

Project proposal 2006-16-9

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Project Leader

Richard Bruskiwich

Collaborator(s)

Shoshi Kikuchi, Masaru Takeya (NIAS)

Project Title

Task 16.9 Gene expression data management tools

Rationale

Task 2005-32 led by NIAS is designing a comparative gene expression microarray data repository based on ([MAXD](#), an open source microarray data management platform, and designing additional expression data mining tools. This project is intended to provide complementary GCP domain model implementation back up (at IRRI) for this task.

Project Category

DataSource development, web services, GUI

Deliverable Product(s)

- Customization of MAXD for use of ontology like MIAME-Plant
- Pantheon Querybuilder integration of microarray data
- BioMOBY enabling of MAXD

Proposed implementation strategy & technology

- The existing Java software and database schema for MAXD is being analysed by a project student and adapted to seamlessly connect to GCP ontology databases (e.g. Chado cv) and later, to be wrapped in suitable web services.
- MAXD has previously been integrated into the NCGR ISYS framework. Insofar as this ISYS framework is being incorporated into the GCP platform, it will be used to connect MAXD to the Pantheon Querybuilder in a seamless manner.

Existing Prototype(s)

MAXD, ISYS, Chado and BioMOBY (Java MOSES + Dashboard) are well established software tools. The project mainly consists in bring these tools together in an effective cross-linkage.

Mode of Product Delivery

- GCP scientists will generally access the MAXD components through the Pantheon Querybuilder

Product Availability

- MAXD, ISYS, Chado and BioMOBY components used are publicly available on non-GCP web sites.
- GCP specific components will be posted to CropForge.

Project Milestones/Timeline

- Early design and prototype - April - June, 2006
- First *alpha* web site deployed - end of June, 2006
- Rapid iterations toward a usable MAXD integration.
- Brazil-ready demo by August 31st, 2006
- Completion of integration by December 31, 2006

Product Testers/Users

Shoshi Kikuchi, Kouji Satoh (NIAS); Hei Leung, Ramil Mauleon, John Bennett (IRRI)

GCP budget requested (US\$)

None requested for 2006. Late recruitment of local University student and the commitment of an IRRI core funded scholar to the project means that resourcing of the software engineering for this project is already in place for most of 2006.

In-Kind Contribution

- IRRI CRIL team member (salaries)
- IRRI Training Center funded scholar (Mr. Serge Gregorio) is also working on the

project

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