

Motivations and Objectives

- Motivations
 - Improve the experience of asking questions during a large conference or lecture
 - Increase mobile device's functionality by creating a method to allow devices to act as a wireless microphone
- Objectives
 - Transmit recorded audio from a smart device to an existing audio system
 - Create an Android application that does the above within a question and answer format

Challenges

- Lack of experience in Android Programming.
 - Time spent learning Android
- Finding a viable way to transmit audio in a wide range of existing venues.
 - Wi-Fi vs. Bluetooth?
 - Which is better for a wide range of existing venues?
 - Use a Server?
 - Required research, learning curve
 - How to get audio from server to audio receiver?
 - FM Transmitter vs. network connection
- Time constraints
 - Both previous challenges required a lot of time to mitigate.
 - Allowed for much less time to develop, test, and finalize our application.

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Methodology

- Connect participants to BEARmic Server
- Queue question requests from Participants
- Selected Participant speaks into their mobile device
- Send recorded audio from the Participant's device through the BEARmic server to the Host's device
- Use FM Transmitter to send audio from Host's device to the audio receiver
- Audio receiver sends audio to speakers through the existing audio system setup

FM Transmitter



- Used to transmit sound over FM radio frequencies
- Fits audio jack of most devices

Results

- Completed prototype BEARmic application
 - Capable of transmitting audio from a single mobile device
 - Basic functionality
- Successfully transmitted audio from mobile device to a radio
 - Proof of concept, audio receiver and radio both receive radio frequencies.

