

# Support and Extend In-house ORU Repository



## Background

The client had started a proof-of-concept project to store lab results as industry-standard Health Language 7 (HL7) Observation Result (ORU) messages. They had both the historical repository and a prototype web UI. The concept seemed sound, but they wanted expert input into the decision to extend the project or shut it down. Given our experience with long-term medical records storage, they asked M+H to review their project, assess it and advise them on long-term viability.

## Business Challenge

The challenge was to answer some difficult questions: Could the project be moved from an experimental to production footing? Could the project be maintained by in-house staff with other priorities and shrinking resources? Could the raw data facility be adapted quickly and effectively to real-world uses?

## Solution

To validate the project's real-world usefulness, we wrote middleware to allow us to incorporate the data source into one of our application systems for the client. This allowed us to establish both that the technology was usable and that the clinical community wanted to use it.

To validate the data archive's reliability, we developed cross-checking software to mass-compare the results to the source system. At this point, we offered the assessment that the project was viable, although not as it was. The client asked M+H to move the project from science experiment to production facility.

To pass HIPPA compliance, we created an authentication mechanism which is tied into the hospital's core authentication system. To gain support for the expense and effort of bringing such a system on-line, we rolled out a modified version of the UI as a downtime facility. To make the data source more easily accessible, we developed a service to allow apps on remote servers to pull data across the network.

We took over the system administration of their server, moved the system to a High Availability Linux (HAL) cluster and recently managed the transition from the original LIS to a new LIS, providing a seamless and fully integrated on-line history.

## Results

The result is a supported and current data source which is fast and flexible, allowing clinicians to view integrated results from many sources for orders dating back to 1974. We usually create custom software as-needed to support business processes. However, as this project demonstrates, we are comfortable taking over existing software and extending and supporting it.