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New connectivity standards nearly ready to roll

Big hair, Metallica, and even Nintendo can evoke nostalgia for the 1980s. The electronic connectivity standards that were born in that decade? Maybe not so much. Yet in vitro diagnostic analyzers and laboratory information systems still communicate with each other using standards originally promulgated by the American Society for Testing and Materials during that period.

Enter the Laboratory Analytical Workflow profile, a set of next-generation standards developed by the IVD Industry Connectivity Consortium in partnership with Integrating the Healthcare Enterprise (see "New connectivity standards all about ability to plug and play," CAP TODAY, August 2012, page 90). A recent demonstration of the LAW profile at the annual meeting of the American Association of Clinical Chemistry drew intense interest from laboratory IT directors, LIS companies, and IVD instrument vendors, says Eric Olson, IICC president and vice president of portfolio and product management for Siemens Healthcare Diagnostics. "It was a really positive event for us. Five companies that have implemented the LAW profile in their software connected to one another without drivers and successfully demonstrated plug-and-play connectivity between LIS or middleware and analyzers," Olson says.

The AACC demonstrations featured analyzers from Abbott Diagnostics and Siemens and laboratory information systems or middleware from Orchard Software, Sunquest Information Systems, and Roche Diagnostics. All except Sunquest are founding members of IICC. Other founding members include Beckman Coulter, Becton Dickinson, BioMérieux, Data Innovations, Ortho Clinical Diagnostics, and Systelab Technologies.

In six demonstrations during the AACC conference, different analyzer–LIS pairings tested the LAW profile through "the full life cycle of order to results between LIS and analyzer," says Olson. "First was the Sunquest LIS talking to the Siemens analyzer. The analyzer reports a sample ID, the LIS says, 'Here's what to do with it,' and the analyzer produces a result, confirming that they can talk and understand each other's messages without a driver."

Lab information systems and analyzers typically communicate via a serial port that uses "a standard that was based on work that ASTM did and that was ultimately taken over by the Clinical and Laboratory Standards Institute," explains Ed Heierman, PhD, chief technology officer for IICC and informatics software architect for Abbott Diagnostics. With ASTM, communication with a given LIS requires a unique interface, or driver, for each type of IVD instrument. "The whole objective of IICC [in developing the new standards] was to help simplify and streamline those communications because our industry found that companies and even health care providers are spending a lot of time and effort just to get things connected," says Dr. Heierman. "The goal is to enable an LIS vendor to implement one LAW interface and then be able to communicate with any company's IVD instrument that may come on board."

In addition to eliminating multiple, customized interfaces, the LAW profile uses the HL7 communication protocol, "so it's basically getting the lab to use the same language that the rest of the health care infrastructure is already using," says Olson. Serial cable connections "can get backed up when there's transmission of a large number of results," he continues, but LAW avoids this by using modern TCP/IP networking technology. LAW improves routing "because it takes into account when an analyzer can or cannot accept an order." If an analyzer is busy or out of reagents, for example, the sample can be rerouted to a different analyzer, "whereas with ASTM, you often have to wait until you don't get a result back before you know you've got a problem. It's much better from a control systems perspective."

The IICC had expected to publish a final LAW profile in 2013, but, Olson says, requests for changes that emerged from testing at an Integrating the Healthcare Enterprise-sponsored Connectathon in spring 2012 caused some

delay. “We went back and did reviews of existing implementations and made updates to clarify and improve some of the messaging and the data exchanges,” adds Dr. Heierman. “We also went back and reviewed with hematology and microbiology subject matter experts to make sure we had adequate coverage of those two testing domains.” After another round of testing at a Connectathon scheduled for early 2014, he says, “I think we’ll be ready to move this into the IHE Laboratory technical framework and publish the profile as a new CLSI standard.”

When can lab IT directors expect to see the plug-and-play capability in their own systems? It could be a matter of months, says Olson. “There are no products on the market yet that use LAW. The protocol is still [undergoing] finishing touches. It’s certainly sufficient for people to implement, but it’s not fully published. That’s probably still a couple of months away. But some companies are [incorporating] it in their products now, and others have committed to doing so.”

Olson is reaching out to information technology vendors by phone and in person at events such as the AACC meeting to promote the LAW profile. When he talks to vendors about the timing of implementation, “I send the message that in general, most [IVD] companies are looking to implement this in future products rather than going out and changing all the products that are out there in the field.” But, he adds, LIS companies are likely to retrofit existing products with a LAW interface, “so this industry transition is not going to have to wait until the whole installed LIS base turns over.”

CAP and mTuitive create application for care of cancer patients

The College of American Pathologists and mTuitive have collaborated to develop the CAP electronic forms and reporting module, or CAP eFRM. The application incorporates the CAP electronic cancer checklists, the electronic version of the CAP cancer protocols.

The electronic cancer checklists include 81 cancer case summaries and two new biomarker reporting templates for colorectal and lung cancer. The case summaries are derived from the 65 CAP cancer protocols, which are intended as a resource to help pathologists report surgical pathology findings in newly diagnosed cancer cases.

“We designed eFRM to help pathologists and laboratories make more effective use of data electronically as they care for patients,” says Charles Roussel, CEO of the College of American Pathologists. “This application eases electronic cancer checklist implementation for health care and laboratory system vendors, ultimately benefiting pathologists, laboratory professionals, clinicians, and patients.”

The CAP and mTuitive will offer two versions of the eFRM—a basic, stand-alone version and a more comprehensive version that includes a wider range of functionality and can interface with laboratory information systems.

***College of American Pathologists**, 847-832-7700*

European firm purchases Centricity LIS from GE

GE Healthcare has sold its Centricity Laboratory Division to Cirdan Ultra, a subsidiary of Cirdan Imaging Limited, Lisburn, Northern Ireland.

Under terms of the acquisition, Cirdan Ultra will support GE customers using current versions of the Centricity laboratory information system in North America, Asia Pacific, and the United Kingdom.

“We plan to develop the products to keep pace with the rapid advances in molecular and genetic pathology,” Cirdan Imaging CEO Hugh Cormican said in a prepared statement. Cirdan plans to launch the next version of the Centricity LIS in January 2015. “This will combine the power and performance of the GE LIS products with the pathology imaging modalities under development by Cirdan Imaging,” Cormican added.
Cirdan is collaborating with Kainos Software Limited, Belfast, to link future versions of Centricity with Kainos’ Evolve electronic medical record system.

***Cirdan Imaging Ltd.**, 44(0) 28 9266 0880*

NovoPath offers Citrix platform for AP system

NovoPath has announced that it will support the Citrix XenApp platform, while continuing its support of the Microsoft Terminal Services platform, to allow laboratory professionals using its NovoPath anatomic pathology system to securely manage cases from any location at any time.

"We believe it is important to provide our clients with a choice in architecture to support remote employees [and] enable a flexible working environment," says Rick Callahan, vice president of sales and marketing for NovoPath. "With a diversity of offerings, IT departments can save time and money and select the most appropriate NovoPath offering, given their existing IT infrastructure."

NovoPath also offers the NovoOutreach module, which provides referring physicians with Web-based off-site order entry and results viewing.

***NovoPath**, 877-668-6123*

AHRQ tool focuses on lab test processes in medical offices

The Agency for Healthcare Research and Quality has released the toolkit "Improving Your Office Testing Process: Toolkit for Rapid-Cycle Patient Safety and Quality Improvement."

The document is intended to help doctors, nurses, and medical office staff improve their processes for tracking, reporting, and following up on medical laboratory tests. It includes a template to ensure that laboratory test results are properly communicated to patients in English and Spanish.

***The toolkit is available on the AHRQ Web site at www.ahrq.gov**.*

Brazilian hospital selects Cerner system

Cerner has announced that it will install its Cerner Millennium solutions at Hospital Israelita Albert Einstein, a private, 674-bed hospital with eight ambulatory clinics in São Paulo, Brazil. The hospital is Cerner's first Millennium implementation in Brazil and its first client to leverage Millennium in Portuguese.

***Cerner**, 816-221-1024*

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