DTV Audio - An overview

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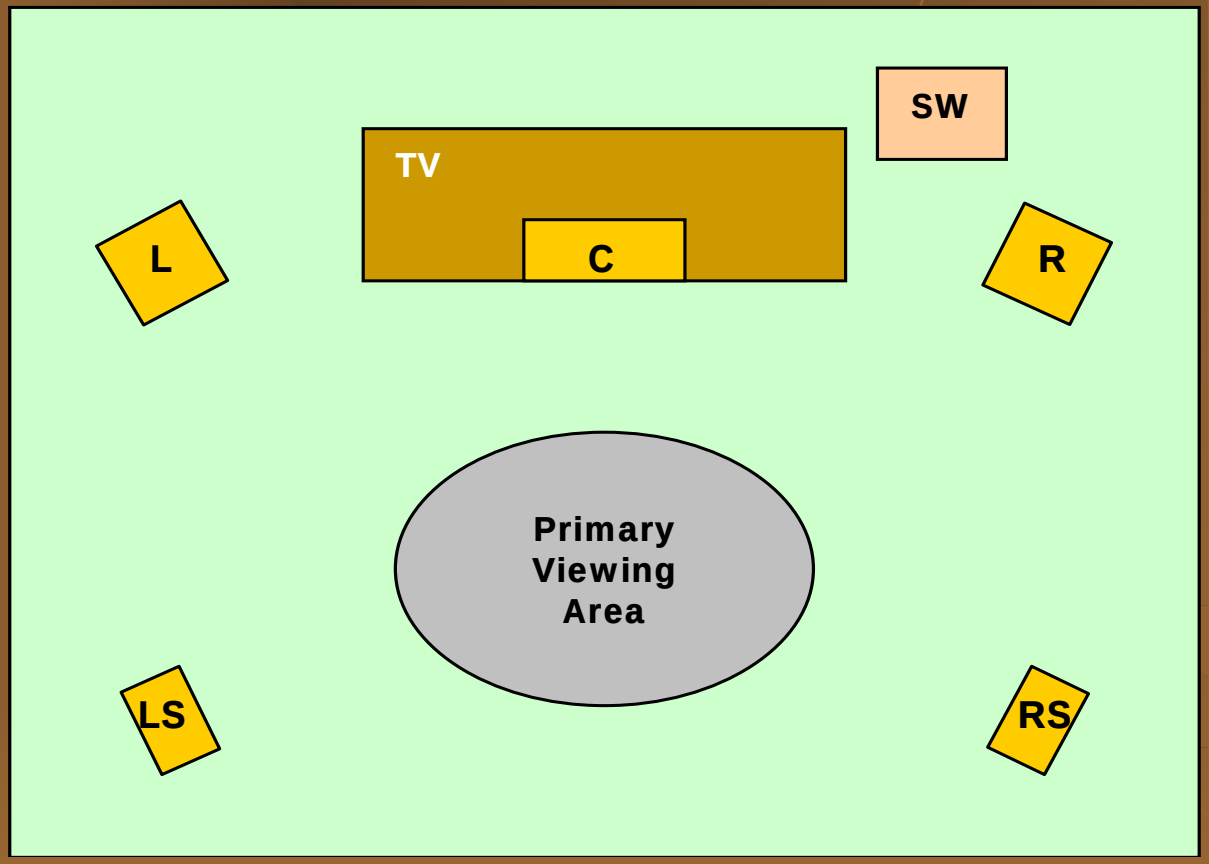
Compared to what?

- MTS audio transmission
  - *Companded analog stereo subcarriers*
  - *One, two or four (4-2-4 matrixed) channels*
- Storage/production
  - *Longitudinal VCR tracks*
  - *FM on helical scan*
  - *Digital on helical scan*
- Distribution/routing
  - *Analog*
  - *AES (STP or coax)*
  - *SDI embedded*

5.1-channel layout



DTV audio transmission

- Digital bitstream
- Multichannel (5.1)
- Lossy compression
  - *Dolby Digital (AC-3)*
  - *5.1 channels in 384kb/s*
- Metadata
  - *One soundtrack fits many environments*
  - *Solving traditional TV audio problems*

DTV audio production

- Preferably digital
- Linear or non-linear
- Multichannel (6 to 8, perhaps more)
- Compressed or uncompressed
  - *Contribution*
  - *Distribution*
  - *Emission*
- Metadata authoring & editing
- Downmixing (5.1, surround, stereo, mono)

DTV audio distribution/routing

- AES (3 or more layers)
- SDI embedded
- N-Vision solution
- Dolby E
- Metadata routing

Summary of changes

- Production/distribution environment
  - *Multichannel digital capability*
  - *Mux/demux issues*
  - *Metadata*
  - *Comprehensive monitoring (enc/dec)*
  - *Possible non-linear integration*
  - *Additional time required*
- Transmission environment
  - *AC-3 encoding*
  - *Comprehensive AC-3 decoding*