



TELLIANT™
Intelligent Software. Delivered.

Telliant Systems

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Case Study

Modernize a Telemedicine and Mobile Health Platform for Radiology and EHRs

The Client

The client is a leading technology provider of secure telemedicine, teleradiology, and RIS/PACS solutions. With over 1,000 installations worldwide, their platforms enable the electronic acquisition, viewing, communication, and storage of medical data from various modalities.

They offer workflow management and integration with existing Hospital Information Systems (HIS) and Radiology Information Systems (RIS). Their solutions are used in radiology, orthopedics, dermatology, ophthalmology, stroke evaluation, dentistry, and general medical exams, serving diverse healthcare user communities.

The Challenge

The client needed to enhance their platform to deliver valuable services globally with improved user experience. They required a technology partner with deep expertise in medical informatics, databases, medical imaging, telemedicine, ongoing feature enhancement, maintenance, and HIPAA compliance, while staying current with healthcare and mobile technology advancements. The new functionalities included are:

- ✔ Designed and developed major updates to the mobile telemedicine app with ongoing maintenance
- ✔ Integrated diverse hardware devices to capture and store patient vital signs within the application
- ✔ Connected the telemedicine app with full remote webcam control
- ✔ Incorporated real-time clinical data (ECG/EKG, heart rate, respiration, oxygen levels, posture) into comprehensive dashboards





Technology Environment

Telliant worked with the client to identify/create the most suitable tech-stack for the project to include the following

LANGUAGES

- ASP.NET
- .NET
- Android
- Objective C
- IOS
- C#
- Xcode 8.2.1

PLATFORM

- SQL Server

INTEGRATIONS

- DirectShow
- Vitalconnect
- iHealthLabs
- Webrtc

About Us

Telliant Systems, offers a diverse selection of custom software product development services, such as product strategy, software design, application development, QA/Testing, and application management services. Expert teams are available to develop web, enterprise, and mobile applications, including iOS and Android development.

Solution Highlights

The client needed secure, reliable real-time communication for streaming vital signs and images between mobile and web platforms. Telliant enhanced their mobile telemedicine and teleradiology app to deliver an improved user experience. Team Build:

- ✓ Remote-controlled webcam access with pan, tilt, and zoom (PTZ) capabilities.
- ✓ DirectShow API integration for enhanced camera functionality and real-time communication.
- ✓ WEBRTC platform implementation for concurrent multi-location communication.
- ✓ Real-time capture and transmission of vital signs and radiology images to cloud-based EHRs.
- ✓ Scalability upgrades for rapid emergency response.
- ✓ Vitalconnect and iHealthLabs Library integration for vital signs capture and streaming
- ✓ Comprehensive dashboards for real-time patient data streams.
- ✓ ExtJS UI components for cross-device data security.
- ✓ iPad interface for the telemed app

Result

The client received an application that not only met but exceeded their requirements. Seamless API integrations and improve performance, scalability and real-time communication to leading EHRs, resulted in a 100% increase in customer satisfaction.

