



# caBIG Support Service Providers Sorely Needed, but Also Sorely Need More Business

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By [Vivien Marx](#)

**WASHINGTON** — Just about six months after the National Cancer Institute awarded its first licenses under its caBIG Support Service Providers program, some participating vendors are finding that the initiative has not been as beneficial for their businesses as they had initially hoped.

The SSPs are licensed to market informatics services to organizations who are using tools developed under the NCI's Cancer Biomedical Informatics Grid program. NCI has issued SSP licenses to 14 commercial firms and one university since October 2008.

This week during the caBIG annual meeting here, several SSPs told *BioInform* that while they are grateful that the NCI has set up a mechanism to offer their services to cancer researchers, information about the program does not appear to have permeated the caBIG community and business could be better.

Ekagra Software technologies president Kalpesh Patel told *BioInform* that caBIG SSP business planning is hindered by the fact that "you don't know the size of the market."

Ekagra offers caBIG applications, such as the caBIG Clinical Trials Suite, on the Amazon Elastic Compute Cloud, which helps customers avoid the capital investment of servers or hardware, Patel said. The cloud's instances can be managed from any computer and the company also offers an iPhone application.

John Greene, director of bioinformatics at SRA International, agreed with Patel. Although the number of cancer centers is known, "the number of cancer centers willing to use service providers is the X," he told *BioInform*.

SRA helps customers deploy caBIG applications by listening and "abstracting [the task] one level higher" to grasp the scientific problem researchers are seeking to solve, he said. The company is involved with a wide range of caBIG-related projects, such as the NCI-NHGRI Cancer Genome Atlas Data Coordinating Center and the Cancer Genome Workbench.

While SRA has a large staff with expertise in a range of areas, Greene said that for smaller firms, it is difficult to gauge whether there will be "sufficient return on investment" from caBIG services to make it worth adding that capability to their offerings.

Deploying a caBIG system can be very complex and customer expectations often grow during deployment, he said. As an SSP, Greene has to keep customer budgets in mind, to make sure that expenses don't balloon and make sure "they can afford the solution they need," he said.

Several other service providers who did not wish to be identified told *BioInform* that it is not uncommon for institutions to underestimate how large a project deployment can be.

Patrick Shironoshita, Infotech Soft's vice president for market development, said that the open source free nature of caBIG software is the "big advantage" for users but deploying and configuring it "requires work."

Offering services around open source software is "a good business," Aditya Phatak, vice president of life sciences and healthcare at Persistent Systems, told *BioInform* at the meeting.

Persistent, headquartered in India, is a caBIG-licensed SSP and runs a support center for caTissue. The firm developed caTissue together with Washington University and has worked with 15 cancer centers.

Phatak said the company generated \$500,000 in revenues from its caTissue support business last year. The firm has close to 450 staff devoted to healthcare and life sciences.

One challenge he sees is that caTissue needs to compete with commercial products. "Every software needs to have a product roadmap," he said, but for now NCI's cycle is periodic. In order to compete with commercial software, the product roadmap "must go beyond one or two years" so it can be taken to a "more mature enterprise level," he said.

Phatak said that caTissue is a robust platform that works for the scale for which it was intended, but will need to mature before it will work effectively in a high-throughput environment.

## **The World Outside DC**

While caBIG is intended to support cancer researchers across the country, service providers have found that proximity to the federal government can be advantageous. Of fourteen SSPs present at one panel, nine were either headquartered or had offices in the Washington, DC area.

"On the federal side, I know what my return is," said an SSP representative who did not wish to be identified, but who said the firm's main clients were federal agencies connected to caBIG.

"I can see the size of the market," working with the feds, he said. Small firms must look at "maximum ROI," and geographic dispersion becomes an "unknown proposition."

For the support service providers "there are still things we are trying to sort out," said R. Mark Adams, director of Booz Allen Hamilton's biomedical informatics group and caBIG program manager. Booz Allen manages caBIG for the NCI.

A "healthy ecosystem" has providers and community support, Adams said. While caBIG has done well creating community support, "that doesn't get the job done on the site," he acknowledged.

SSPs "are having difficulty, and I find that frustrating, too, because we need a robust set of commercial service providers," he said. "We need to do a better job help them make that transition" to extend their services geographically. At the same time, the government is in a "funny position" since it cannot endorse service providers, he said.

While there is no magic wand to wave to have half a dozen customers at the ready, Adams said, he suggested that some SSPs could learn from those vendors who have been successful under the program.

Some firms, such as Persistent, "get in there" and call people to find clients, Adams said, while others drum up business by understanding their community.

### **Field Notes**

During the meeting, a number of SSPs shared their experiences and advice in implementing caBIG at cancer centers so far.

Sudhir Raju, vice president of delivery management at CTIS, said during a panel discussion that the "biggest needs" of the cancer centers are in integrating caBIG applications with legacy systems while keeping those existing systems running "without interference," much like "changing an engine on a moving plane," he said. CTIS has developed and integrated a number of clinical caBIG tools such as Janus, a clinical data repository.

Some firms believe niche solutions might give them an edge. For example 5AM Solutions presented a pilot project that was not funded by NCI to deploy caBIG-compatible services to the cloud, in this case the Google App Engine.

The Google cloud is not set up as a general computing environment but can handle many hundreds of requests per second and is scalable, Todd Parnell, 5AM Solutions' CTO, told *BioInform*.

Google's cloud does not use relational databases, but is "a massively scalable datastore," he said, noting that in exchange for scalability, one loses many of the features of relational databases that users are accustomed to. The project arose because his firm sought to explore how much of caGrid's interoperability capability "is tied to this implicit idea there is a relational database on the backend."

As Parnell and his colleagues pointed out in a poster presented at the meeting, the current definition of a caGrid data service is "heavily influenced by a relational mindset."

The firm modified the NCI Enterprise Services that it had developed in order to run the caBIG clinical trials reporting program on the cloud. They adapted Google's non-relational store, BigTable, to the data model and created a REST API for operations. "We can rely

on the semantics of the Web to give us application semantics that are very hard to code otherwise," Parnell said.

Recombinant Data, an SSP based in Newton, Mass., has a specialized approach to its services with a focus on data warehousing, associate Aaron Mandel told *BioInform*. The firm is also exploring cloud computing, but declined to offer customer names.

Aaron Abend, the firm's managing director and co-founder, said he is "happy" with the company's current business prospects. One strength, he said is the firm's specialization and size.

Other small firms SSP are generalists, which means, in his view, that they must compete with large firms like SAIC. "Try competing with them, if you say you're doing everything, but we've got a niche" with data warehousing in biomedical informatics, he said.



The banner features a central orange background with white text. On the left, there is a logo for 'qPCR Symposium' with a stylized DNA double helix. The main title 'qPCR Symposium USA' is in large blue font. Below it, the dates 'Nov. 9-12, 2009, Millbrae, CA' are listed. Three columns of topics are shown: 'Multimarker diagnostics Extraction & Purification', 'Pathogen detection Data Management', and 'Sample Preparation Forthcoming Tech'. On the right, the word 'Expe' is partially visible. At the bottom center, there is a small blue Drupal logo.

**qPCR Symposium USA**  
Nov. 9-12, 2009, Millbrae, CA

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