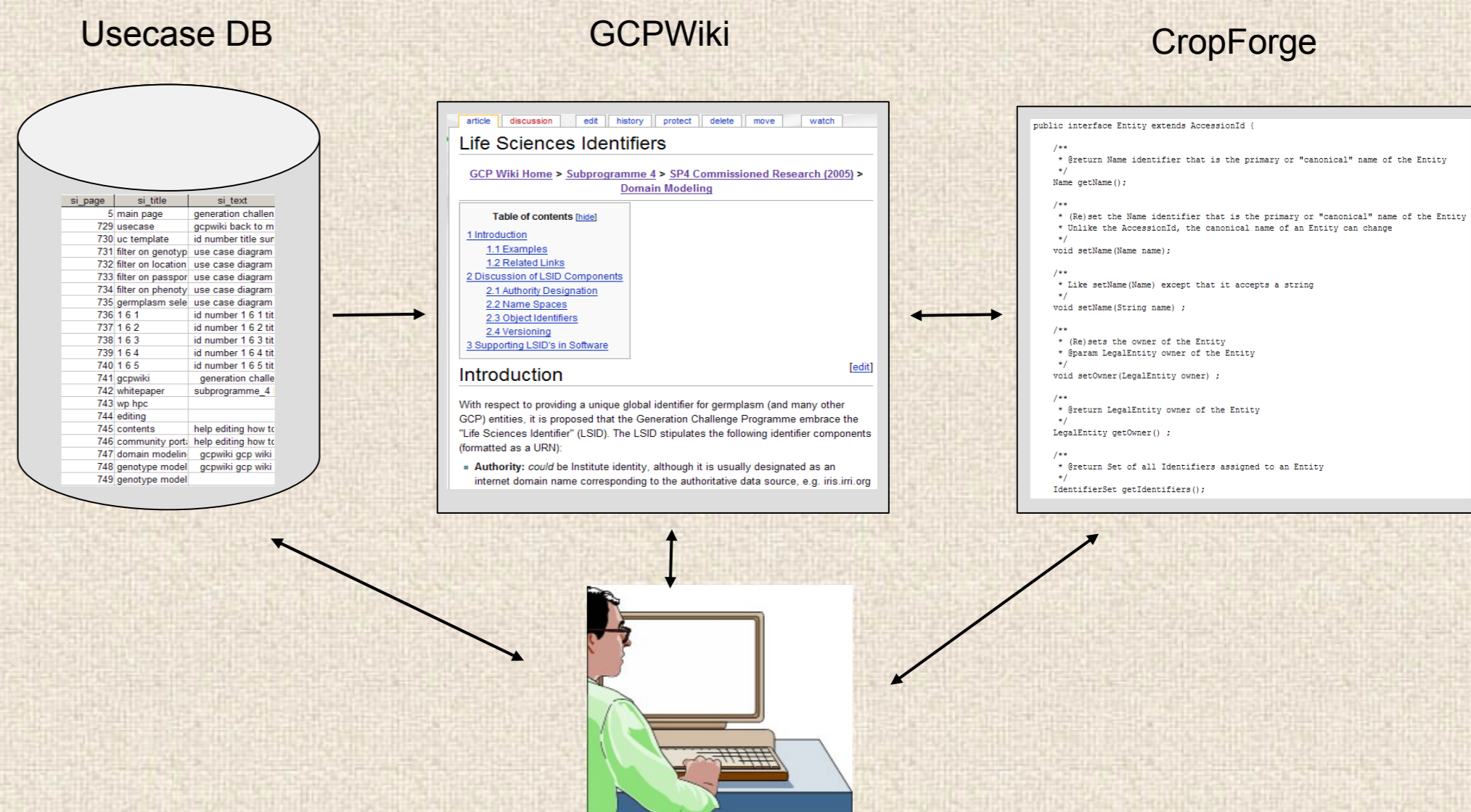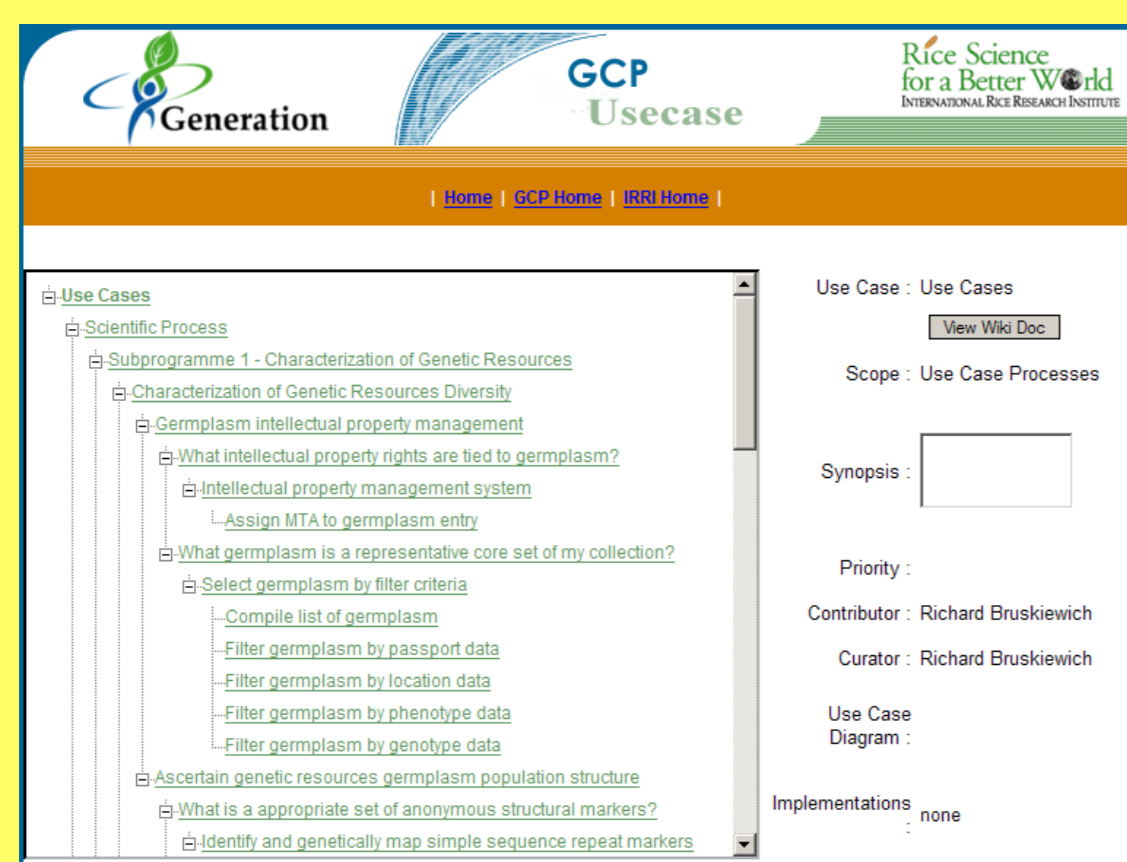# Collaborative Development Platform for GCP Software and Information Systems.

Overview of the system components:

The collaborative development platform consists of a custom-developed usecase database (Java, MySQL), 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. All components run on Debian Linux systems.
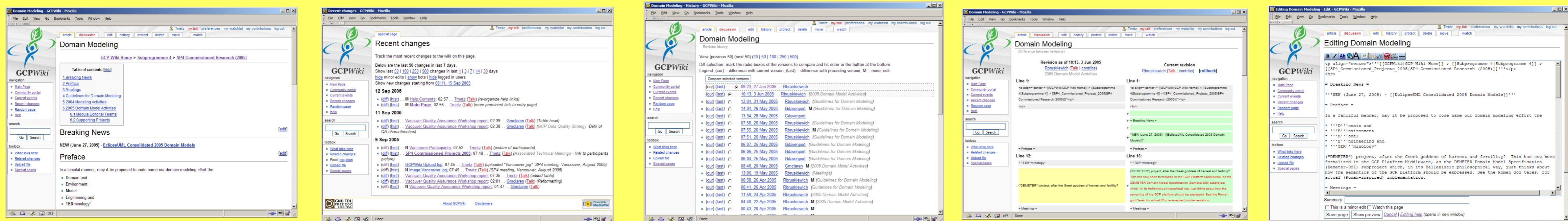
Usecase DB   GCPWiki   CropForge

The use case database is an index of GCP use cases that is presented in a tree-like structure. Each use case links to a Wiki page of the GCPWiki, where extended information on the use case can be recorded and updated.

Items in the different components of the collaborative development platform can be cross-referenced using web links. Users can interact with all components via the web, requiring only a web browser for access.

GCPWiki – a collaborative web site:

A Wiki is a website that can be edited by many users, using only a web browser for access. For a reader, a Wiki page appears exactly like a normal web page (1). A recent changes (2) listing shows all pages that have been changed during a user-selectable past period. All revisions of an individual page are accessible in a page history display (3), showing when changes have been made, and by whom. Any two revisions of a page can be compared in detail (4) to examine exactly what has changed between the revisions. For contributors, pages can be loaded into an editor (5) for editing, using a simple formatting syntax.

(1)   (2)   (3)   (4)   (5)

CropForge – a collaborative software development system:

CropForge is a combination of tools specifically geared towards collaborative software development. The home page http://cropforge.irri.org (1) is the entry point to all the projects hosted at the site. Each project (2) is managed independently and remotely by a manager and a team of programmers. Geographically dispersed programmers work against a common source code repository (3), releasing completed versions of the software in a file release system (4) for downloading by users. Interfaces for interaction between the developers and the users include tracking systems for software errors (5), feature requests, and requests for assistance, as well as discussion forums and mailing lists.

(1)   (2)   (3)   (4)   (5)

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 uses the Wiki technology to manage a web site where many users can efficiently make incremental contributions, as well as keep track of the contributions made by others. CropForge is a complete suite of web-based tools for software development and support.

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