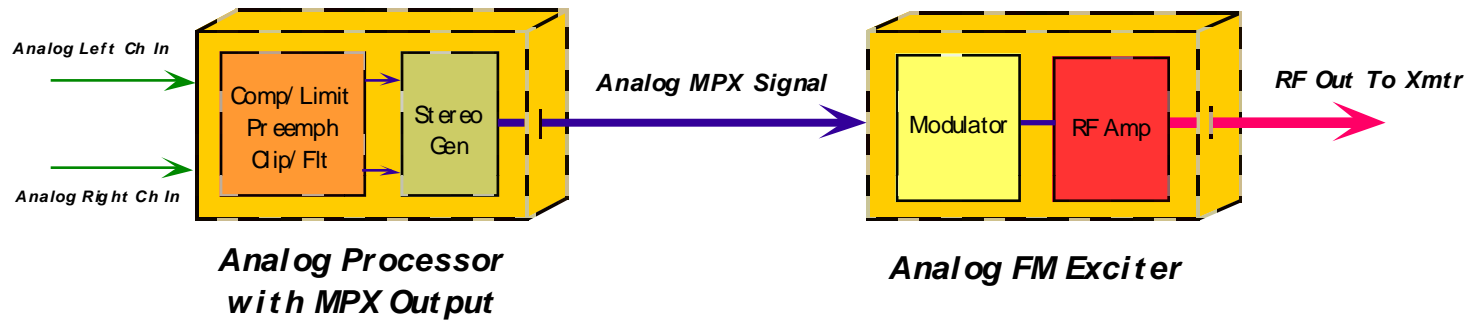
Frank Foti
Omnia Audio
Cleveland, Ohio

Broadcasters Clinic
Madison, Wisconsin

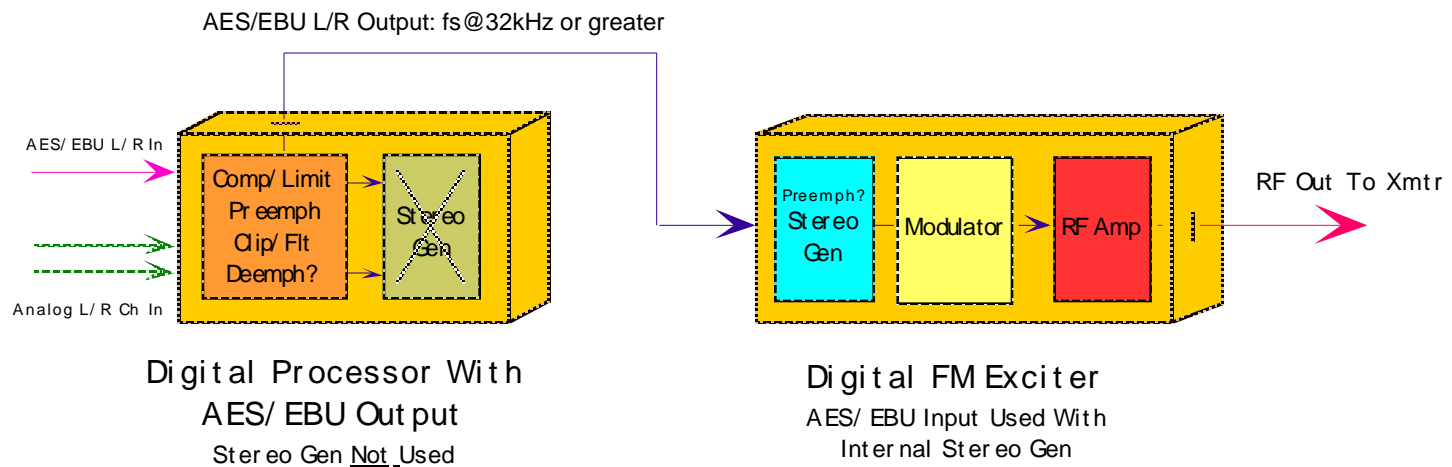
Mid 1970's FM Audio Chain (Where's The Leisure Suit?)



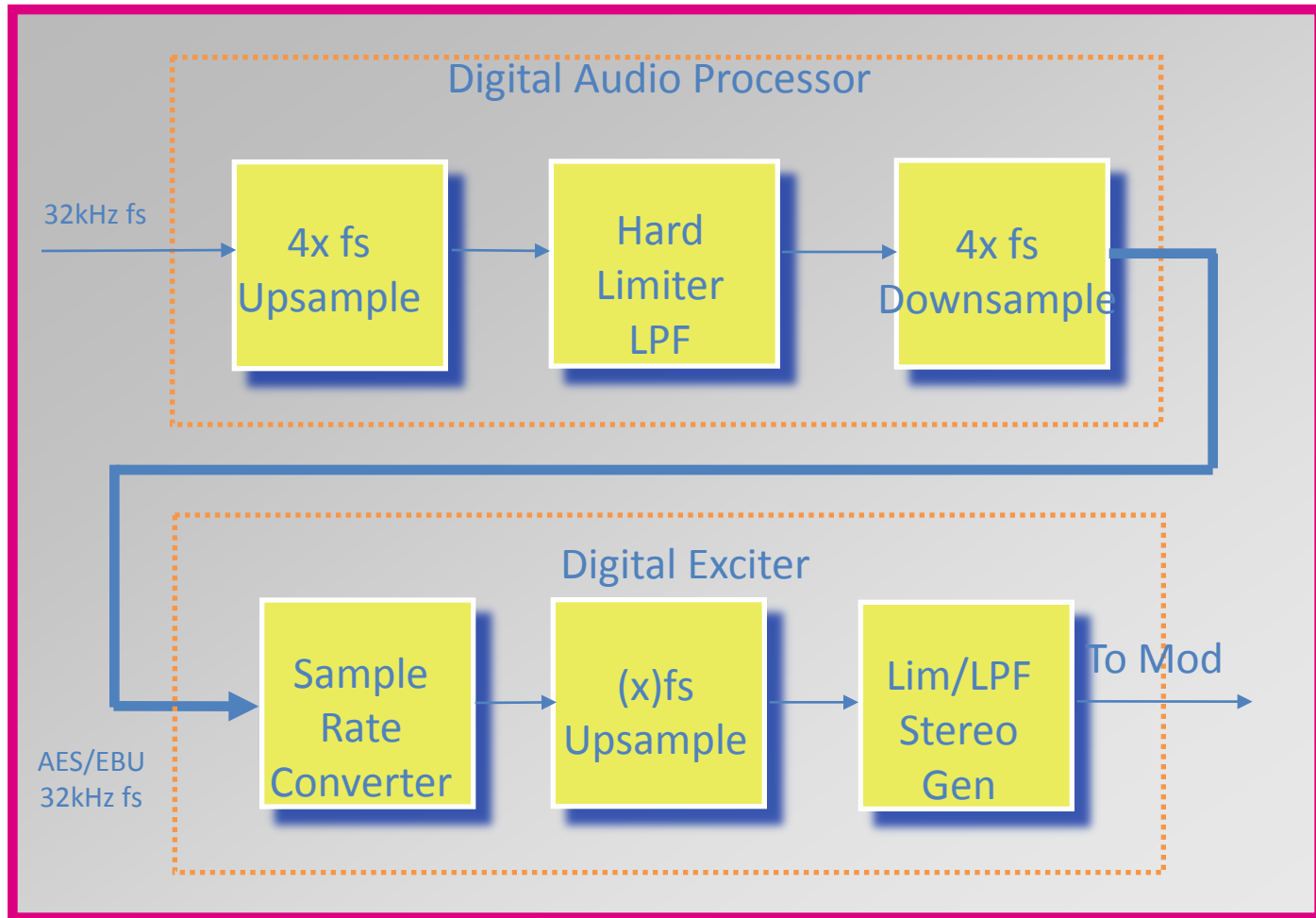
Conventional Analog Processor and Exciter



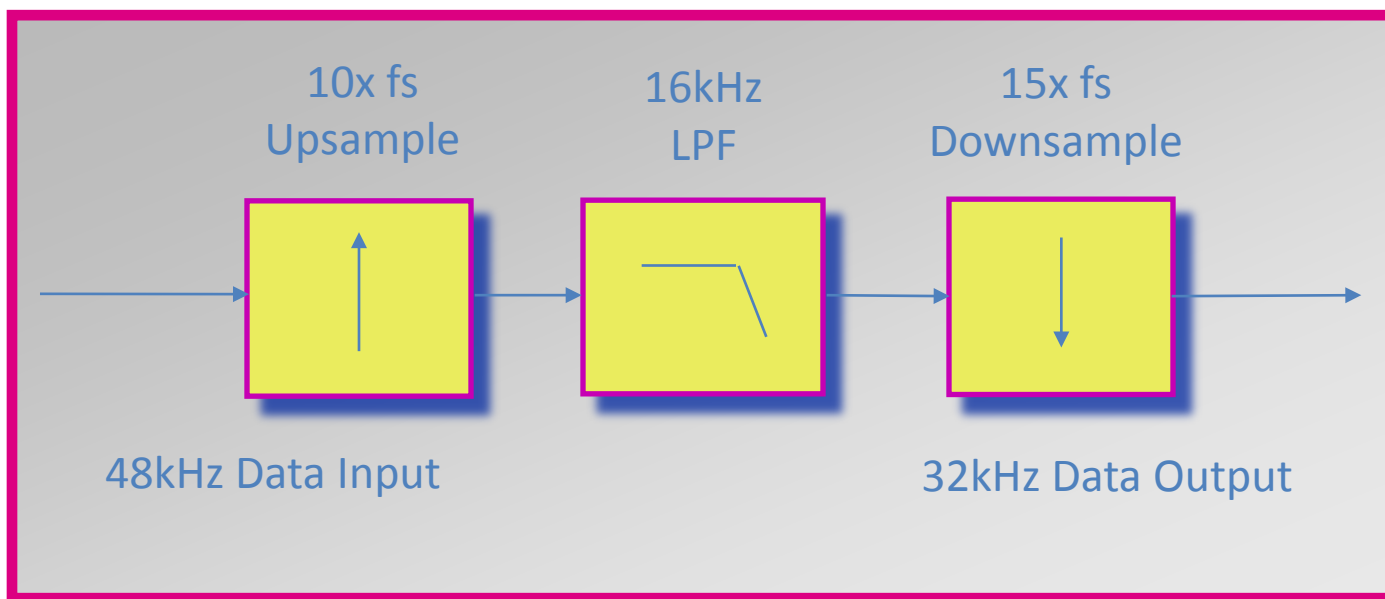
Digital Processor and Exciter: AES/EBU Connection



Sample Rate Roller Coaster!



Sample Rate Conversion: 48kHz fs to 32kHz fs



It All Started Over Dinner...

...Right Here In Madison!



OmniaDirect Genesis:

- Evolved in 1998. (D/CET concept presented at NAB '98)
- Idea was ahead of its time due to lack of interoperability
- Fast-Forward to last fall...
- Casual 'among friends' chat with Nautel gang at Broadcasters Clinic 2012
- "Can Do" approach of two innovative and assertive companies.
- Goal: Present and launch at NAB 2013!

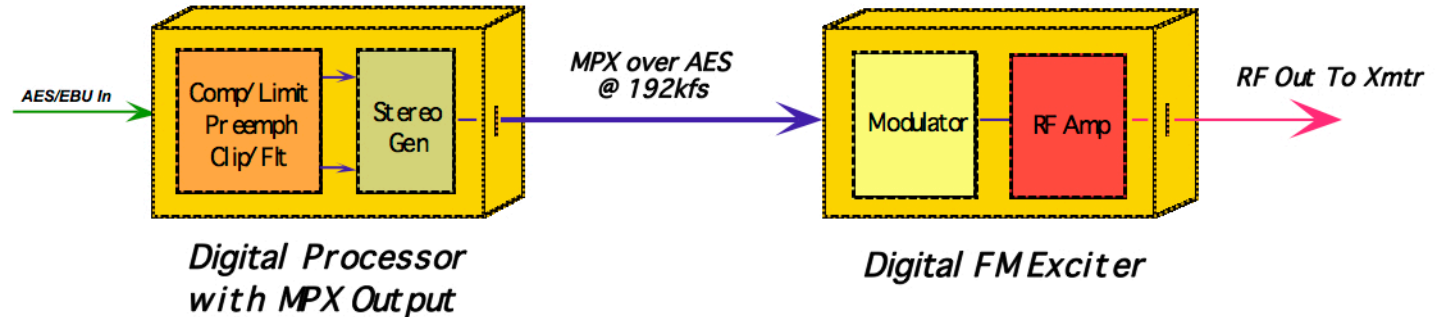
OmniaDirect Advantages:

- Digital Wideband Direct Connection To The Modulator Stage Of Digital Exciter (Analogous To Composite Input On Traditional Exciter)
- Zero Modulation Overshoots! Direct Coupling To Modulator Provides Sonic Improvement Over AES/EBU Method
- Eliminates The Need For On-Board Exciter Hard Limiter as Overshoots Do Not Occur From Sample-Rate-Converters Because The SRC Is Eliminated!
- Natural Exciter Design Progression: The Ability To Combine BOTH Conventional And HD Radio Into A Single Unit (increases simplicity)
- Eliminates Redundant Functions Like Emphasis, Hard Limiting And LPF

More Advantages!

- Propagation Delay Is Reduced Due To Elimination Of SRC , Reduced Number Of Low Pass Filters, And Emphasis Networks. (FIR Filters Consume Time!)
- No Sample Rate Roller Coaster! Sampling Rate Escalates On A Systemic Need
- Supports SSBSC Operation
- Point-To-Multipoint MPX Connectivity
- STL Requirements: 5.84Mb/s Throughput...Or...Can It Transport AES @ 192kHz/fs
- Can Be Implemented In Later Model Digital Exciters! (Nautel Vs/Vx already do!)

Digital Processor and Exciter: MPX Over AES Connection



Thank You!



Still Plays With
Trains

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Thank You!

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