Integration of Libre Software Applications to Create a Collaborative Work Platform for Researchers at GET

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ABSTRACT

Libre software provides powerful applications ready to be integrated for the build-up of platforms for internal use in organisations. We describe the architecture of the collaborative work platform which we have integrated and designed for researchers at GET. We present the elements we have learned during this project in particular, with respect to contribution to external libre projects, in order to better ensure the maintainability of the internal applications, and to phpGroupware as a framework for specific applications development.

Keywords: collaborative work environment; contribution; free software; groupware; in-house applications; libre software; OpenLDAP; open source software; phpGroupware; PicoLibre; ProGET; Sympa; TWiki; WebDAV; wiki

INTRODUCTION

ProGET is a collaborative work platform, built out of a set of specialised libre software applications integrated together. ProGET is designed for the whole of teachers/researchers at GET. It provides every GET research project with the best features found in each application (wiki, mailing-lists management, shared WebDAV folders, Web portal, etc.).

We start with a description of the libre components that have been integrated and of the features that have been selected, as well as elements of architecture of the developed platform. We will then introduce the strategy for collaboration that we have devised for our contribution to phpGroupware. We finish with a first evaluation at the end of the initial development phase.

RESEARCH AT GET

The Groupe des Écoles des Télécommunications (GET) is composed of several engineering and business schools together with research centers in Paris (ENST), Brest (ENST...
Bretagne), and Évry (INT), in France. The research teams are made up of more than 600 full-time research equivalents. The range of the researchers’ expertise is from technologies to social sciences, and enables an integrated approach of characteristic of GET research and fosters its adaptability to new application sectors and new usages in response to current challenges in the fields of information and communication.

To give a clearer view of research at GET, the Research Office started to catalogue the activities from the different locations so that the research may be described in terms of research projects and programmes. A project is made-up of a group of people working together on closely related subjects. For example the authors belong to the “Collaborative Platforms for Research” (PFTCR) project. A programme associates different projects loosely related. For example our project is related to the “Web and Information Society” programme. Due to the fact that GET teams are located in different areas, the research office also decided to propose a Web platform to help researchers collaborate through groupware tools and animate their research work.

**PROGET INTEGRATED PLATFORM FOR COLLABORATIVE WORK**

ProGet has been launched in July 2003 with the following goals:

1. Provide all research teams in GET and their external partners (more than 1,250 users) with cutting-edge technologies in terms of Web based groupware tools
2. Allow the Research Office to manage the administrative records describing research projects
3. Generate a public Web portal based on information extracted from both previous components. The home page of the Web portal is shown Figure 1.

**Groupware Tools for Researchers/Teachers**

The following features have been selected as corresponding to the basic needs for collaborative work in the context of research activities at GET:

**Document sharing:** People in the same project must have a way to share the documents they produce, whatever the type of document.

**Asynchronous communication:** Each project manages predefined mailing lists and may also create mailing lists as it needs.

**Online editing:** People in the same project group are allowed to write easily and collaborate on simple hypertext pages using their Web browsers, to create a collaborative Web, in a wiki-type tool.

**Publishing short announcements:** The project manager can write short news items about the project, and have the project news published online on the public Web portal very easily.

The platform must provide secure access, from any point on the Internet, to a set of tools. These tools will have to be accessible through a Web interface, to allow people to use them without the need to install any specific application on the computer from which they are connected.

Some features must also be accessible through non-Web client tools, in the Microsoft Windows™, or GNU/Linux environments. For instance, as explained in the section entitled, Project Documents Repository Accessible through WebDAV, access to the DAV repositories through DAV-compatible file managers. Information generated in this collaborative part of the platform may be made accessible to the public portal directly by the research teams, without further interaction with a Webmaster.

**Tools for the Research Office**

The Research Office is supervising the setup and evolution in time of the research projects and programs. In ProGET, it uses,