
SIMULCAST - Motorola Systems

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Motorola Simulcast

- Three basic options
 - Analog (no longer made)
 - Early Digital (no longer made)
 - Current Digital
- No audio frequency response adjustment
- All equipment and audio paths must be the same
- No automatic adjustment
- All use “?SCI” card

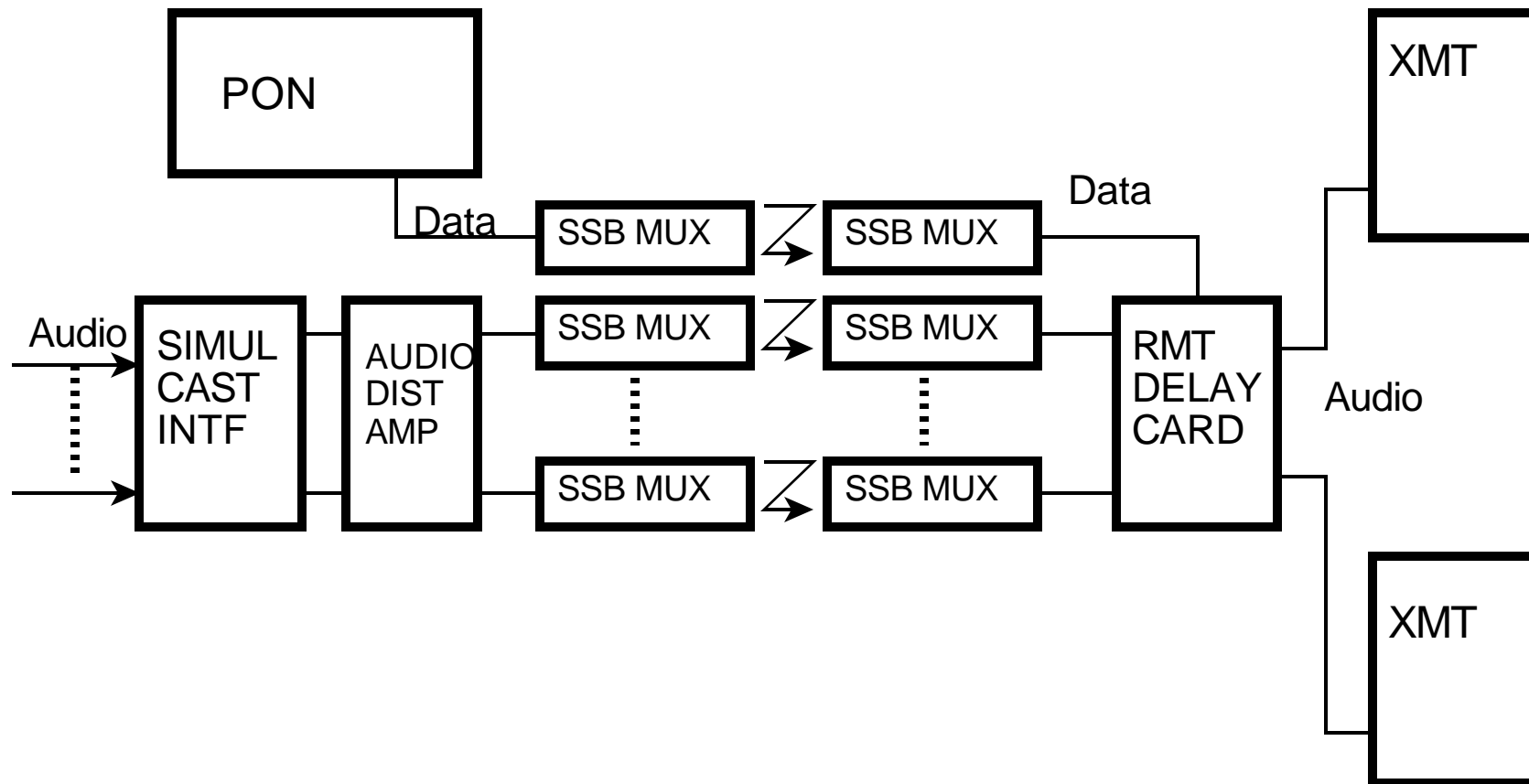
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Analog

- Used computer control (Prime Optimization Node)
- Used Motorola simulcast multiplex
- PON had two settings for loop microwave
- PON had to be manually adjusted
- Used audio distribution amplifier

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Analog block diagram



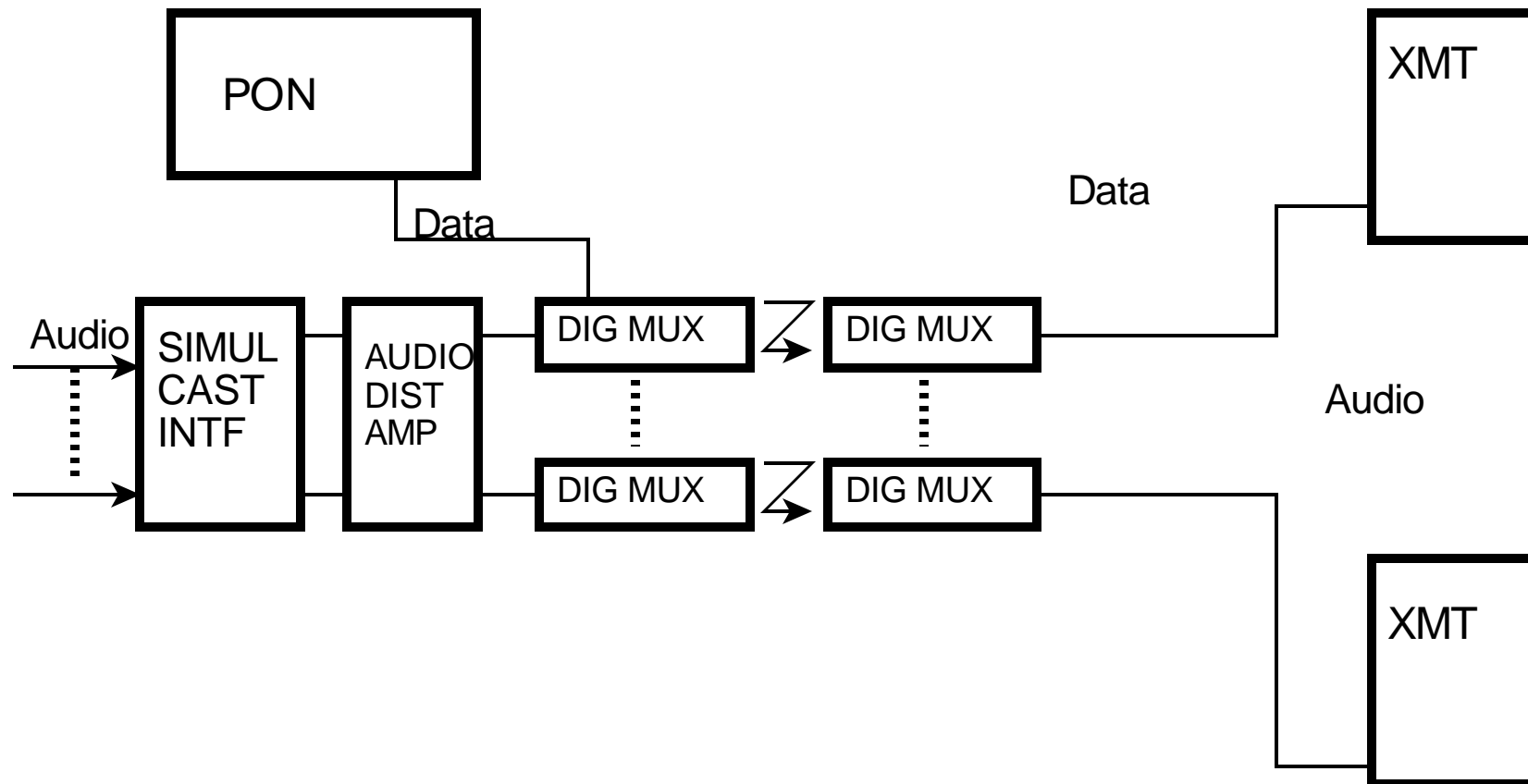
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Early digital

- Used T1 Channel bank from Siemens
- MUX cards built by Telesciences
- Used computer control (PON)
- PON still had to be manually adjusted
- PON had two settings for loop microwave
- Used audio distribution amplifier

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Early digital block diagram



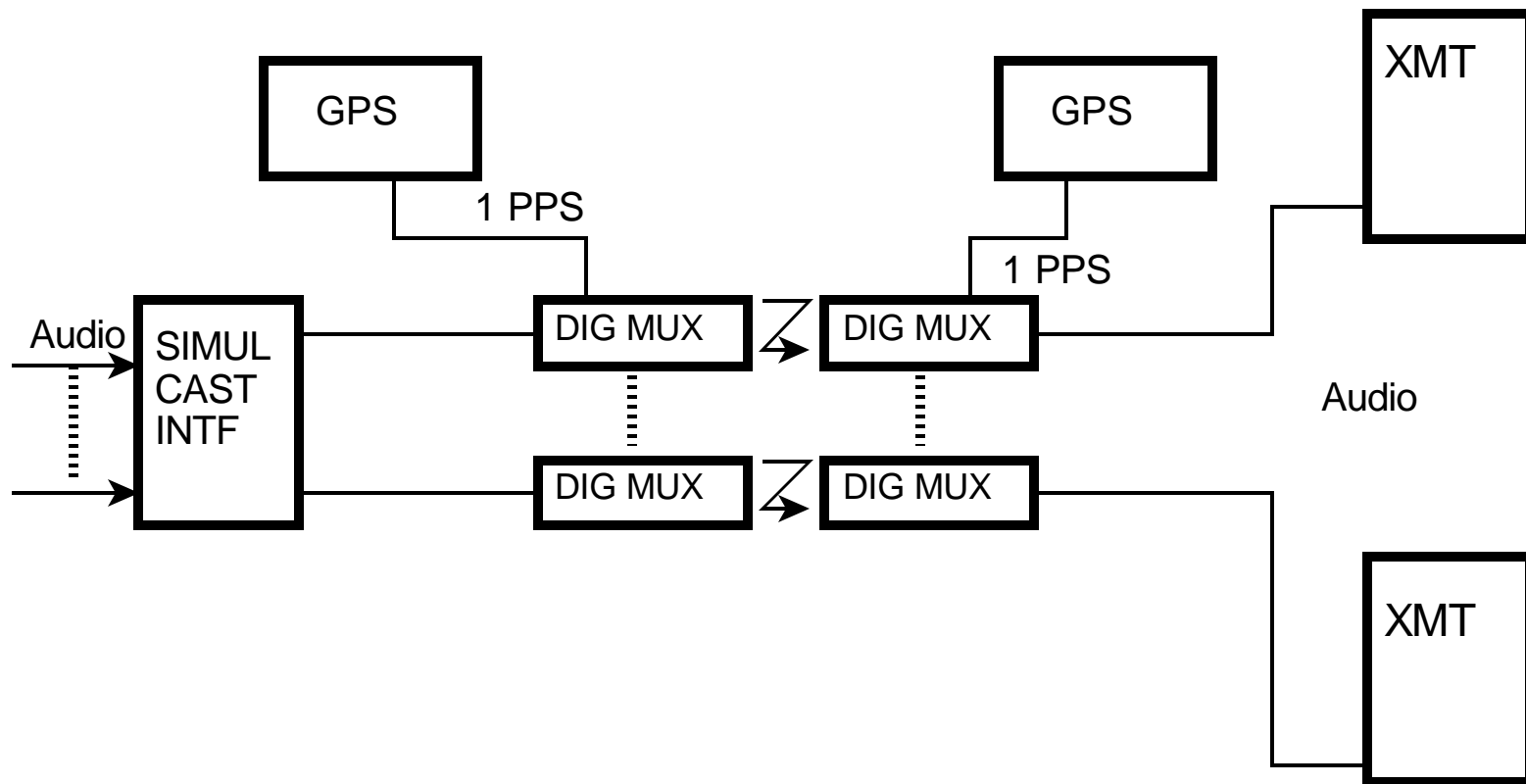
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Current digital

- Uses special cards in a Premisys Channel Bank
- Time delay automatically adjusts
 - Uses GPS timing (Efratom GPS/Rubidium references)
 - Set for constant delay
 - Can be used with DACS and telco T1s
- Audio levels manually adjusted
- Audio distribution handled in channel bank

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Current digital block diagram



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Common elements

- **Systems use “Simulcast Controller Interface”**
 - Provides for audio limiting
 - Provides for “low speed data” interface
 - Transmitter keying
- **Audio paths must all have the same elements for best audio**