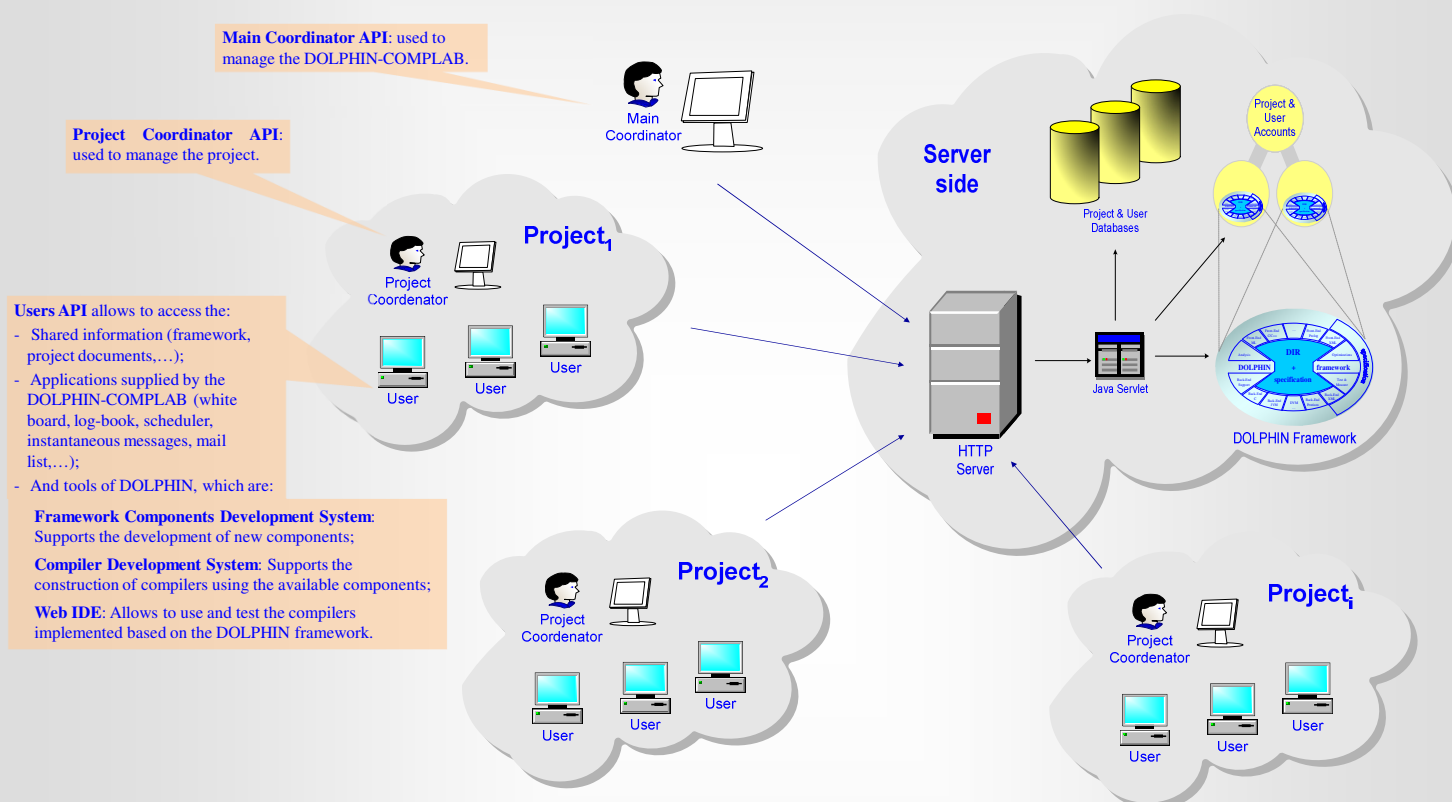


DOLPHIN-COMPLAB

A Virtual Compilers Laboratory

DOLPHIN-COMPLAB is a project to implement a virtual laboratory containing all the necessary features for the development of compilers and compiler components. It was conceived to supply an environment for assisted cooperative work, based on the web technologies, and to be used by teams of investigators, developers or simple teacher/students.

DOLPHIN-COMPLAB is based on client-server architecture. The server is composed by a database, with the project and user settings; a distributed file system, with the project and user accounts; the DOLPHIN framework, that provides the compilers technology; and a Java Servlet that integrates all these components and makes the interface with the client applications.



DESCRIPTION

The laboratory is accessible using a simple web browser. DOLPHIN-COMPLAB supplies three distinct Application Program Interfaces (API's), one for each type of user: main coordinator, responsible for the management of the DOLPHIN-COMPLAB; the project coordinators, responsible for the projects; and the conventional users (the workmanship of the project). The projects are created by a request made to the Main Coordinator, with the identification of the Project Coordinator and the list of the framework components and tools that are requested for the project. The Java Servlet creates an account for the project with an instance of the DOLPHIN framework containing the chosen components and, inserts the information about the project into the database. It is the Project Coordinator that can add new users to the project and set their access privileges (to the components and tools available on the project), goals and scheduler. The user API allows to access the shared components (framework + documents), the DOLPHIN tools, and the environment applications that help the team work, like: the shared white board; the log-book, where are register all operations realized by the project users; the project scheduler (with the contributions expected from each user); the instantaneous messages; the project mail list and the shared editor. Besides that, each user has its own account to save personal documents and unfinished work.

CONCLUSION

It is not yet possible to measure the utility and the concretization of the DOLPHIN-COMPLAB because there are some components that are not yet concluded. But considering the used architecture, the principles that sustain this project and the goals established for DOLPHIN-COMPLAB, we believe that it is possible to obtain interesting results and a good acceptance, namely from the investigators, developers and teachers/students of the compilers community. We are specially interested to test if the DOLPHIN-COMPLAB can replace the conventional laboratories used on the classes of compilers, and to see if this solution can be used on other areas, namely where the collaborative work is an important factor.