



Making Open Source Their Business, Recombinant Helps UMMS Deploy i2b2 Platform

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Recombinant Data, a privately held data warehousing provider based in Newton, Mass, has helped the University of Massachusetts Medical School integrate a data warehouse and an open source informatics platform into a new biorepository.

The platform, called the Massachusetts Integrated Clinical Academic Research Database, or MICARD, is based in part on the open source computational framework [Informatics for Integrating Biology and the Bedside, or i2b2](#), developed by the NIH-funded National Center for Biomedical Computing based at Partners HealthCare System that also goes by the name of i2b2.

The i2b2 platform helps clinician-scientists manage and analyze clinical data for population-based and genomics research and to run clinical trials. The software is downloadable as executable Windows or Macintosh files or as source code for users to build client and server themselves.

In this instance, UMMS decided to draw in Recombinant's services to help with systems integration. UMMS officials were not available for comment prior to *BioInform's* deadline.

Recombinant has historically focused on healthcare and clinical data management. William Stetson, the firm's marketing manager, told *BioInform* via e-mail that i2b2 fits in with its business approach since the platform is "is driven by clinical data, which is often isolated in disparate systems" and that successfully implementing i2b2 "requires a reliable and centralized source of high-quality data."

The company's clinical data warehouse platform, called the Data Trust, "provides a foundation for multiple secondary uses of clinical data, including translational research with i2b2 as well as quality reporting," he said.

Open Source Works

Building a business around open source platforms is working for the firm, Stetson said. "Recombinant successfully supports the open source community including NIH-funded technology such as i2b2, caBIG [the NCI's cancer Biomedical Informatics Grid], and SHRINE [Shared Health Research Information Network]," he said. SHRINE is a federated query tool for i2b2 databases.

In his view, Recombinant's "professional open source model" incorporates "the best of open source technology with the additional software and services necessary." At this year's caBIG annual meeting, Recombinant had a poster outlining its new Ontomapper, a tool to integrate i2b2, SHRINE, and caGrid. The tool allows caGrid to query i2b2 but not vice versa and provides semantic interoperability to caGrid, according to the poster.

Recombinant has been involved in other i2b2 deployments, Stetson explained, such as at Cincinnati Children's Hospital, University of California at Davis, UC San Francisco, the University of Washington, and "one of the top-5 pharmaceutical companies," which he did not wish to name. "Recombinant was also recently selected for a statewide implementation [of i2b2] in South Carolina," he said.

MICARD is part of an ongoing UMass Medical School project called the Conquering Diseases Bio-repository Core, Ralph Zottola, UMMS' associate CIO, said in a statement. "Clinical investigators were accustomed to waiting months for specific research data requests," he said. The implementation with Recombinant "reduces this waiting period to minutes."

According to the Conquering Diseases Bio-repository Core web site, the UMMS biorepository holds blood samples from volunteers and is intended to be a "long-term" preservation site for these samples. Unlike most repositories, which only bank DNA and protein products, UMMS is also banking RNA to support "the strong RNA research" at the medical school.

