



GCP Software Engineering and Collaboration Platform

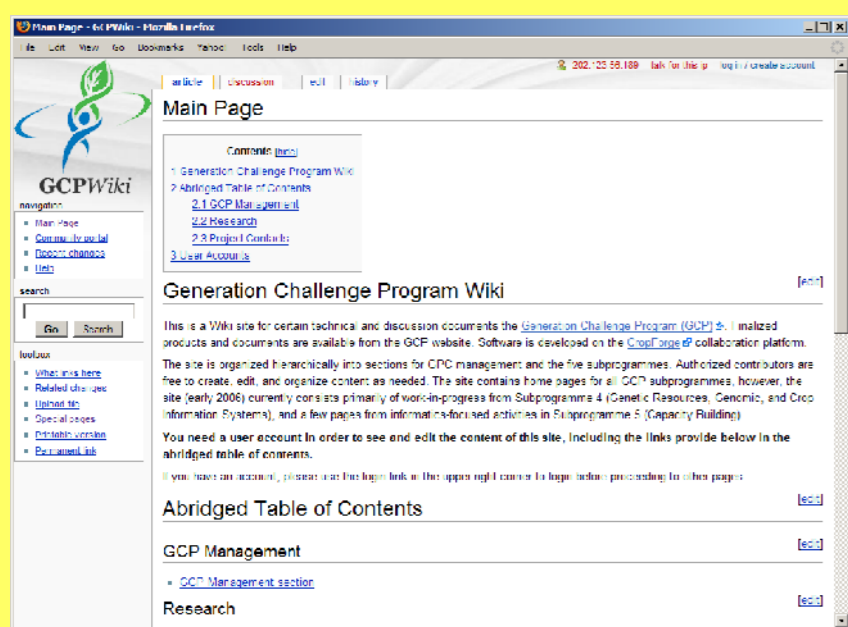
The platform components:

The collaborative development platform consists of a Wiki site for content development (GCPWiki) based on the MediaWiki software, and a collection of tools (CropForge) for collaborative software development, based on the GForge software.

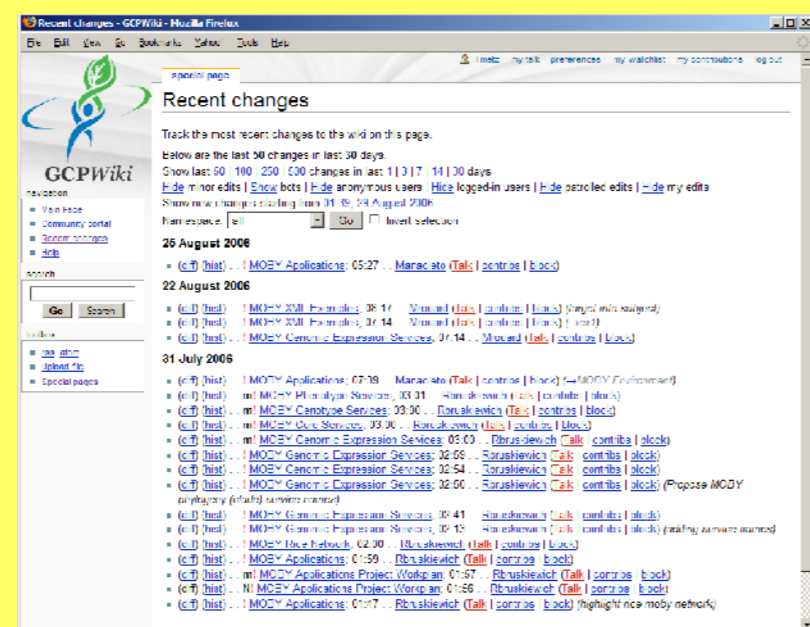
GCPWiki – a collaborative web site:

The GCPWiki (<http://cropwiki.irri.org/gcp>) is a website that can be edited by many users, using only a web browser for access. Only registered users can see and edit the GCPWiki content. By the end of August 2006 the site had 356 pages and 275 uploaded files. Since its beginning in April 2005 there were about 40,000 page views and 4,600 page edits. Currently, the GCPWiki has 147 registered user of which 15 are administrators.

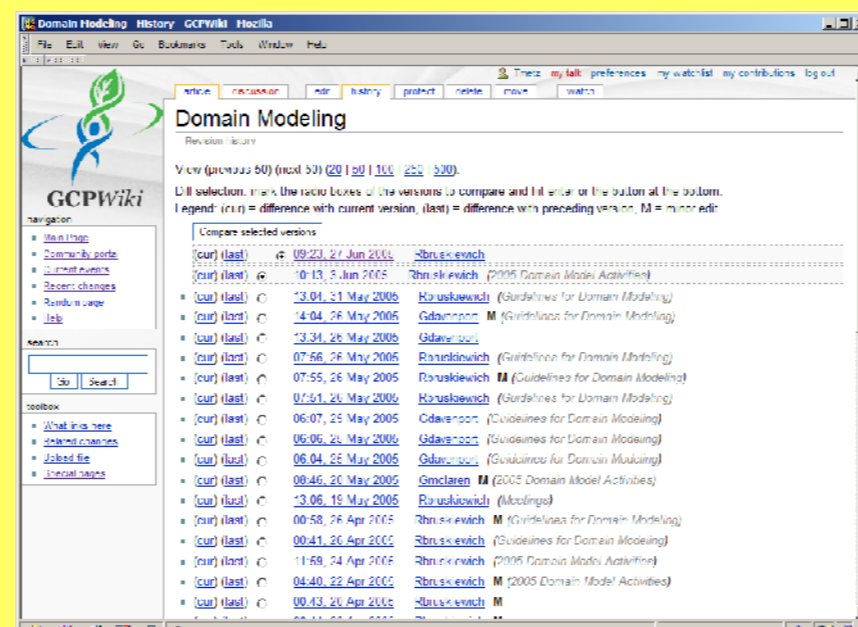
GCPWiki home page



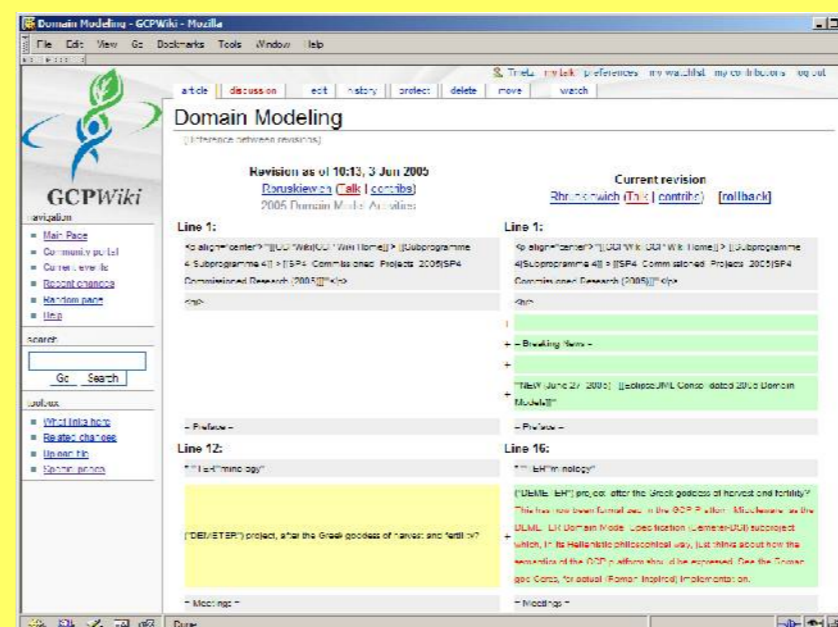
Recent changes



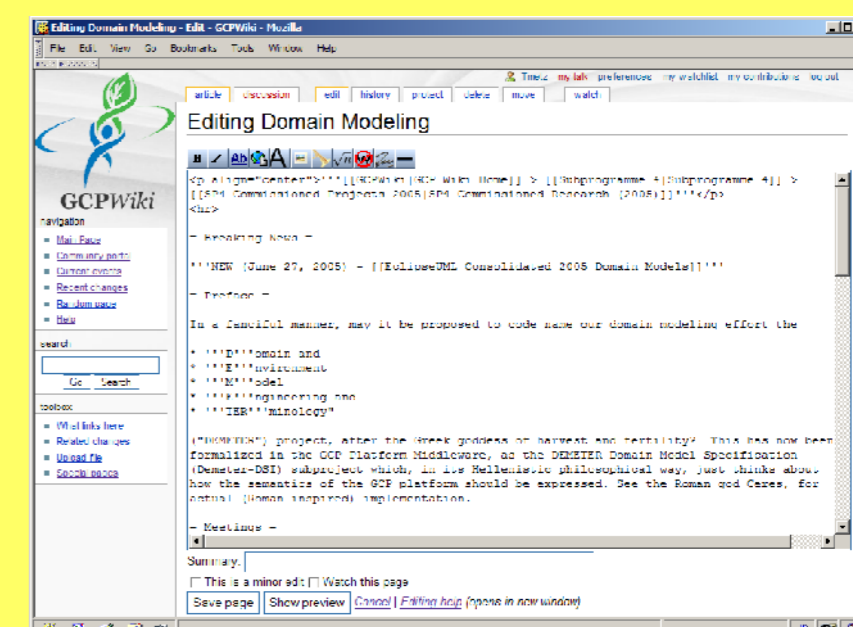
Page history



Version comparison



Page editing



CropForge – a collaborative software development system:

CropForge (<http://cropforge.org>) is a combination of tools specifically geared towards collaborative software development. The site hosts projects that are managed individually by project administrators. Each project has its own source code repository (CVS/Subversion), mailing lists, discussion fora, issue trackers, file release system, etc., which are managed by the project administrator and the team members. Currently, CropForge hosts 62 projects and has 121 registered users.

CropForge home page



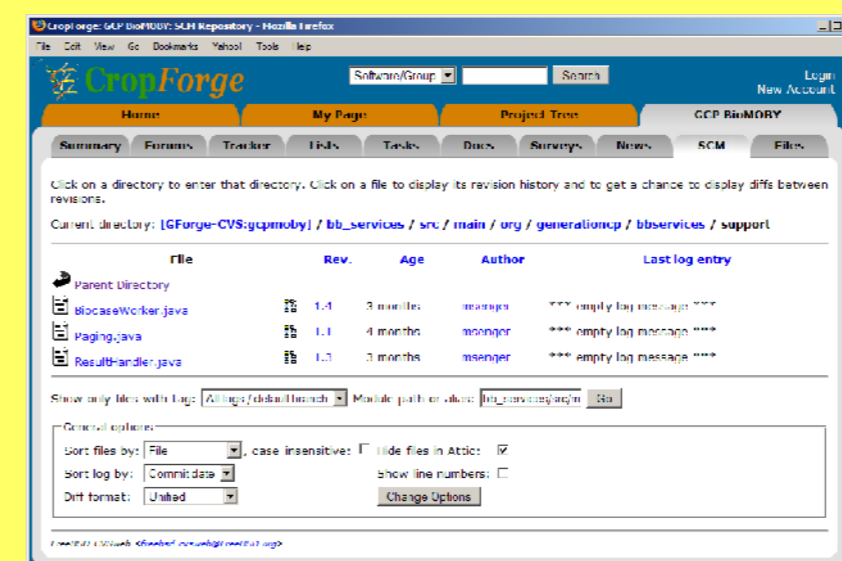
Project home page



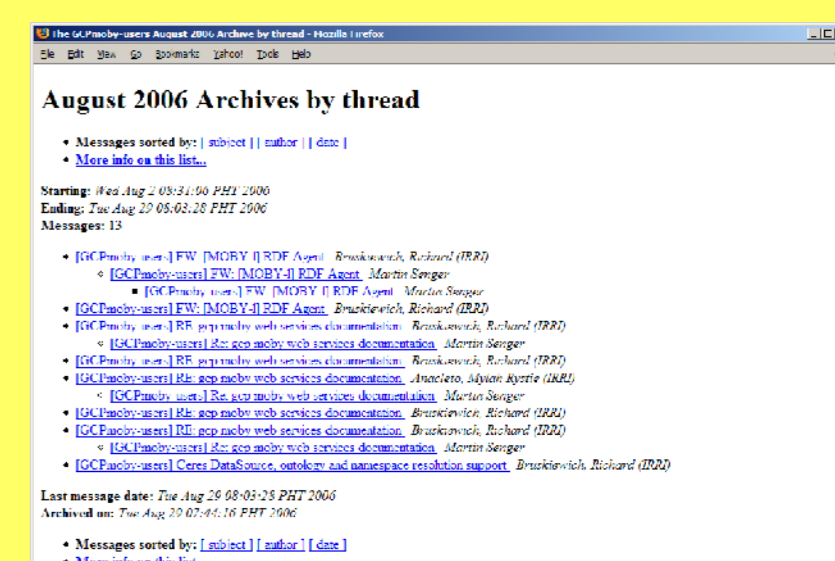
Source code repository



Source code



Mailing list



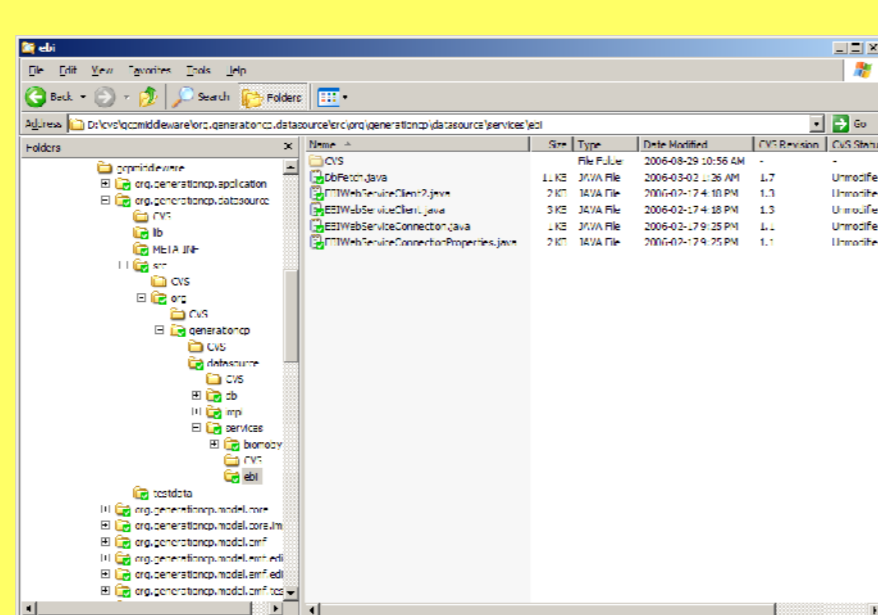
Collaborative source code management

Each project on CropForge has a central source code repository. Developers have a local copy of the source code on their computer which they update from the central repository. Local changes to the source code are committed to the central repository where they become visible to the other developers. Multiple developers can work concurrently on the same source code module following the update-edit-commit cycle. Branching and merging can be used to maintain separate lines of development.

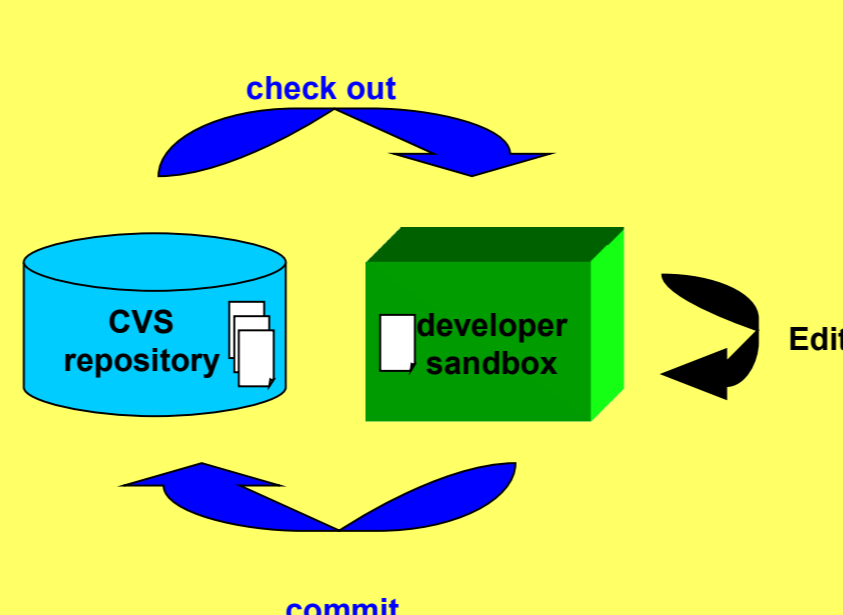
Central repository



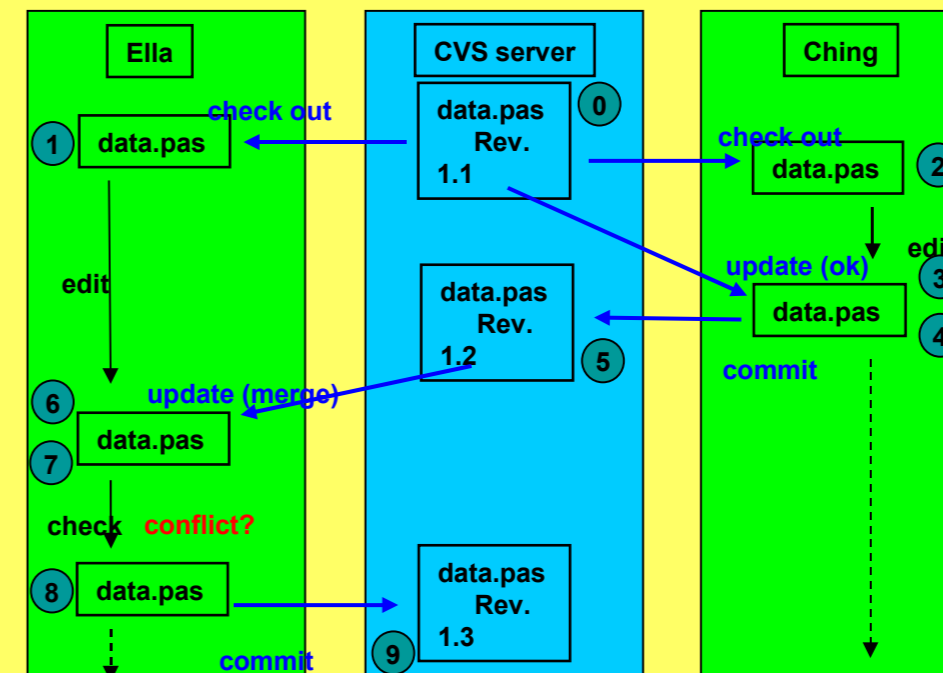
Local copy



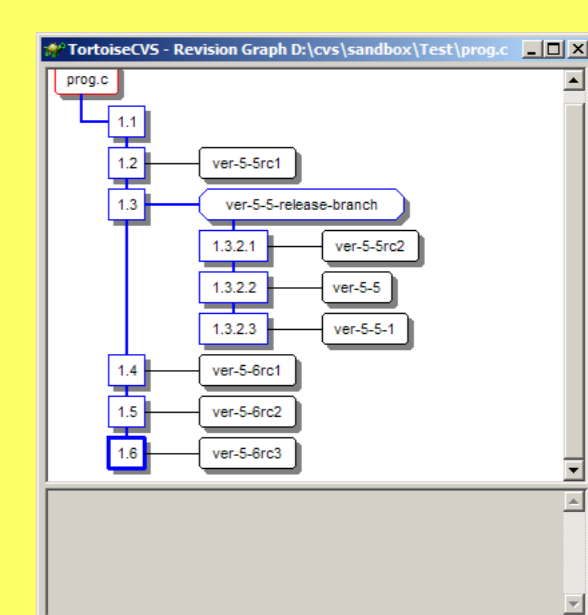
CVS principle



Concurrent development



Branching/Merging



Summary:

The collaborative platform allows users and developers in the GenerationCP to design, develop, distribute, and support software and systems that are needed to capture, manage, and integrate the data produced in the GCP. The GCPWiki is a web site where many users can efficiently make incremental contributions. CropForge is a complete suite of web-based tools for software development and support.

Metz T.¹, Bruskiwicz R.¹, Mendoza M.J.¹, Davenport G.², Simon R.³
¹ IRRI; ² CIMMYT; ³ CIP