Newsbytes, 12/13

Raymond D. Aller, MD, and Hal Weiner

How software issues enhanced a vendor's relationship with its client

The University of Michigan Medical School has, for more than a century, brought innovation to all aspects of health care. So no one should have been surprised that when it found itself dealing with usability issues in its new lab information system, it came up with a novel solution. What may have surprised some, however, was that the solution included a trip to Poland.

Presented earlier this year with a new anatomic pathology module that had a slow and complex user interface, Ulysses J. Balis, MD, professor of pathology and director of the division of pathology informatics at the University of Michigan Health System, came to realize he had two options for substantially rebuilding the user interface: rely on conventional programming methods, which could require a time investment of up to a year, or turn to agile programming, a days- to weeks-long approach that is common in many sectors of the software industry but, to Dr. Balis' knowledge, has not been applied to LIS development. After a nanosecond of consideration, Dr. Balis opted for the latter.

Rather than repeatedly shuttling interim versions of software between end users and a vendor's programmers, he explains, with agile programming, "you pair subject matter experts and programmers side by side, and you build the software from the ground up until it does exactly what you need it to do."

Operational challenges surfaced at the University of Michigan mid-year, when it broadly deployed a new LIS from SCC Soft Computer to replace its 28-year-old lab system. While the vast majority of the general laboratory modules were mature and performed well, the anatomic pathology module "was brand-new code with many sections containing never previously deployed workflow models or user interfaces," says Dr. Balis. "But, as is often the case with new software, there was never enough time or opportunity to adequately expose the software to end users." As it turned out, the interface "for many parts of our workflow, was cumbersome, or had too many steps, or was visually too cluttered. The pathologists were getting frustrated because the clutter was slowing down case sign-out and potentially adding risk, because with all that information overload, you might miss a critically important piece of information."

Consequently, "our team and [SCC CEO] Gilbert Hakim and his senior architects decided that the only real way to expeditiously solve this would be to make new optimal-workflow interfaces from the ground up," says Dr. Balis, who then seized upon the agile programming model. Because SCC's team of 70-plus programmers working on related modules were based in Poland, Dr. Balis proposed to the vendor that he and three colleagues travel to Poland and work with the programmers for a week. SCC thought the idea was fascinating, says Dr. Balis, because no one had ever done that before. "Two-and-a-half weeks later," he adds, "they [SCC] called and said, 'We'll do it.'" With the approval of his departmental leadership, Dr. Balis and his colleagues left for Poland five days later.

In addition to Dr. Balis, the team from the University of Michigan included the director of surgical pathology, a second-year resident, and a cytotechnologist who serves as senior implementation lead for AP. A group headed by SCC's senior architect traveled to Poland from the company's headquarters in Clearwater, Fla. Focusing only on case sign-out, the collaborators examined the user interfaces that needed to be redesigned and "went through the workflow in great detail so that their programmers would really understand what goes on in a pathology laboratory, or when a pathologist signs out a case," Dr. Balis explains.

Five days later the group "had mutually assembled, from the ground up, a new interface that accomplished everything we wanted: to be fast, safe, and minimalist in the amount of information displayed, though if you need more information you can easily get it on demand," says Dr. Balis. "We had a working prototype on which the programmers could do their own regression testing and deliver to us much more quickly than the six-month to one-

year cycle of typical software development." The Polish programmers spoke excellent English, and the teams established a solid working relationship, he adds. Six weeks after the trip, the new software was demonstrated at a University of Michigan departmental staff meeting, "and they loved it. I don't think we'll have to change it at all."

Any vendor can do agile programming, says Dr. Balis, but he credits SCC for its willingness to let clients work with the company's programming team. "That's very nontraditional, and I give them tremendous credit for it." For his part, Hakim views the experience as "a fantastic trip," adding that, "it demonstrates the flexibility [of the application]. Now the complexity of the workflow can be defined strictly by the types of pathologists using the system. We can 'user define' every kind of pathology workflow." SCC has requested permission to make the new interfaces its model system for the SCC SoftPathDx surgical pathology module, Dr. Balis says.

Now that agile programming has proven successful for one interface, "everybody here is extremely excited, and we're strongly considering subsequent trips [to Poland]," continues Dr. Balis. "We already have a list of interfaces that need to be streamlined; some may be grouped together into one trip." With the initial sojourn costing $8,500, this approach was viewed by university leadership as a highly cost-effective solution, Dr. Balis says. "The proof is in the pudding. After the faculty saw the results of this effort, they're believers now."

Abbott releases new version of LIMS

Abbott has launched version 11 of its StarLIMS laboratory information management system. The new version offers advanced analytics and HTML5 compatibility and can run on mobile devices, allowing users to access data from any location.

StarLIMS version 11 includes enhanced dashboards; two new control libraries, one for desktop computers and another for mobile devices; and touch controls that comply with specifications for iPads and iPhones. Extensible Forms Description Language forms running on Internet Explorer will continue to be the primary platform, but users can create proprietary HTML5-based forms to run on Internet Explorer or alternative browsers, including Chrome, Firefox, or Safari.

With this new version, says David Champagne, Abbott's divisional vice president of informatics solutions, "clinical, industrial, and research labs can leverage the advantages of mobile devices to secure on-the-spot access to lab test results and reports."

***Abbott**, 847-937-6100*

Viewics introduces payer-focused solution

Viewics has released its Viewics Pulse laboratory data-analytics platform. The first offering built on the platform is the company's payer analytics solution, which allows laboratories to share member population analyses with payers.

The vendor-agnostic offering aggregates the lab's billing information with results data and provides payers with a cloud-based platform to access the information in a variety of formats.

***Viewics**, 415-439-0084*

Syapse debuts clinical 'omics' reporting software

Syapse has introduced Syapse for Labs, clinical omics reporting software for generating complex molecular profiling test reports and delivering them to physicians via a Web portal.

The application manages patient clinical information, omics data, and supporting laboratory data. Biomedical evidence, such as variant interpretation, is stored in a versioned knowledge base. A configurable rules engine automatically assembles patient test reports and updates them as the evidence in the knowledge base evolves.

Molecular diagnostics laboratories can configure Syapse for Labs to support their data and test formats, as well as brand the Syapse for Labs physician-facing clinic interface. The laboratories can also use the offering to collect patients' clinical and outcomes data as evidence to support clinical utility.

***Syapse**, 650-924-1461*

Telcor software receives certification as EHR module

Telcor's revenue cycle management system has achieved 2014 Edition Modular EHR Ambulatory ONC Health IT Certification, which means the software can support stages one and two meaningful use measures required to qualify for funding under the American Recovery and Reinvestment Act. Telcor's revenue cycle management system, version 13.0, was certified by ICSA Labs, an Office of the National Coordinator-Authorized Certification Body.

***Telcor**, 402-489-1207*

Contracts and installations

MTuitive has implemented its xPert for Pathology synoptic reporting solution at Covenant Health, Lubbock, Tex., a member of the Irvine, Calif.-based St. Joseph Health System. St. Joseph plans to install the product at nine other sites, located in California, Texas, and New Mexico.

***mTuitive**, 508-771-5800*

Nouvation recently implemented its Otis Blood Bank 8.0 occurrence-tracking information system at two medical facilities. Shepeard Community Blood Center, Augusta, Ga., became the first freestanding blood bank in the United States to implement the system. Nouvation has since installed Otis Blood Bank 8.0 at the Community Blood Center of the Carolinas, Charlotte.

***Nouvation**, 714-963-7099*

[hr]

Dr. Aller is director of informatics and clinical professor in the Department of Pathology, University of Southern California, Los Angeles. He can be reached at raller@usc.edu. Hal Weiner is president of Weiner Consulting Services, LLC, Florence, Ore. He can be reached at hal@weinerconsulting.com.