BUILDING THE SOFTWARE BEHIND REAL-TIME AUDIO STREAMING

How Multiplied architected and built an audio software platform for a startup, then continued its development and modernization after acquisition with AI-assisted software development.



MULTIPLIED SOLUTIONS

ENTERPRISE AUDIO STREAMING, ASSISTIVE LISTENING & CLOUD-NATIVE ECOSYSTEMS

FROM LEGACY TRANSMISSION TO AI-POWERED IMMERSIVE COMMUNICATION

The Challenge: Complex Real-Time Audio at Global Scale

Our client is a premier provider of wireless audio solutions, assistive listening, language interpretation, and high-volume content distribution for large-scale organizations across North America and Europe. Their core offerings enable real-time audio broadcasting via mobile applications, dedicated receivers, and web platforms for universities, convention centers, government agencies, houses of worship, and major entertainment complexes.



As the demand for seamless multi-channel streaming and live AI-powered translation grew, the platform faced significant engineering challenges:

HIGH-CONCURRENCY STREAMING

Distributing low-latency, real-time audio content to thousands of devices connected simultaneously.

COMPLEX DEVICE ECOSYSTEMS

Managing fragmented mobile operating systems alongside dedicated hardware devices and remote server infrastructure.

MODERNIZATION & SECURITY

Integrating AI translation, centralizing server management, enhancing security, and accelerating CI/CD cycles.

The Engineering Solution

Since 2015, Multiplied Solutions has served as the client's strategic software engineering partner. Over more than a decade of collaboration, our cross-functional team has embedded directly into the client's operations to design, build, and evolve core components of their global technology ecosystem:

- **Next-Gen Mobile Applications (Android & iOS):** Developed and modernized intuitive mobile apps allowing end users to stream real-time audio channels, access live interpretation, and utilize AI-driven automatic translation tools with minimal latency.
- **Centralized Admin & Cloud Management Platforms:** Built and maintained web-based administration platforms responsible for remote device configuration, server health monitoring, user/permissions management, and full-spectrum cloud infrastructure oversight.
- **AI Translation & Real-Time Processing:** Integrated advanced AI-powered machine translation engines, providing automated, highly accurate language interpretation across live streams.

- **Cloud Infrastructure & Production DevOps:** Engineered multi-cloud architectures across Google Cloud Platform (GCP) and Microsoft Azure using .NET, Python, and MySQL. Implemented automated CI/CD pipelines to streamline code deployment, improve application security, and manage production releases safely.
- **Subject Matter Expertise (SME):** Acted as strategic technical advisors on high-level system architecture, cross-platform integrations, process optimization, and software lifecycle management.

CORE CAPABILITIES DELIVERED

- iOS & Android Development
- Real-Time Audio Streaming Architecture
- AI-Powered Live Language Translation
- Cloud Infrastructure (GCP & Azure)
- Remote Device & Server Management
- CI/CD & Production DevOps Management
- SME Technical & Architectural Advisory



The Business Impact

Our long-term technical leadership transformed a complex audio distribution network into a high-performance, future-ready enterprise asset:

- **Global Scalability & Zero-Latency Performance:** Enabled seamless real-time audio transmission to thousands of concurrent mobile devices across global enterprise venues.
- **New AI Capabilities & Monetization:** Successfully introduced AI-based language interpretation, empowering the client to deliver groundbreaking features to institutional customers.
- **Accelerated Delivery & Platform Security:** Automated release cycles and centralized server monitoring reduced deployment friction, strengthened data security, and elevated system stability across live environments.
- **Sustained Partnership Value:** Transformed a traditional audio distribution platform into an agile, scalable, and secure digital ecosystem serving tier-one global organizations.

Get In Touch With Us

READY TO TRANSFORM YOUR SOFTWARE INTO A HIGH-PERFORMANCE ASSET?

Let our elite engineering team take complete ownership of your technical challenges and accelerate your business growth.

LET'S BUILD WHAT'S NEXT

We help organizations turn complex challenges into scalable, future-ready solutions. From audio technology and e-commerce to healthcare and beyond, our cross-industry experience means you get a partner who understands your goals and delivers with clarity, speed, and reliability.



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