MANCHESTER 1824

The University of Manchester

Case Study: Eagle Genomics

Enhancing its commercial portfolio with new support and development services

The challenge

Taverna, an open source workflow management system developed by the myGrid computer science group at The University of Manchester, is the most widely adopted open source workflow product in scientific informatics. It allows scientists to easily design and execute a series of computational- or data-manipulation steps - workflows - that analyses their datasets intuitively and efficiently. Such experimentation is a key element of biological research, transforming research data into knowledge.

Taverna enables scientists with limited computing knowledge, technical resources and/or support to construct highly complex analyses of public and private data and computational resources, using a standard Windows, UNIX or Mac OS X computer. It has been adopted by over 350 organisations worldwide, including NASA, and - although academic researchers and consortia are its traditional user-base - commercial organisations were becoming increasingly interested over recent years.

Eagle Genomics was therefore keen to develop commercial-grade support offerings for Taverna, enabling it to provide expert technical support, customised additions and user training based on industrial needs. The University's myGrid team recognised that the type of support required by commercial users was beyond its scope as a research group so the two organisations pledged to work together on a knowledge transfer project, to combine their strengths and develop robust, scalable support structures.

The University of Manchester solution

To create an environment where knowledge and expertise would be transferred most effectively, Eagle Genomics' staff were seconded into The University of Manchester's myGrid group for four, bi-weekly sessions. The activities covered:

- **TRAINING** in Taverna project organisation, technical architecture and functionality, version control management and security
- **GUIDANCE** on user best practice, and extending the Taverna system
- **TRANSFER** of Taverna tools, and hands-on workflow-creation using real world case studies
- **INTERPRETING** and responding to requirements from existing commercial users, including licensing, scalability, developing extensions and costing Service Level Agreements.

As well as enabling Eagle to meet market needs by developing commercial-grade support services for Taverna, the secondment allowed its staff to establish long-standing working relationships with the team that had developed the product.

> "The collaboration and knowledge transfer was instrumental in strengthening our links with The University of Manchester. The project allowed us to explore and exploit new technologies that we would not otherwise have had the resource to undertake."
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> *Dr Abel Ureta-Vidal,*
> *Chief Operating Officer,*
> *Eagle Genomics*

Eagle Genomics is a bioinformatics software provider that specialises in open source solutions. With clients across pharmaceuticals, crop science, animal health and biotechnologies wishing to use genomic data to develop new products, the company has quickly become one of the leading providers of open source bioinformatics expertise and technical support.

www.eaglegenomics.com

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The benefits

The collaboration between Eagle Genomics and The University of Manchester myGrid team has supported both organisations to enhance their capability and reputation.

- **A commercial support team for Taverna has now been established within Eagle Genomics, increasing company revenues through sales of its new services and contributing to the business's development and growth**
- **The knowledge transfer has enabled Eagle Genomics to meet clients' specific Taverna business needs, by making bespoke enhancements to the product**
- **The partnership between the University and Eagle Genomics has led to a joint Technology Strategy Board funding bid, attracting £500,000 for a ground-breaking life sciences project which will use Taverna to dramatically speed-up gene sequencing analysis**
- **The increased availability of both quality support and customisation services for Taverna will enable commercial organisations to carry out more and better quality research at a competitive cost, contributing significant economic value.**

Improving the product's reputation with commercial clients has made it a much more compelling option for e-Science and digital projects, and Taverna's capacity to support the specific service metrics of diverse industries will lead to further new sources of income. "Our partnership with Eagle has created an exciting opportunity to make Taverna a viable and supported part of the commercial software ecosystem," says Professor Carole Goble of the School of Computer Science.

This growth, and association with the respected Taverna name, will directly generate employment opportunities as Eagle recruits new staff to fulfil Taverna support contracts. "Customers can invest in using the Taverna workflow management system with peace of mind, knowing that they can get professional support from a company that was set up to solve their specific issues," says Richard Holland, Eagle's Chief Business Officer.

Importantly, with Eagle taking the support reins, the myGrid team can focus on developing innovative new features to enhance the Taverna product line. According to Professor Goble, "This project will be instrumental in improving our productivity and the delivery of our consultancy services; as well as opening up an opportunity to develop a product-based strategy that should allow us to enter new markets, and support our growth in those we already operate in."

As Richard Holland says, "We have a great opportunity to demonstrate Eagle Genomics' continued engagement with academic institutions, and help spread the impact of the world class bioinformatics research carried out in the UK."

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EPSRC Knowledge Transfer funded work with Eagle Genomics built the capacity to support industrial research and development activities. The partnership was a springboard for building a lasting collaboration between the University and Business.

Professor Carole Goble,
School of Computer Science,
The University of Manchester

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