REMOTE BROADCASTING

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THE CONCEPT

- Production of audio for broadcast from locations away from the studio at the radio station

- Audio coming from a remote location must be mixed properly and sent back in a single feed

- Requires coordination between producers based in the studio and the remote location
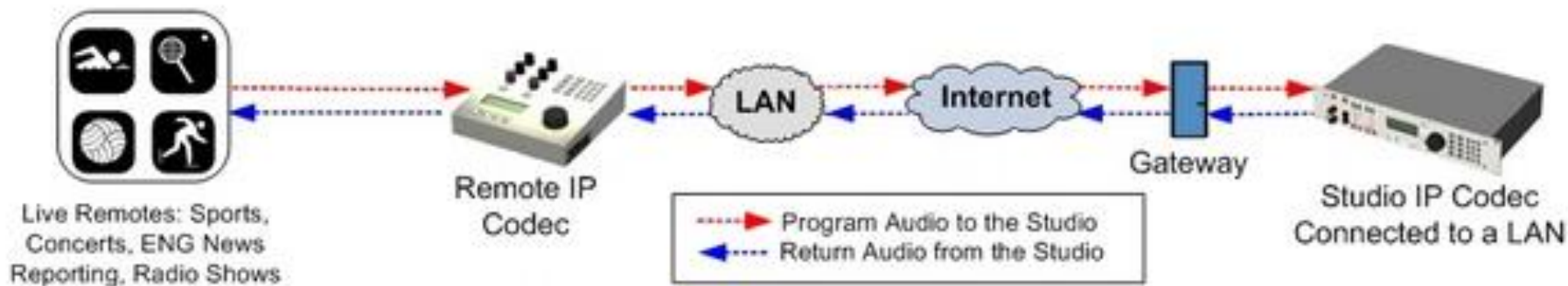
TYPES OF REMOTES

- Remotes can be a full production or provide elements for more of a studio-based show

  - Broadcasting a concert is more of a fully remote production aside from PSA breaks

  - Sports broadcasting involves more integration with studio-based programming

GETTING ON AIR

- Easy to transmit remote feeds over the Internet if audio delay is not a factor
  - Example: Thunderbird Radio Hell from The Pit

- Broadcast codec or special lines required to transmit clear audio in real time
  - Example: Sports broadcasts, talk shows on location

REMOTES A TWO-WAY DEAL

- Must be able to hear studio at remote location

  - Studio talkback with microphone "program 1" turned off
  - Can use phone for cue feed when not using the IP codec
  - Can also use FM radio to hear station output in real time

Live Remotes: Sports, Concerts, ENG News Reporting, Radio Shows

Remote IP Codec

LAN

Internet

Gateway

Studio IP Codec Connected to a LAN

- - - - ▶ Program Audio to the Studio
◀ - - - - Return Audio from the Studio

TRANSMISSION OPTIONS

- Tieline IP Codec: Real time, two-way audio over the Internet between studio and remote

- Leased line: Real time, one-way audio over dedicated line through campus phone system
  - Available at War Memorial Gym, Thunderbird Arena, Thunderbird Stadium
  - Need second phone line to receive studio feed over regular dial tone phone line

TRANSMISSION OPTIONS

- Live stream: Webcasting via laptop computer to provide delayed feed aired through studio
  - Only practical for shows fully produced from remote location with minimal transitions from the studio, or in cases where precise timing isn't essential
  - Can not engage in cross talk between studio and remote due to audio delay
  - This is the method in which we broadcast Thunderbird Radio Hell at The Pit

TRANSMISSION OPTIONS

- Wireless transmitter and receiver: If within signal reach of CiTR newsroom window, can use wireless kit to transmit remote feed over the air
  - Still need a telephone line or portable FM radio to receive studio feed
  - Longer broadcasts may require transmitter batteries to be changed mid-show
  - This is the method in which we broadcast the Welcome Back BBQ at McInnes Field

PLANNING A REMOTE

- Successful remote broadcasts start with proper planning

  - Time and other constraints
  - Personnel requirements
  - Equipment and logistics

TIMING IS EVERYTHING

- Is time going to be a factor? (e.g. sporting events don't wait for the broadcasters)

  - Can the remote be coordinated with the regular CiTR schedule?
  - If not, how will regular programming be affected? Pre-emptions?
  - Will studio elements need to fit in between remote elements on fixed time?

STUDIO PERSONNEL

- Minimum one person required in studio to monitor levels and switch between remote feed and other elements such as PSAs, music off CD, phone, etc.

- Technical producer can double as a studio host or co-host

- Studio serves as "master control" for shows fully produced from remote location (may only need studio person to break away from remote feed to air PSAs/Ads)

REMOTE SITE PERSONNEL

- One person required to monitor audio levels of all elements fed back to the station, including other boards connected to the codec, and coordinate timing with studio

- Depending on broadcast, field producer may be able to double as an "on location" host or co-host

INTERNET CONNECTION

- Preferable to have a wired connection that doesn't require a network login

- If going wired, how much Ethernet cable will be required to reach nearest connection?

- If going wireless, how strong is the wireless signal? Does it require a network login?

INTERNET CONNECTION SHARING

- Necessary for wireless networks that require login

- Codec connects to Internet through a laptop with both a network port and a wireless adapter

- Requires use of special ethernet "crossover" cable to connect the codec and the laptop

OTHER CONSIDERATIONS

- Connections to codec: mics, headphones

- Extension cords, power bars, XLR cable, etc.

- Table and chairs for equipment, broadcasters, producers, guests

- Broadcasting outdoors: Protection from rain/wind

MOST IMPORTANT THING

Set up equipment as early as possible before a remote broadcast, allowing plenty of time for testing levels and troubleshooting potential problems

EXECUTING A REMOTE

- Technical producer in studio can talk to the remote location off-air using studio microphone with "program 1" turned off.

- Remote feed can be heard off-air using the cue button.

- Technical producer must be careful to ensure remote feed is potted down and double check the "program 1" button before engaging in off-air cross talk.

EXECUTING A REMOTE

- Helpful to follow a rundown for broadcasts that require integration of remote and studio elements

- Careful attention must be paid at both ends to timing to ensure smooth transitions

- Field producer must be wary of unwanted noises being picked up by microphones (e.g. drunkies/expletives)
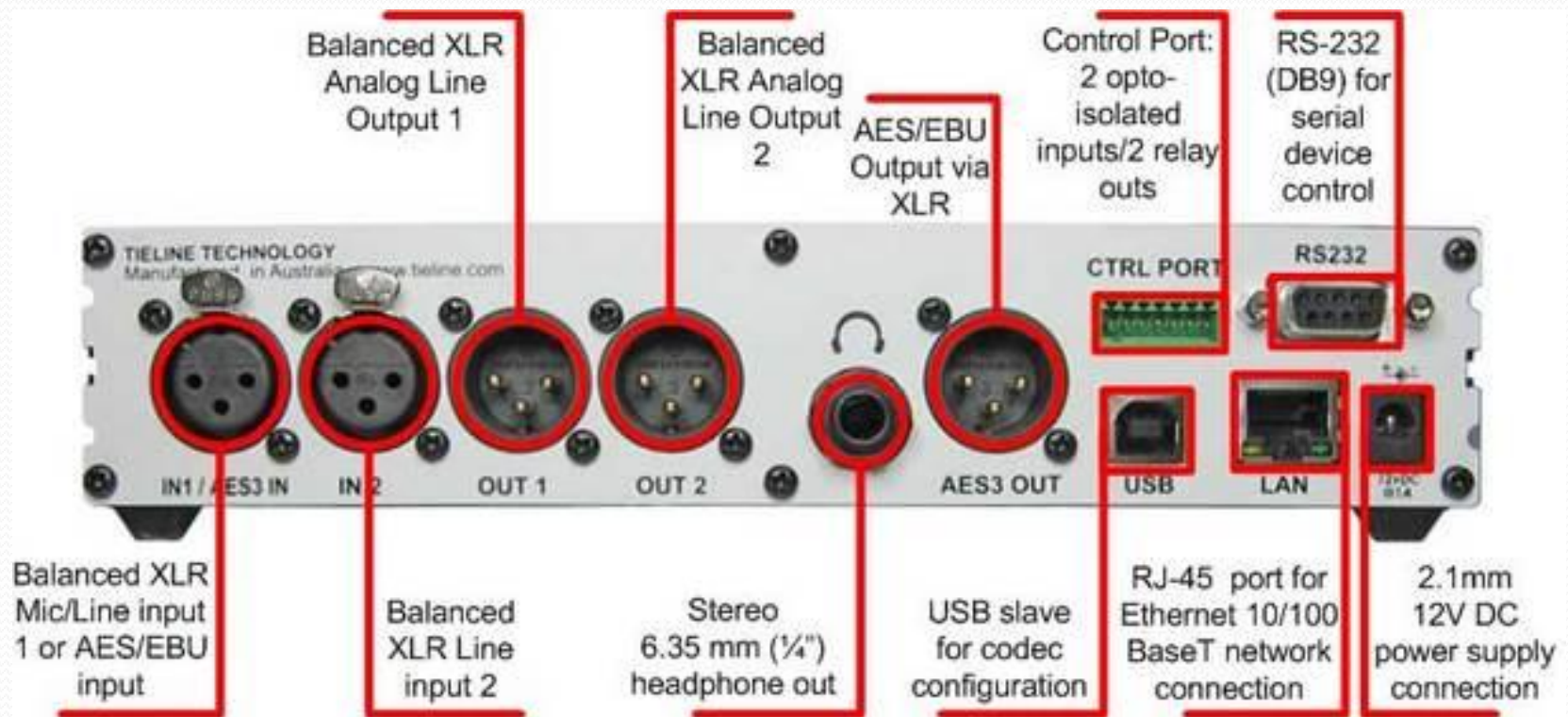
CONNECTING TO OTHER BOARDS

- Broadcasting a concert or gig usually means taking a feed from a large audio board and connecting via XLR cable to the IP codec or a smaller mixer that is connected to a leased line or wireless transmitter

- Field producer must ensure feeds from other audio boards include a proper mix of vocals, instruments

TIELINE IP CODEC

Use front panel to simply "dial"
in and connect to the station codec

TIELINE CONNECTIONS

QUESTIONS?

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