

The Next-Gen Healthcare Communication Platform for Better Interoperability

Client

A healthcare IT services company with cloud-based software products that help health organizations and individual patients to communicate, collaborate and facilitate remote consultation. The software platform provides secure DICOM storage and cloud PACS that is accessible to all, from anywhere on any device and allows real-time collaboration amongst healthcare providers and patients.

Business Challenges

The existing system had challenges with data integration, patient privacy and security, and patient data management. The system could not capture or interpret data, which led to medical errors, all of these led to reduced quality of patient care and experience.

The client wanted an integrated networking portal with

secure and seamless unified communication with cross-platform support. The platform would feature medical image cloud storage and sharing; with the facility to access, view, share or store DICOM images, non-DICOM images, and medical reports. The platform had to be HIPAA and HL7 compliant and ensure information security at all times.

Solutions

Trigent developed a state-of-the-art HIPAA & HL7 compliant, integrated patient communication platform. This centralized collaboration system is used by physicians, surgeons, radiologists, nurses, physiotherapists, any care team both inside and outside hospital walls.

The SaaS-based platform:

- Enhances patient-provider communication with secure messaging.
- Provides DICOM image management – images can be uploaded and shared with other users within the platform, anywhere at anytime.
- Reduces effort and errors with Modality Worklist – With an HL7 interface; the platform populates accurate, relevant information from EMR/EHR to the modality thereby cutting down manual effort and reducing errors in data entry.
- Supports a scalable digital Picture Archiving Communication System (PACS) – Handles all DICOM modalities and store non-DICOM images for a holistic view of patient imaging.
- Leverages flexible routing rules for automated workflow – Sends and shares medical reports and research studies across healthcare organizations or groups, specific PACS, etc.

Improved health interoperability ecosystem and patient engagement

The platform is compatible with smartphones using which healthcare providers can send text messages, images, files, and audio and video messages to one another. Also, it streamlines the workflow associated with patient visits such as registration, scheduling appointments, and patient reminders.

Besides customized user experience, the software provides features for 3 user groups:

- **Administrator:** Accountable for privacy, security, and permissions.
- **Users:** Can upload and access their health information and care plans. They can create closed groups and share details such as EMR, DICOM image management & genomics data within.
- **External PHI:** To generate healthcare applications, deployed and executed upon the PHI RE runtime, and derived from the international standard HI7.

Other features include:

- Patient-Doctor (1-1) chat
- Patient centric group conversations
- Healthcare bot integration
- Share medical files and reports
- Telemedicine for remote patient care and diagnosis



Reduced diagnosis errors



Faster appointment scheduling process



Improved patient care

Technology Stack

- **Front-end:** Angular 7, jQuery, HTML5, CSS3, NG Bootstrap
- **Middleware:** ExpressJS, NodeJS
- **Database:** MySQL
- **Server:** Tomcat 8+, Linux
- **Mobile:** Hybrid Cordova 5, Ionic 3

“Trigent has helped us build an integrated communication platform to overcome interoperability barriers, improve patient engagement and quality of care.”

Benefits

- Improved care coordination by providing the right amount of information to healthcare providers and patients.
- Secure and seamless system that helps improve treatment efficacy and saves staff time.
- Enhanced clinical workflows by providing a real-time consolidated view of patient information.
- Month-on-month growth of 50% patient and physician sign-ups, since platform launch.
- Provides medical diagnosis, resulting in effective patient-centered care.
- Highly secure, scalable, cloud-based storage that speeds up image access and reduces storage costs.
- Standards based RESTful interfaces allows interoperability with other external systems and deeper integrations with partner systems.