Proposal for the development of a website framework for conference organisation

1. Introduction

This document describes a technical and financial proposal for the development of a generic and modular website framework. Though it could be used for any particular purpose, this framework will be tailored to meet the specific requirements of a conference organisation.

2. Objectives

As organizing a conference is already quite time consuming, this work is intended to help the people in charge of the website for this event to focus only on the content of the pages and not on the structure of the site. For this reason, all configuration needed to adapt the generic framework for a particular event should be done by mean of a web interface. This interface should be as intuitive as possible. Moreover adding or modifying pages should only require basic knowledge of the HTML language.

This should also be a one-shot development which means that once the implementation is finished no further assistance will be needed from the original developer. All the chosen technologies must thus be widely accepted standards and be well documented in order to allow anybody with normal programming skills to extend or modify some parts of the framework.

All these objectives are already met by the prototype which has been developed. A demo version is accessible at http://www.run.montefiore.ulg.ac.be:8000/conference/home.php.

This demo comes with a sample default configuration which can be very easily adapted. The homepage shows a very intuitive interface : an horizontal main menu giving access to a vertical sub-menu. Both of them can be modified to add, remove or change the properties of any item. This is done by means of an « admin » section (which is password protected). By means of this special section it is possible :

- to change the title, place, date of the event;
- to set the image file to use for any of the three configurable technical sponsors;
- add an item to the main menu bar;
- add an item to the sub-menu of any main menu item and choose the particular URL to open when the button is clicked (this URL can be opened in the same window or in a new one);
- to select a graphic banner for the event.

This first phase of development lead to a framework able to manage and make accessible a lot of informations about a conference. To automate the whole process a bit further a lot of things can still be done :

- Integration with an automated paper submission system (the suggested one is « confman ») : such a paper management system also takes care of the participants registration. By integration, it is meant :
  - A link on one of the pages must give access to the paper submission system and/or participant registration;
  - A reference configuration for the suggested software (confman) will accompany the framework;
  - The general design of the pages generated by confman will be tailored to match as much as possible the design of the framework.

- For conferences where all the power of confman is not required or for organizers who want to use another paper submission system which might not handle participants registration, an automated registration procedure may be developed and included in the framework. This system will of the following services :
  - Introduction of all information needed for the registration;
  - Computation of the total cost of the registration according to the introduced data;
  - Generation of a web page to be printed and completed by hand with the credit card informations (then this page can be faxed to the organizers);
  - The organizers will be able to automatically send an email to all participants;
  - A web page will allow the organizers to introduce each received payement and to check how many payement are still expected.
- Page hit statistics generation to allow the monitoring of how the website is accessed and which particular pages do have the most impact.
- Adding of an automated picture gallery allowing to publish pictures about the event : this service automatically generate a thumbnails page giving access to the full resolution picture.
- Small modifications to the current prototype :
  - Allow the administrator to upload HTML and image files;
  - When a filename has to be specified, display a page showing all allowed files;
  - Offer more design choices to tune the look of the website;
- Write a comprehensive installation procedure and a setup documentation.

Of course any other specific requirement can be studied for feasibility and cost.

3. CHOSEN TECHNOLOGIES

1 Server-side technology.

To meet the objectives described in point 1, it is required to be able to generate dynamic content on the HTTP server. I decided to use the PHP scripting language to manage the dynamic parts of the site. Many reasons motivates this choice :

- It is an open-sources projet;
- A rich documentation is available in many different languages and lots of sample programs can be found allowing the newcomer to quickly be able to realize very complex tasks;
- It offers a high level of security as all bugs are corrected very rapidly when discovered;
- A PHP engine is available for many different platforms, operating systems (Linux, Windows, Mac OS, ...) and HTTP servers (Apache 1.3 and 2.0, IIS, ...);
- Many extension modules allow to generate not only HTML content but also PDF files, image files, ... Such a functionality is already used in the current prototype to dynamically generate the image file for each menu button.

The recommended web server is Apache. It is once again an open-source projet supported by a very large and active community. More than 50 percent active HTTP servers on the internet are running Apache. Moreover Apache is available on all common operating systems.

If a participant registration system has to be developed the use of a SQL relational database will be required. Once again one of the best available is an open-source projet : MySQL.

The only mandatory software is the PHP engine. Apache or the MySQL server could be easily replaced by any equivalent solution.

2 Client-side technology.

To be able to consult the website, a client must be compatible with the following standards : XHTML 1.0, CSS 1.0 (Cascading Style Sheets), Javascript 1.0.

XHTML is an evolution of HTML 4.0 with more constraints on what is allowed by the standard and what is not. It remains backward compatible with HTML 4.0 which means that a valid XHTML file is implicitly a valid HTML file. All the generated pages are correct XHTML code.

CSS is a way to separate the text structure from its representation on the screen. It allows to create a more uniform website design making the navigation more attractive.

Javascript is a client-side scripting language. Which can be found in all current navigator. A very small subset of the language is used (to force a page reload for example).

The current prototype has been successfully tested with the following navigators : Netscape 6.0 and 7.0, Internet Explorer 5.5 and 6.0, Opera 5.0, Mozilla 1.3, Konqueror 3.1. As all these navigators can be downloaded freely on the internet there is no reason to suspect that the chosen technologies might prevent anybody from correctly viewing the website.

4. PLANNING

First phase : 4 man-days.

This first phase is already completed and lead to the prototype demonstrating the general structure of the framework.

Second phase :

Integration with confman, picture gallery, statistics generation, small modifications, documentation writing : 6 man-days.

Development of a specific participant registration system : 5 man-days.

5. FINANCIAL PROPOSAL

Each development day is charged 250 €.

The first phase total cost is thus 1,000 €.

The second phase cost vary between 1,500 € (without the registration system) and 2,750 € (with the registration system).

Total cost of the project :

2,500 € (without the registration system)

3,750 € (with the registration system)

6. FINAL REMARK

It remains the responsibility of IFIP to obtain the permissions to use and distribute a particular automated paper management system (for example confman).