Overhauling your FM+HD network, managing a changing environment





New Technologies – Scenarios



TRADITIONAL ANALOG FM



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- Audio processor located at studio w/composite STL
- Tube transmitter
- Remote control w/dial up or DSL

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• Limited flexibility



HIGH LEVEL COMBINED FM+HD





HIGH LEVEL COMBINED FM+HD

- Audio processor located at TX for main FM
- HD processing at studio
- I/E at different locations
- GPS required everywhere
- Composite/AES STL to TX
- Dual transmitters
- Inefficient combiners

HIGH LEVEL COMBINED FM+HD



 Audio processor located at TX • I/E at different locations for main FM

• HD processing at studio

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- GPS required everywhere
- Composite/AES STL to TX
- Dual transmitters





- Established
- Paid for

- Obsolete equipment
- Costly to operate, high electric bills
- Inadequate HD signal coverage, -20dBc max
- Costly repairs
- Limited flexibility, might not be bi-directional



SATELLITE TO TX | FM OR HD



SATELLITE DELIVERY TO TX FM OR HD

- TX Site only
- Audio & or HD ingested from ٠ satellite receiver
- ٠
- Audio processor at TX Dial up or DSL service ٠

SATELLITE DELIVERY TO TX FM OR HD



- TX Site only Audio processor at TX
- Audio & or HD ingested from Dial up or DSL service satellite receiver

- Established
- Paid for
- Simple

- Satellite contracts are expensive
- Hard to monitor

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- Costly site visits
- Local restrictions to infrastructure (dishes)



Upcoming Technologies – Scenarios

ANALOG FM+HD READY W/IP INFRASTRUCTURE





ANALOG FM W/IP INFRASTRUCTURE

- Audio processor at studio
- HD Ready SS transmitter
- 950/IP STL delivery
- Fiber / WISP / Cradlepoint

ANALOG FM + HD READY W/IP INFRASTRUCTURE

- Audio processor at studio
- HD Ready SS transmitter
- HTML web enabled



- 950/IP STL delivery
- Fiber / WISP / Cradlepoint
- Streaming services



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- Multiple backup services
- Automated failover
- Main/Alt single TX footprint
- Combined FM+HD processing
- Simplified GPS & HD monitoring

- Initial investment
- Skillset for RF/IP

HIGH DENSITY IP DISTRIBUTION





HIGH DENSITY IP DISTRIBUTION

- Third party enabled •
- Centralized monitoring & processing TX site specific adaptability Network controllable •
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HIGH DENSITY IP DISTRIBUTION



- Third party enabled
- Centralized monitoring &
- processing

- TX site specific adaptability
- Network controllable







- Hub & Spoke architecture
- Multiple backup services
- Automated failover
- Network management of software
- Lower overall operating cost of infrastructure
- Simpler centralized management (NOC/TOC)



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Skillset for RF/IP







BEST IN CLASS



BEST IN CLASS CONSIDERATIONS





- Centralization (Monitoring, software management/dist)
- Utility rich devices (Auto rollback, embedded processing)
- Cloud based tools and support (Livelook)
- On board features (Audio processing, SFN, dual-drive)
- Web enablement (SNMP, HTML5, advanced security)
- Built-In Redundancy (Stream splicing, multi-directional)
- Quick restart / life support (remote software updates)



