

Inside the BioITalliance

Microsoft's BioIT Alliance

In 2006, Microsoft launched the BioIT Alliance. The project was largely the work of Microsoft executive Don Rule, and is now directed by Rudolph Potenzzone, Microsoft's worldwide industry technology strategist for pharmaceuticals (and the former CEO of LION).

Since its launch, the BioIT Alliance has grown to more than 70 members, with a stated goal of increasing membership to over 100 by year-end. While the majority are well known vendors in the industry—such as Thermo Fisher Scientific, Waters, InforSense, Sun, AcitveMotif, Agilent, Ocimum Biosolutions, and ChemAxon—others are relatively unknown players, including many from Europe. A variety of other organizations, including IUPAC, a chemical standards body, and university groups (Hebrew University of Jerusalem) have also joined. There is a possibility that some pharmaceutical companies might join as well.

Priorities for the alliance, as Potenzzone sees it, include communication—helping companies connect that hadn't contemplated working together. To be sure, the BioIT Alliance encourages companies to use and adapt relevant Microsoft technologies, but it also forms a nucleus of companies that, to a degree, can share pre-competitive tools, technologies and strategies. How can companies integrate research information and business intelligence for themselves and their clients?

"We're really branching out beyond just bio-IT," Potenzzone told *Bio-IT World* last year. "I think people tend to think of bio-IT as more focused on bioinformatics. We're definitely seeing a branching out further downstream into the clinical world and into medical devices, which formally is all part of bio-IT."

The BioIT Alliance website includes regular updates on news and activities of the member organizations (www.bio-italliance.org.) A recent case study, for example, showcases Microsoft's collaboration with Pfizer and Infosys Technologies to develop The Biologist Workbench to allow researchers to better visualize data.

The Alliance's focus is building with the partner community real practical solutions that can positively impact the drug development pipeline. With Microsoft dedicating growing resources in the life sciences space, the future is looking very good indeed.

Bio-IT World is pleased to publish this special supplement, with support from Microsoft and the participating Alliance members, to provide further insight into the activities of the Alliance and some of its partners, and to encourage other groups to take a fresh look at the BioIT Alliance. ▲

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THERMO FISHER SCIENTIFIC

Thermo Fisher Scientific Offers Enterprise Document Management Solution

The centralization and harmonization of laboratory data is a critical and strategic part of the global growth of any pharmaceutical company. Large-scale deployments of integrated and web-based systems can now be relied upon to be more consistent and more rapid because purpose-built laboratory information management systems (LIMS), like Thermo Scientific Watson LIMSTM, can not only facilitate superior data exchange across the organizations, but also offer a bio-directional flow of data

Thermo Fisher Scientific

- ▶ **Founded:** 1957
- ▶ **# of employees:** 30,000+
- ▶ **Location:** Waltham, MA
- ▶ **Microsoft solution provider:** 8 years
- ▶ **Top Executive:** Marijn E. Dekkers, President and CEO
www.thermofisher.com

between a pharmaceutical company and with its contract research organization (CRO). This freer exchange of data can mean improved business decisions that enable a life sciences company to

deliver the right compounds faster, and saves the time and expense of working on a compound that ultimately will prove ineffective. It also allows for faster and more automated review and submission of reports. For bioanalytical laboratories and CROs around the world, Thermo Scientific Watson LIMSTM provides the detailed protocols necessary for DMPK and bioanalytical studies in drug discovery along with maximum flexibility and configurability so that each lab can integrate workflows or instrumentation across study protocols as required.

It's also critical for organizations to implement enterprise-wide document management and collaboration tools to stay competitive, increase productivity and comply with standards. There has been a need in the industry that has gone largely

unanswered until now, for a secure, cost effective, validated content management solution that incorporates structured data from LIMS, chromatography data system (CDS) and other enterprise systems along with unstructured information that support laboratory processes, all in a completely validated solution. In the past solutions have been incomplete, cumbersome and expensive. To satisfy this need, Thermo Fisher Scientific recently announced a collaborative agreement with NextDocs Corporation to bundle and sell its enterprise document, quality and compliance

management solution suite. The offering is a natural extension of Thermo Fisher's portfolio of LIMS and CDS products, allowing the company to offer a comprehensive, informatics and content management solution to the industry. It provides organizations with a complete document management and collaboration system for managing documents, records (e.g. training records), SOP's (standard operating procedures), activities and other information critical to the enterprise.

Thermo Fisher Scientific, the leader in providing purpose-built informatics software solutions, has partnered with Microsoft, the technology leader, as a fellow member of the Microsoft BioIT Alliance. The company's recent partnership with NextDocs to deliver a document and compliance suite that delivers unmatched ease of use

and functionality, further cements the relationship between Thermo Fisher Scientific and Microsoft to deliver next-generation and best of breed open solutions. "We're thrilled with the extent of our ongoing relationship with Thermo Fisher Scientific," said Mike Naimoli, U.S. life sciences industry solutions director, Microsoft Corporation. "Organizations store documents in a wide range of isolated systems on multiple software platforms – making the retrieval and synthesis of information daunting tasks. This new alliance between Thermo Fisher and

NextDocs goes a long way toward addressing the need for regulated content management, integrated workflow administration and compliant collaboration in the enterprise setting. We believe this joint solution will bring enormous value to the industry as a whole."

"By offering an enterprise content management solution that is tightly integrated with our LIMS and CDS work-

flow for regulated laboratory environments, Thermo Fisher is better positioned to offer our customers the most comprehensive informatics solution in the industry," concludes Dave Champagne.

For a free webinar on NextDocs document management solutions or for more information about Thermo Scientific Watson LIMS please call on +1 866-463-6522 or e-mail marketing.informatics@thermofisher.com or visit www.thermo.com/informatics. ▲



David Champagne



It's about efficiency.

Which is why it's about time you invested in a Thermo Scientific LIMS. Thermo Scientific LIMS are purpose-built to help drive your business to the highest level of efficiency. We build the efficiencies into the core of every Thermo Scientific LIMS so you can make faster and better informed business decisions, decrease your time to market and improve your margins. No wonder more laboratories count on Thermo Scientific LIMS than any other.

Now with Thermo Scientific WebAccess Suite™, all you need is a web browser for full, secure, high performance access to any Thermo Scientific informatics solution – from anywhere. Web deployment of any Thermo Scientific LIMS. That's all about efficiency. Isn't it about time? Your time.

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Part of Thermo Fisher Scientific

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ACTIVE MOTIF

Accelerating Downstream Understanding of Next-Gen Sequence Data

What distinguishes your company from its competitors and makes it unique?

TimeLogic, a brand of Active Motif, has been in the business of supplying bioinformatics tools to the life science community for over 10 years. We offer a variety of hardware products ranging from CodeQuest™ workstations to multi-server DeCypher® enterprise solutions. Moreover, our company specializes in designing algorithm implementations using low-level languages

Active Motif

- ▶ **Founded:** 1999
- ▶ **# of employees:** <100 worldwide
- ▶ **Location:** Carlsbad, CA with offices in Japan and Belgium
- ▶ **Microsoft solution provider:** >10 years
- ▶ **Top Executive:** Joseph Fernandez, CEO
www.activemotif.com
www.timelogic.com

for custom-designed Field Programmable Gate Arrays (FPGA). This enables us to deliver the equivalent of nearly 500 CPU cores (3 GHz) of performance with a single PCIe card. We support Microsoft Windows Servers, Linux and Sun Solaris platforms, and provide three

types of user interfaces.

Name of customer(s) you've positively impacted and briefly tell how?

TimeLogic technology has enabled customers to engage in large-scale, genomic comparisons projects without requiring deployment or use of a large cluster system. For example, one academic customer routinely uses the Tera-BLAST implementation to compare two million GST-length sequences against a large plant genome using a DeCypher system that only requires 6U of rack space. The Salk Institute in La Jolla, CA, compared Dr. Craig Venter's Global Ocean Sampling (GOS) data set against Pfam (about 350 million comparisons) and other HMM

databases in about two weeks using TimeLogic hardware. They calculated that this task would have taken one century on a standard server.

What prompted you to join the Microsoft Bio-IT Alliance and what do you hope to get out of it?

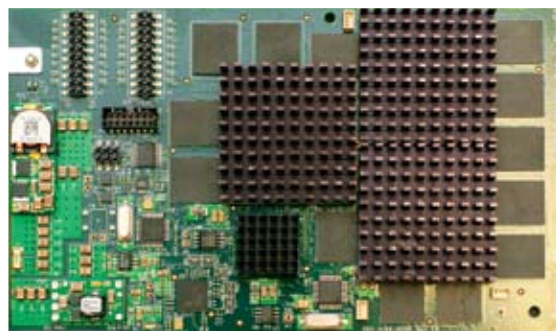
"Microsoft's Windows operating system is a ubiquitous platform for the life science industry, and we want to ensure we are able to support our customers' bioinformatics infrastructure," states Darryl León, Ph.D., Informatics Product Manager for TimeLogic. "We see the importance of being part of an organization that contributes to the BIO-IT community, and we are interested in collaborating with other informatics companies to advance the pace of discovery in the life sciences."

List the Microsoft products you support.

The DeCypher and CodeQuest systems, employing our new PCIe-format SeqCruncher acceleration card, run on Windows 2003 servers. To simplify genome analysis workflows, we also provide the PipeWorks™ visual workflow environment, which includes both client and server applications for Windows Server and Windows XP platforms.

How might your company and capabilities be different a year from now?

Active Motif expects that higher next-generation sequencing throughput will lead to a stronger demand for our current acceleration products as the volume of new sequences and well-characterized data rises. In addition, "TimeLogic is currently investigating next-generation



TimeLogic's FPGA accelerator card draws only 15 watts.

sequencing data analysis in conjunction with Invitrogen, to identify ways in which our FPGA technology can deliver improved performance and analysis quality," states Chris Hoover, Business Development Manager for TimeLogic.

What's the biggest misconception customers have about your technology?

Many people are under the misconception that TimeLogic products are all over \$100K. However, we have products in the \$30K range that give independent investigators the acceleration hardware needed to pursue ultra high-throughput genome annotation and metagenomics projects.

Briefly describe the steps and processes implemented in a typical customer engagement.

TimeLogic's bioinformaticists provide custom benchmarks for each customer to ensure a level of performance and data quality our customers demand. Working closely with our customers, we also determine their level of throughput and IT requirements before proposing an optimal biocomputing solution. ▲

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OCIMUM BIOSOLUTIONS

Biotracker™ LIMS — The Life Sciences Research LIMS

Ocimum Biosolutions offers one of the largest portfolios of integrated genomic solutions. Our vision is to become the No. 1 Genomics outsourcing company by providing quality solutions spanning across the genomics space. Pharmaceutical, Biotechnology, Diagnostic, Government and Academic institutions worldwide utilize our comprehensive LIMS, bioinformatic systems, genomic databases and service resources to enable better

understanding of underlying mechanisms of diseases, discovery and prioritization of gene targets and biomarkers.

Biotracker™ is the only LIMS purposely designed for Life Science Researchers. The critical features

configurable structure.

Full Featured LIMS

Make sure your LIMS provides out-of-the-box the core features that are needed to run your laboratories. Biotracker™ Core features include:

- Laboratory Administration
- Project Design and Scheduling
- Work Flow and Process Tracking
- Experiment Tracking, Analysis & Archive
- Sample Management
- Hierarchical Location Tracking
- Chain of Custody
- Plate Management & Tracking
- Inventory Mgmt & Tracking
- Configurable & Extensible Forms & Fields
- Instrument Integration
- Ad-hoc Report Builder
- Cost Estimation of Projects
- Standard Reports

Biotracker™ LIMS has been in production since 2002 and is currently running in research organizations across pharmaceutical, biotech, academic, and research institutes. Biotracker™ is often overlooked when going through a LIMS selection process which tends to focus on traditional LIMS vendors. Researchers then end up trying to implement a commercial, sample-centric LIMS and fail. Life Science Research laboratories need Biotracker™ for Core LIMS, Biobanking, Genomics (sequencing, genotyping, expression), and Proteomics

Ocimum Biosolutions' standard Biotracker™ implementation process follows a modified Waterfall methodology which is described below. Ocimum will, however, adhere to whatever standards or processes that our customer prefers. Ocimum has successfully implemented

Biotracker™ LIMS utilizing a number of methodologies including: Waterfall, Prototypical, Time-Boxing, and Chunking.

The Standard Ocimum Biotracker™ Implementation Process steps include:

- Kick-off meeting
- Requirements Gathering – FRD Delivered
- Requirements Analysis – SRS Delivered
- Design & Development
- Testing & Documentation
- Beta Testing
- Final Acceptance Testing
- Go-Live

Deployment timelines vary depending upon the size and scope of the particular client project. Typical implementation time is 3 – 6 months on average.

Customer successes include:

A Microarray & Gene Expression Analysis Core Facility in Asia

Biotracker™ provides integration, exploration and analysis of vast quantities of data and allow a scalable and flexible storage and retrieval system across our heterogeneous data repositories.

Biotracker™ at University of New Mexico's Multi-Disciplinary Lab

"After researching multiple LIMS products, we chose Biotracker™ due to flexibility needed for a research laboratory". Barbara Griffith, Project Director, HSC, UNM

A Top 10 Pharmaceutical Company

The customer needed a solution to replace their current biological sample management and biorepository tracking system. Biotracker™ supports the global Molecular Pathology / Molecular Histology units to track biological samples and their derivatives maintaining pathology, histology, serology, QC and associate donor's medical and biological information. ▲

Ocimum Biosolutions

- ▶ **Founded:** 2000
- ▶ **# of employees:** 300+
- ▶ **Locations:** MD, India, Netherlands
- ▶ **Microsoft solution provider:** 8 years
- ▶ **Top Executives:** Anu Acharya, CEO and Subash Lingareddy President & CFO
- ▶ **Contact** Ocimum at outreach@ocimumbio.com

you should look for in a Life Science Research-based LIMS include:

Project-Centric LIMS

Traditional sample-centric LIMS just do not work well for research environments. A LIMS for research must provide a flexible data structure that inherently supports a Project/Protocol/Experiment oriented environment. Biotracker™ is designed to operate as researches do and enables you to derive knowledge from your data.

Flexible LIMS

In Research your experiment processes are constantly evolving. Your LIMS must be flexible to support your changing needs. Biotracker™ provides an adaptive platform to capture your research findings. Rather than dictate the process flow, Biotracker™ captures your work in an organized, yet

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BioIT Alliance Members

<http://bioitalliance.org>

Aberdean Consulting, LLC
Accelrys
ActiveMotif
Affymetrix
Agilent Technologies
Amylin Pharmaceuticals
Applied Biosystems
Axendia
Axiom Discovery Inc.
BIOBASE
BioDiscovery
Biotique Systems
Blue Reference Inc.
CambridgeSoft Corporation
Caresoft Inc.
CeuticalSoft
ChemAxon
ChemZoo (ChemSpider)
Clarabridge
CLC bio
Capital Technology Information Services (CTIS)
Digipede Technologies
discovery biosciences
Dotmatics Ltd.
eXludus
FOCUS Biology, LLC
Gencom Technology
GenomeQuest, Inc.
Gentelligent Inc.
Geospiza, Inc.
GGA Software Services LLC
GrapeCity
GulfStream Bioinformatics
Hebrew University of Jerusalem
Hewlett-Packard
ILink Systems
IMC
InforSense Ltd.
Infosys Technologies Ltd.
Infusion Development

Integromics, S.L.
InterKnowlogy
INVISION IT Systems
IO Informatics
The International Union of Pure and Applied Chemistry (IUPAC)
KineMatik
Linguamatics Ltd.
Microsoft
m-Objects
Molegro ApS
Newtech Global Solutions LLC
NextDocs Corporation
nFocus Technologies Inc.
Ocimum Biosolutions
Paradigm Infotech Inc.
Persistent Systems Ltd.
PointCross
POINTONE Systems
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ProSanos Corporation
QL2
RND Group
SGI
SLIM Search Ltd.
Strand Life Sciences
Sun Microsystems
Symyx
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TAKE Solutions
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TranSenda International, LLC
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