

PHP Bindings to the GNOME Platform

Greetings!

I wish to take on the development of PHP language bindings to GNOME and its associated libraries as a part of Google's Summer of Code initiative. This project will result in PHP being added as an official GNOME language binding, and that means that the bindings developed will be in accordance to the GNOME platform binding and release cycle rules.

Benefits to the GNOME Community

1. Increases accessibility to GNOME application development by expanding the developer base. Programmers proficient in PHP will now be able to contribute to GNOME in significant ways.
2. Simplifies development of GNOME applications greatly. PHP is a powerful object oriented language, that is much easier to learn than C or C++, and that makes it easier to develop applications in.
3. Expand the capabilities of GNOME applications. PHP is known to be an extremely "internet-friendly" language, which, along with the power of PEAR (PHP Extended Application Repository) allows for easy development of desktop applications that work with a variety of web services.

In addition to that, the project also benefits the vast PHP community by providing an easy entry point into GNOME application development. This will also, as mentioned earlier, put PHP on the official GNOME Platform Bindings project, in addition to the 4 existing modules (C++, Java, Perl and Python)

Deliverables

Required

1. Creation of the 'gnome-php' package that will provide PHP language bindings to the following libraries: GConf, Gnome, and GnomeCanvas.
2. Creation of the 'gnome-php-extras' package that will provide PHP language bindings for the following libraries: libEgg (trayIcon only), libGDA, GnomeApplet, GtkSpell, GTop, NautilusBurn, WNCK, GtkMozembed, GtkSourceView and libGKsu.
3. Integrate PHP-GTK 2 (along with the new bindings, excluding the non-GNOME platform bindings, i.e. gnome-php-extras) with the upcoming GNOME bindings release set as a separate module, proposed to be included in GNOME 2.18

Optional

1. PHP bindings to GnomeVFS. An attempt will be made to bind GnomeVFS, including the async API.
2. Non-Code deliverables will include usage example scripts and documentation for all the libraries mentioned above.

Note

Justification for the choice of packages and more information about this proposal can be found at: <http://www.kix.in/soc/gnome-php.html>

Project Details

The project will be based on PHP-GTK 2, the existing PHP language binding to Gdk, Gtk, Pango and Atk. Although PHP-GTK 2 is currently based on Gtk+ 2.6, I will undertake upgrading it to 2.8 as required.

PHP-GTK 2 has the ability to support extensions that add some functionality to it. This feature will be used to develop bindings to the various libraries mentioned in the deliverables.

I have already developed bindings for GtkMozembed and GtkSourceView as extensions to PHP-GTK 2:

<http://cvs.php.net/viewcvs.cgi/php-gtk/ext/sourceview/>
<http://cvs.php.net/viewcvs.cgi/php-gtk/ext/mozembed/>

The libraries listed in the required deliverables will be attempted first. GnomeVFS is listed as an optional deliverable because it has a huge API and it may not be possible to completely wrap it within the Summer of Code time-frame.

The packages will conform to the GNOME platform bindings and release cycle requirements and will integrate PHP-GTK 2 with the GNOME platform bindings release set for the upcoming version of GNOME. Although, this proposal may not be in time for the TwoPointFifteen schedule (since the last date for a new module proposal was April 24th), an effort to include the project's result in GNOME 2.18 will be made in accordance to the TwoPointSeventeen schedule.

Project Schedule

The project is planned to be split across 6 major Phases:

1. **Analysis** (May 23 - May 31):

This phase involves interaction with the mentor and the key people involved in similar projects (maintainers of pyGTK, gtkmm etc) in order to exactly understand the requirements. The GNOME Platform binding rules and release cycle requirements will also be studied in detail during this phase. Project infrastructure (CVS Repository, Website etc.) will also be setup.

2. **Development Part I** (June 1 - June 15):

This phase will involve the up-gradation of PHP-GTK 2 to bind Gtk+ 2.8, instead of the current version (2.6).

3. **Development Part II** (June 16 - July 10):

The core development phase where the bindings to the primary GNOME libraries will be implemented. This includes GConf, Gnome, and GnomeCanvas.

4. **Development Part III** (July 11 - July 25):

Implementation of bindings to the non-gnome platform libraries: libEgg (trayIcon only), libGDA, GnomeApplet, GtkSpell, GTop, NautilusBurn, WNCK, and libGKsu. Although the GtkSourceView and GtkMozembed bindings have already been prepared, they will be reviewed again at this point.

5. **Packaging** (July 26 - August 5):

Prepare PHP-GTK 2 along with the newly developed bindings for inclusion as a module in the GNOME platform bindings release set for GNOME 2.18

6. **Testing and Wrap-Up** (August 6 - August 21):

Thoroughly test every aspect of the finished package. This phase will also include the development of non-code deliverables: example scripts and documentation. Small feature requests may also be added at this stage in addition to fixing any bugs that may be reported/encountered.

Bio

I am a second-year undergraduate at the Malaviya National Institute of Technology, Jaipur, India. I am pursuing my B.Tech. in Computer Engineering at the institute. I have been passionate about computers since my childhood and have been a free software advocate for around 2 years now.

I am an active developer in several open source projects, the most prominent of which are GNU Parted and PHP-GTK 2. My involvement in both these projects has brought me an in-depth knowledge of C as well as PHP, which I believe are essential requirements for this project. This also means that I am very comfortable and experienced with the open-source development methodology and environment, and hence will have no trouble merging in with the GNOME team.

I was offered CVS commit access to both the PHP and GNU Parted repositories within a month of my involvement with them, and I believe this goes to show the quality and timeliness of my coding efforts. I have already developed the bindings for the GtkSourceView and GtkMozembed libraries as part of my development efforts with PHP-GTK 2.

I am also a system administrator at my university, and have had the opportunity to develop several applications that automate several tasks at the institute. Applications that I have developed include a content management system, an online assignment evaluation system, and a library management software. My responsibility as a system administrator has also kept me at close-quarters with all leading open source technologies and GNU/Linux in general. I have also been an avid user of GNOME for around 3 years now. This gives me a unique perspective on the goals of the project, both as an end-user and as a developer.

Lastly, I would like to express my deep commitment to this project, the GNOME foundation, and free software ideals in general. I have been trying to get involved with GNOME for a long time, and I would like to take this opportunity as an entry point to becoming a full-time GNOME developer. I would love to continue offering my services as a developer to the GNOME Project even after the Summer of Code program concludes. I guarantee that I will take full responsibility for maintenance of the modules that I create during this project.

You can find more details about me and the projects that I am currently involved in, at my website. Please don't hesitate to contact me if any part of this proposal is not clear to you.

Thank you for considering this proposal, and for your time!

Justification for this proposal

<http://www.kix.in/soc/gnome-php.html>

My CV : <http://www.kix.in/soc/resume.pdf>

My Website : <http://www.kix.in/>

The latest version of this proposal is available at

<http://www.kix.in/soc/gnome-php.pdf>
