

NORTHERN Separation of Cloud Generated Audio Streams

School of Informatics, Computing, and Cyber Systems

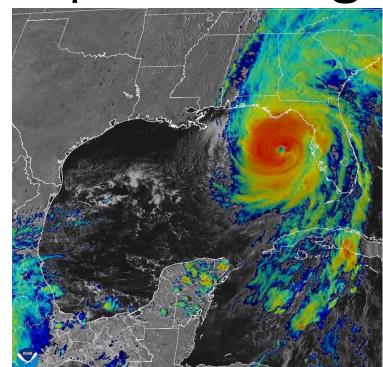
Team: Nolan Newman, Dallon Jarman, Sam Cain, Elliot Hull Mentor: Brian Donnelly, Savannah Chappus Client: US Coast Guard, Rescue21, General Dynamics



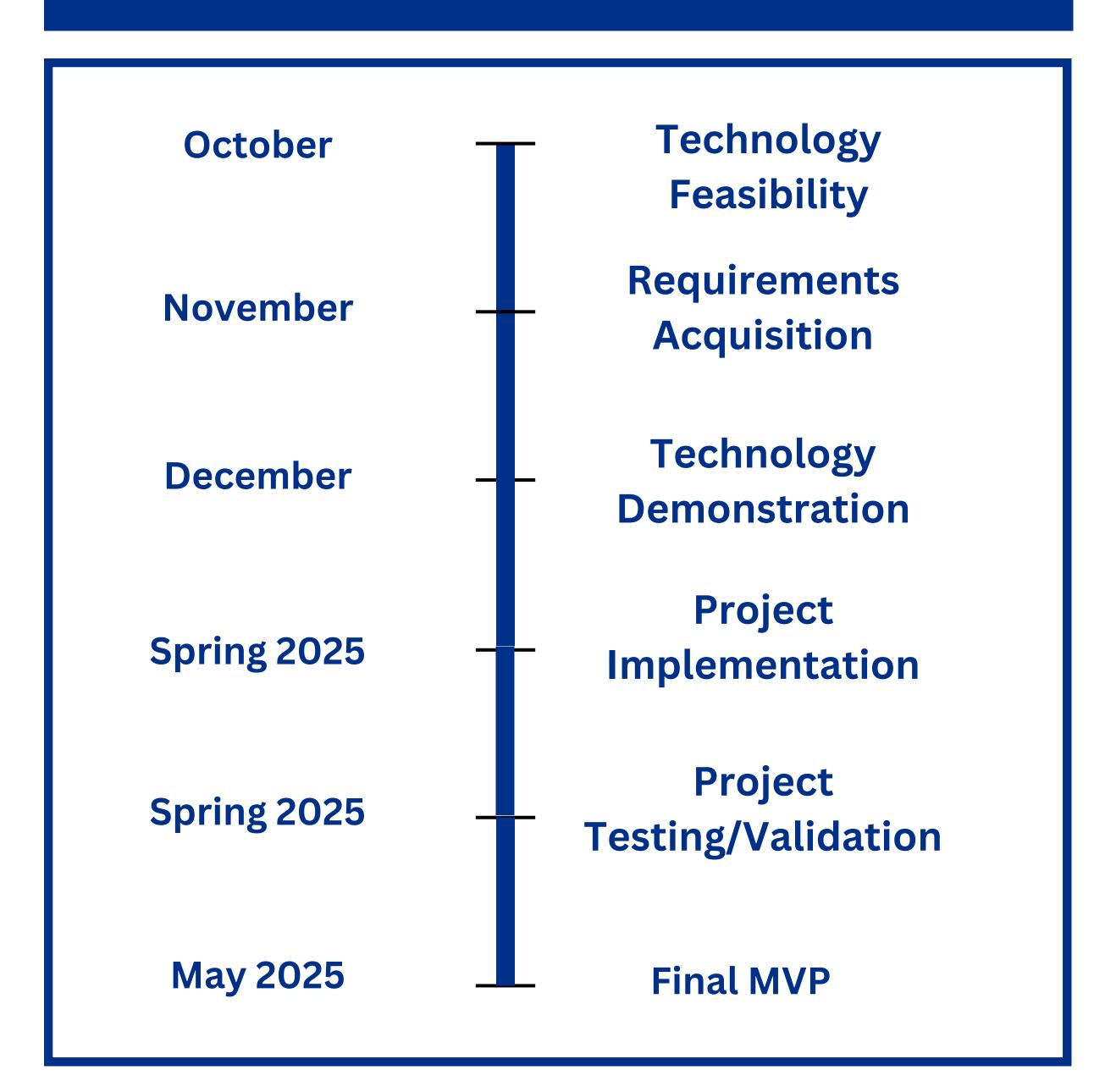
Motivation

Recent severe weather events have underscored the need for rapid and reliable response systems in Search and Rescue (SAR) operations. Our product will enhance SAR communication and efficiency through:

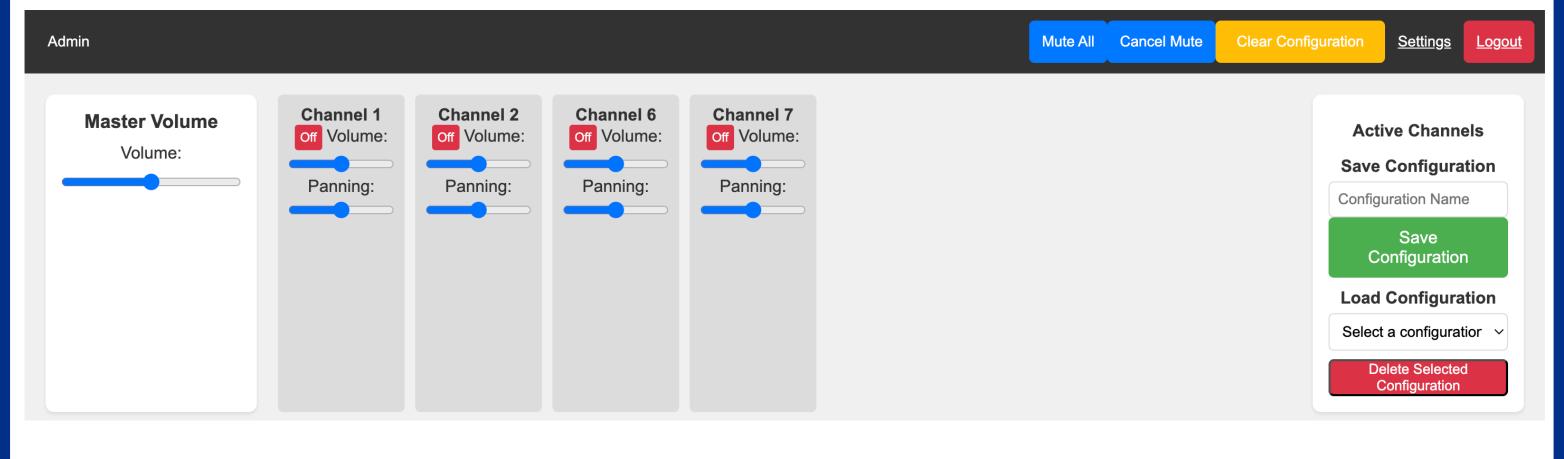
- Use of a web-based audio platform
- Advanced real-time audio processing
- Improved clarity
- Enhanced reliability
- Powerful interface tools
- Customization options



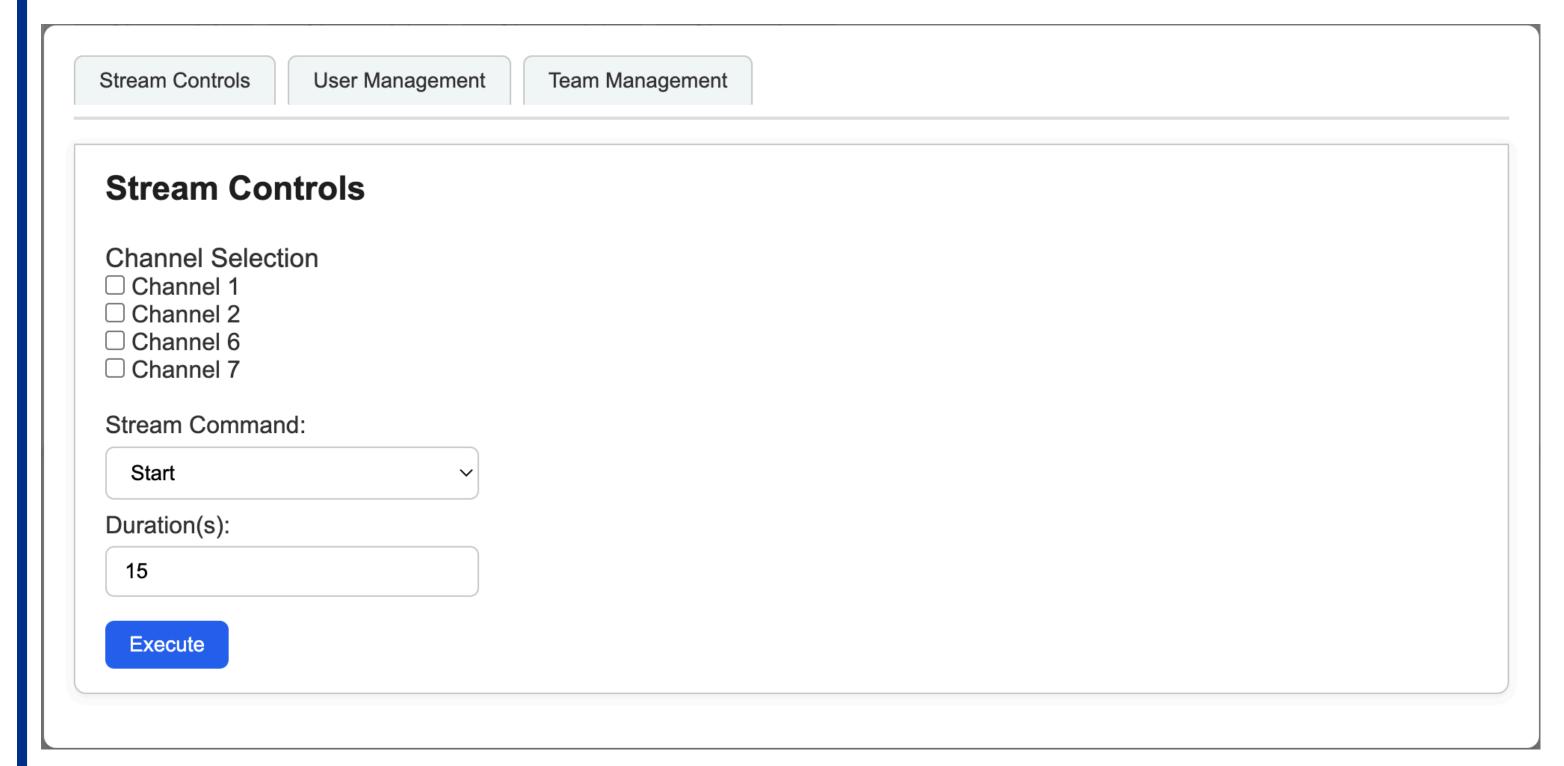
Current Status



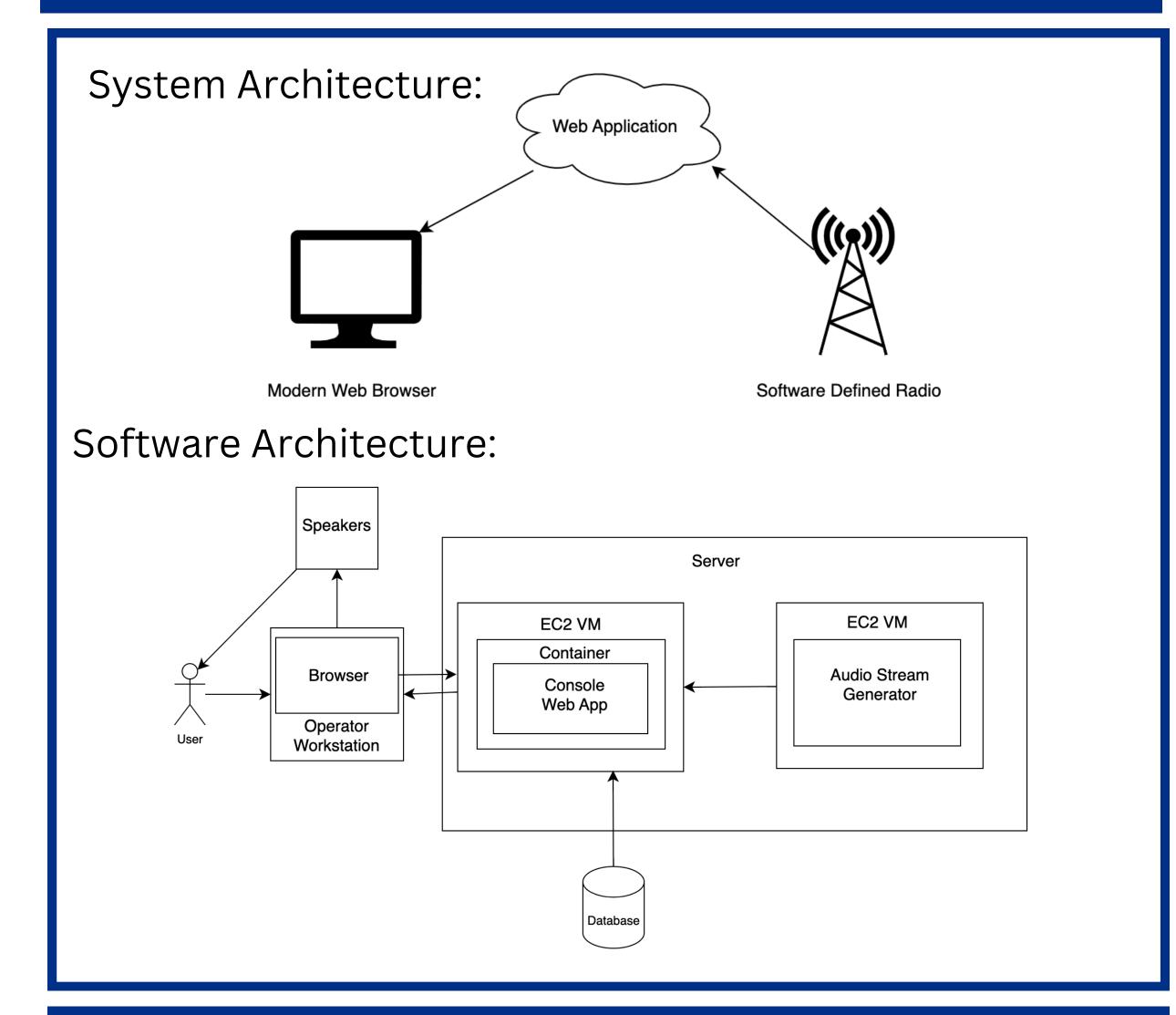
Key Features



- Multicast support on AWS EC2
- Virtual, spatial separation of audio streams
- Wide access provided through browsers
- User role management
- Admin account creation
- Save and load configurations
- Team creation and management
- Zero Trust Security methodology
- Passwordless authentication



System Architecture



Technologies



