



Syngenta core sequencing facility replaces custom, in-house solution

Data delivery times shrink from hours to seconds

ABOUT:

Syngenta is a world leader in agribusiness committed to sustainable agriculture through innovative research and technology. The company is a leader in crop production and ranks third in world market for commercial seeds. Syngenta employs some 19,000 people in over 90 countries, has more than 5,000 people involved in research worldwide and invested \$730 million in R&D in 2003.

SITUATION:

As a world-leading research and development enterprise, Syngenta requires the highest quality DNA sequencing data possible in order to advance crop science research and commercial application. This data is used in marker assisted breeding programs that leverage information gained from polymorphism (SNP) discovery or EST identification, as well as for vector sequencing for construct validation. To remain competitive, the company's sequencing facility rightly recognized that the custom-built data management solutions they had in place were both expensive to maintain and contained significant inefficiencies. From the time the sequencing run was completed, it was taking anywhere from 4 to 24 hours to distribute data to facility customers. Further, the costs for maintaining the custom system were rising rapidly, and IT resources were being taxed beyond their limits trying to support and to distribute updates containing new sequencing technologies. These circumstances drove the evaluation of commercially available software to reduce costs and increase efficiency.

SOLUTION:

The Finch Suite Enterprise Edition leverages web-based architecture and enterprise-level IT infrastructure for managing sequencing data collection and analysis within an integrated framework. Within the system, experimental data is automatically processed by the Finch software for quality, trimmed, vector masked and delivered automatically within seconds into a designated secure database that core lab customers can use to review results or share with colleagues and collaborators worldwide. Finch's automated workflow and tools greatly reduce the cost of IT maintenance and the deployment of new features and software upgrades.

RESULT:

By streamlining the sequencing data collection process and automating the identification of quality results, Finch Suite helps Syngenta's core facility deliver data from completed sequencing runs in seconds vs. hours. And by leveraging the Finch system's web-based design, centralized workflow and data management capabilities, routine IT tasks, such as order entry, new software technology updates, and rolling out system upgrades, have been simplified, reducing IT resource impacts. The net result is a cost favorable software infrastructure that today is delivering Syngenta's core facility and customers with higher quality sequencing results with greater efficiency than ever before.

For more information, visit <http://www.geospiza.com>.

COMPANY:

- Syngenta International AG (NYSE:SYT)

BACKGROUND:

- Central DNA sequencing core facility in Research Triangle Park (RTP), North Carolina supporting more than 80 research scientists located in RTP; Golden Valley, Minnesota; Jealott's Hill, UK; and Toulouse, France

GEOSPIZA PRODUCTS:

- Finch® Suite – Enterprise Edition
- Finch Assembly Manager

HARDWARE PLATFORM:

- 4 CPU Sun E450 running Solaris 8
- 4 GB RAM, 85GB disk space, RAID 0

DATABASE:

- Oracle v9.1

KEY REQUIREMENTS:

- Replace custom in-house systems with a commercial-quality off-the-shelf product
- Increase sequencing efficiencies
- Reduce IT overhead and maintenance costs through web-based applications
- Deploy and maintain a single, integrated information platform

KEY BENEFITS OF FINCH SYSTEM:

- Decreased sequencing data delivery times from 4 to 24 hours to a matter of seconds
- Replacement of existing custom-built system substantially reduced IT overhead and software maintenance costs

"Delivering to our customers high quality, scientifically valid data, in a cost effective way is our top priority. With the Finch Suite, we've improved our facility's efficiency by improving our data delivery times from hours to mere seconds."

- Kay Lawton, Sequencing Lab Director

"The Finch system gave us the added benefit of simplifying our IT infrastructure and dramatically reduced our overall operational costs."

- Michael Peterson, IT Manager

