

LIMS Developers Workshop

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24-31 August 2007

ICRISAT, Patancheru 502 324, Andhra Pradesh, India

Friday, 24 August

9:00am-9:45am: Welcome, Introduction, Overview

- Inauguration
- Welcome Remarks
 - Dr. Dyno Keatinge, DDG-ICRISAT
 - Dr. Dave Hoisington, GTL-BT ICRISAT

Overview - *Jayashree B, ICRISAT*

10:00am-4:30pm: Team Building

- Icebreaker and Virtual Team building workshop - *Jesslina Sahni, external facilitator*

Saturday, 25 August

10:00am-1:00pm: Presentation on data capture and information management platforms

ICARDA Generation Genomic LIMS & GeMS, (presentation file), *Hani Simo, ICARDA*

IRRI Molecular Marker Laboratory Workflow, *Don Pabale, IRRI*

CIMMYT presentation file, *Trushar Shah, CIMMYT*

2:00pm: City Tour

- Visit to Falaknuma palace and Golkonda fort, sound and light show in Hyderabad.

Monday, 27 August

9:00am-11:30pm: Presentation on data capture and information management platforms

EMBRAPA EMBRAPA presentation (pdf), *Michel Yamagishi, CNPTIA*
Mahyco Mahyco Presentation, *Ashok Jaybhaye, Mahyco*
ICRISAT Slides before the demo (ppt) , *Jayashree B, ICRISAT*

11:30am-1:00pm: Use of collaborative tools tutorials

Introduction to CropForge (ppt) A tour of the CropForge collaborative software development web site - *Jon Mendoza, IIRI*
SVN Introduction (ppt) Use of SVN for source code management - *Jon Mendoza, IIRI*

2:00pm-3:00pm: The ICRISAT LIMS code base tour

LIMS Code Base (ppt) - *Sri Kalyani and Meenakshi Gyanmote, ICRISAT*

3:00pm-5:00pm: Checking in/out code from the repository

- Initial checkin/commit of ICRISAT LIMS code base to the CropForge SVN repository.
- Installing Eclipse, subclipse and Exadel plug in for those not having them.
- Individual check out of the code by programmers using SVN.

Tuesday, 28 August

9:00am - onwards: LIMS codefest

- Programmers discussion and exchange of information
- Scrutinizing the code

3:00pm-3:30pm: Information management and data quality seminar

- (put presentation files and details here) - *Dr. Dave Hoisington, GTL-BT ICRISAT*

Wednesday, 29 August

9:00am-onwards: Work on LIMS code continues

- Continue to understand code structure and coding practices with LIMS programmers.
- Review of the outputs expected from the workshop.

11:30am-1:00pm: Struts Framework seminar from invited speaker

- Best practices for scalability and enhanced performance when using the Struts Framework. - *Ms. Laxmi Vemaraju, Project Manager, CMC Ltd. India*

2:00pm - 3:30pm: Eclipse IDE tour from invited speaker

- Walk through the Eclipse IDE and its uses in refactoring - *Mr. Sreenivasu Bolla, CMC Ltd. India*

4.00pm-4.30pm: Target user talks about specific use of LIMS for his work

LIMS- a user's perspective - *Dr. CT Hash, Principal Scientist, ICRISAT*

Thursday, 30 August

9:00am-onwards: Work on LIMS code continues

- Discussion on how to collaboratively work on the code structure

11:30am-1:00pm: Seminar on Collaborative Software Development from invited speaker

- Collaborative Software Development: The Power of Open Source - *Dr. Uma Mahesh, ATC, TCS, Hyderabad*

Friday, 31 August

8:30am-10:00am - Use of Wiki and CropForge for collaborative discussion and exchange of information

Tutorials on the use of GCPWiki for documenting the workshop proceedings -

Jon Mendoza, IRRI

· Tour of the CropForge forums, trackers, mailing lists and docs manager -

Jon Mendoza, IRRI

Documenting workshop proceedings, outputs and recommendations

The overall objective of the workshop is to ensure that high standards of data quality are maintained through a generic Laboratory Information Management System (LIMS) to be deployed by GCP partners in an institution specific, user driven way.

Workshop Activities

- Virtual team building exercise on the first day
- Review of existing data capture and management systems at the various partner institutions
- Extensive review of the code structure, coding styles and practices of the ICRISAT LIMS
- Discussions with LIMS users from ICRISAT
- Recommendations on best practices and collaborative software development from private sector enterprise software developers
- Training in version control using SVN
- Software development IDE (Eclipse) and use of Subclipse plugin for those not initiated earlier
- Collaborative source code management using CropForge
- Documentation and information exchange through the GCPWiki

Workshop Outcomes

1) Community of practise (COP) for LIMS developers initiated, and focal points for each of the institutes (ICRISAT, IRRI, EMBRAPA, Mahyco, CIMMYT, ICARDA) identified.

2) Participants familiarised with version control and collaborative software development environment.

3) Agreement on the way forward for institutional customization and "parallel" development of LIMS

- The version submitted to the SVN repository in CropForge is a merged version of the LIMS customised for ICRISAT-Patancheru, ICRISAT-Nairobi and IITA-Ibadan (version 2.3.3)
- Developers from the various institutes will checkout the LIMS, copy the modules of interest into a new project under the Eclipse IDE, rename it and commit it as a new folder under the same project.
- Individual customisations will continue in parallel and will be committed to the newly created folders.
- Code review will take place (virtually) once a month; enhancements will be committed to the main ICRISAT codebase. Customisations will remain in the newly created folders.
- The SVN gatekeepers would be the project administrators

4) Writing of the Developers manual has been initiated - to contain source code structure coding styles and methods.

5) Instructions and guidelines for collaborative development have been discussed and agreed upon

- Use of CropForge, mailing lists, discussion forums and the GCPWiki

6) The ICRISAT LIMS source code has already been released under the GNU GPL and will continue to be released under the same license. All contributors agree to release their contributions under the same license.

7) User support at the institutes will be handled through the focal points.

8) Minutes of the virtual monthly meetings will be posted on the GCPWiki under "What's New"

Workshop Recommendations

1) The team building exercise is recommended as a useful icebreaker activity at workshops

2) Discussions relating to code will be through CropForge only.

3) Open Source Software Development (OSSD) philosophy will continue to guide developers of the LIMS.

Developers Manual

LIMS Developers Manual