TELLIANT™
Intelligent Software. Delivered.

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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's objective was to enhance their platform to provide valuable and meaningful services worldwide, while ensuring a significantly improved user experience.

They sought a team with extensive expertise in various domains, standards, and integrations, including medical informatics, databases, medical imaging, and telemedicine.

The technology partner would be responsible for enhancing features ongoing maintenance, and HIPAA compliance. The partner should be well-versed in latest advancements for healthcare and mobile technologies.
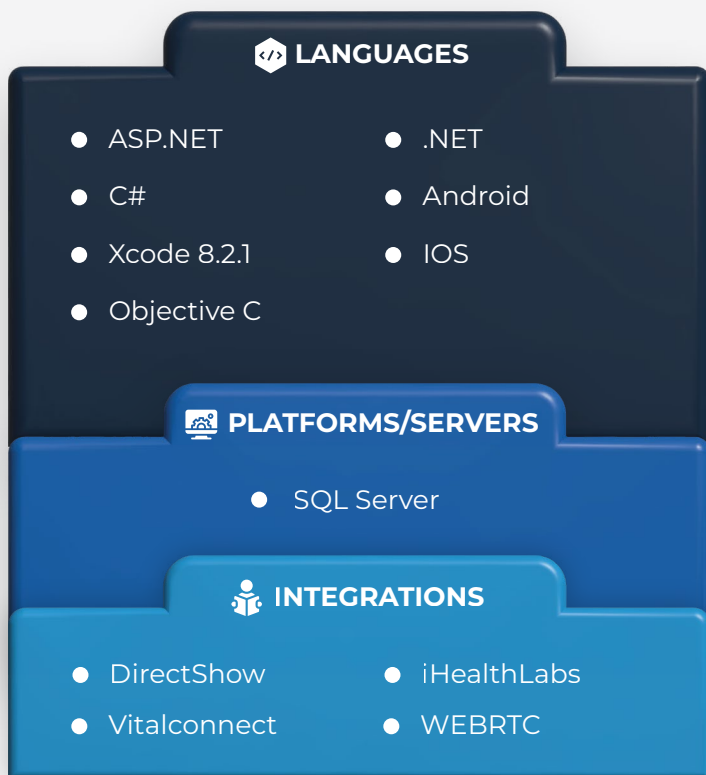
New Functionalities

- ✓ Designing, and developing substantial changes to the client's mobile telemedicine app in addition to conducting ongoing maintenance.

- ✓ Integrating with diverse hardware and devices to capture patient vital signs. Data was captured and stored on client's application.

- ✓ Connecting the telemedicine app with full remote control of the connected web cam.

- ✓ Incorporating Real-time data, such as ECG/EKG, heart rate, respiration level, oxygen rate, and posture, for comprehensive dashboards

- ✓ Thorough testing, including manual and automated scripts was conducted to ensure the efficient evaluation of the total product and newly created features.

Solution Highlights

The client's objective was to establish secure and reliable communication between users, both on the client-side (mobile) and the server-side (web), enabling real-time streaming of vital signs and images using cutting-edge APIs.

Telliant collaborated closely with the client, resulting in an improved user experience to their mobile telemedicine and teleradiology app.

Telliant built and improved several key functionalities:

- Enhanced the mobile app to enable remote-controlled access of webcams with pan, tilt, and zoom (PTZ) capabilities.
- Implemented the DirectShow API interface to enhance camera functionality and enable real-time communication.
- Integrated the WEBRTC interface platform to facilitate concurrent communication across multiple locations.
- Upgraded the real-time functionality of the app to capture and transmit vital signs and radiology images to cloud-based EHRs .
- Implemented scalability upgrades to ensure rapid response in emergency situations.
- Integrated Vitalconnect and iHealthLabs Library to enhance vital signs capture and streaming.
- Designed and built comprehensive dashboards to handle real-time patient data streams.
- Employed ExtJS UI components to ensure data security across all mobile devices.
- Developed the iPad interface for the telemed app.

Insights and Results

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

As a result, the client has planned additional projects with the Telliant team to further enhance the capabilities of both the mobile and web apps.

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
- C#
- Android
- Xcode 8.2.1
- IOS
- Objective C

PLATFORMS/SERVERS

- SQL Server

INTEGRATIONS

- DirectShow
- iHealthLabs
- Vitalconnect
- 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.

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