

Immucor, Inc.  
**Galileo Echo Case Study**  
1.2 Software Upgrade

Ronald Reagan UCLA Medical Center, Los Angeles

2009 April

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## **Background: Ronald Reagan UCLA Medical Center | Los Angeles, CA**

Ronald Reagan UCLA Medical Center is a 520 bed hospital that provides internationally recognized patient care to more than 300,000 people each year from Los Angeles and around the world. In July 2008, *U.S. News & World Report's* annual Best Hospital survey ranked UCLA as No. 1 in the West and among America's top five hospitals for the 18th consecutive time. The UCLA Division of Transfusion Medicine utilizes Immucor's Galileo® and Echo® instruments in their laboratory.

Galileo and Galileo Echo are fully automated blood bank instruments, designed to perform blood typing and antibody screen testing, as well as antibody identifications, Weak D, direct antiglobulin tests, donor confirmations and full anti-human globulin crossmatches.

The Echo provides the industry's quickest turnaround time for a type and screen, coupled with flexible sample and reagent loading. Features that make the Echo cutting edge include linear racks for real time sample loading, STAT priority test scheduling, real time test results and a bidirectional interface to the Laboratory Information System. Due to their high test volume, Ronald Reagan UCLA Medical Center is also utilizing Immucor's Galileo instrument in tandem with the Echo. Galileo is Immucor's high volume blood bank instrument which has the industry's highest throughput for blood typing and antibody screen testing. Galileo also offers linear racks for real time sample loading, real time test results and a bidirectional interface to the Laboratory Information System.

## **Process Improvement Initiative**

Before installing Immucor blood bank automation, Ronald Reagan UCLA Medical Center utilized Ortho Clinical Diagnostic's ID-MTS™ Gel Test™ technology both manually and on the Tecan MegaFlex automated instrument. In 2004, UCLA implemented the Galileo instrument and then added a second Galileo in 2006 to manage their high volume and dynamic workload. Several years after transitioning to Galileo, UCLA added an Echo instrument to their laboratory to assist with STAT testing. This allowed their laboratory to standardize testing across both automated blood bank platforms, taking advantage of the unique strengths of each. The Galileo is able to handle large runs with high throughput, while the Echo is able to manage smaller, more urgent test requests with a rapid turnaround time. The ability to load tests on the Galileo or Echo automated instrument provides UCLA the opportunity to manage their workflow with more flexibility and efficiency.

## **Case Study Method**

Immucor recently launched a new software upgrade for Echo, software version 1.2, which enhances test processing on the instrument via co-mingling. Co-mingling allows the Echo to process multiple tests and assay configurations more efficiently; providing a quicker turnaround time for intermingled test requests compared to earlier versions of Echo software. Ronald Reagan UCLA Medical Center recently performed time studies to evaluate the impact that Echo's latest software upgrade would bring to their laboratory. For time studies that illustrate the difference in assay scheduling and test processing between Echo 1.1 and Echo 1.2 software conducted at UCLA Medical Center, please see Table 1.

## **The Results: Improved Operational Efficiencies & Patient Care**

The savings in total processing time between Echo software version 1.1 and 1.2 for the scenarios tested at UCLA ranged from 16 to 44 minutes. Time savings were most significant for a common workflow scenario at UCLA where the Echo turned around three separately initiated Group and Screen runs with an Antibody Identification panel in between, in 68 minutes; compared to 90 minutes with the old version of software. "This is a very real-world scenario at our laboratory and was a reason that the Echo was previously held in reserve for only Antibody Identification testing by many operators prior to the software upgrade", states Jim Thompson, Blood Bank Senior Specialist for the UCLA Division of Transfusion Medicine. "Now, with the 1.2 software upgrade, total throughput for all assays is increased with minimal increase to the processing time for an individual batch."

"I believe the operators will feel more comfortable when deciding to use the Echo for processing of STAT Group and Screen specimens and adding an Antibody Identification panel as necessary", states Thompson. "Overall, the software change is transparent until the operator notices that a subsequently scheduled, different assay is running while the earlier assay is still in progress."

While the implementation of the Galileo and Echo instruments at Ronald Reagan UCLA Medical Center provided improved test processing compared to previous test methods, the implementation of Echo 1.2 software provides further improvements to the laboratory's operations. Now with the improved software, UCLA expects that the Echo will play a bigger part in managing the laboratory's heavy workflow, specifically the high volume of STAT specimens given the UCLA patient population. "I expect the Echo will support more of the workload simply because the operators prefer its speed and user-friendliness", concludes Thompson.

# Table 1 Echo 1.1 versus 1.2 Software Test Processing

Location: Ronald Reagan UCLA Medical Center



## Test Scenario

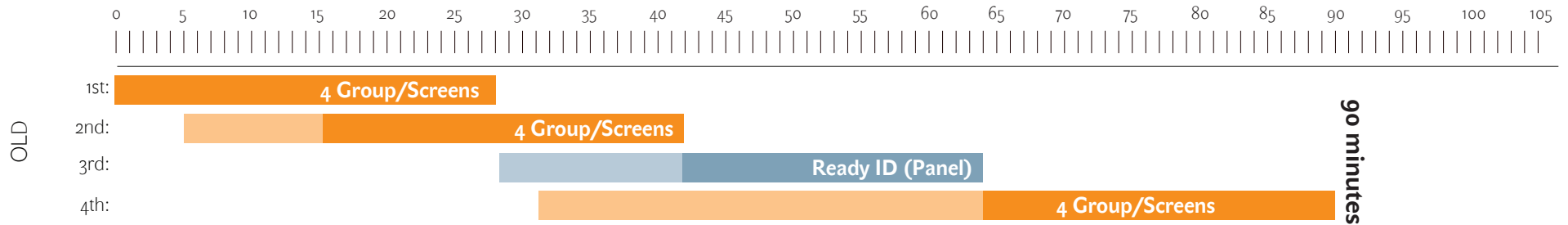
### Assays

- 1st Run  
4 Groups/Screens
- 2nd Run  
4 Groups/Screens (5 minutes later)
- 3rd Run  
1 Ready-ID Panel (after 1st Group/Screen ends)
- 4th Run  
4 Groups/Screens (immediately after ID is scheduled)

### Processing time for all assays

Software version 1.1 .....**90 minutes**  
Software version 1.2.....**68 minutes**

### Software Version 1.1



### Software Version 1.2

