LINKS

Projects

wiki.gnustep.org
www.gnustepweb.org
livecd.gnustep.org
www.nongnu.org/backbone
www.dromasoftware.com/etoile/mediawiki
home.gna.org/garma
www.nongnu.org/gap
www.opengroupware.org

Developers

savannah.gnu.org/projects/gnustep
www.gnustep.it
www.collaboration-world.com
www.roard.com/docs
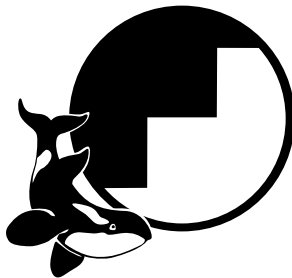
GNUSTEP
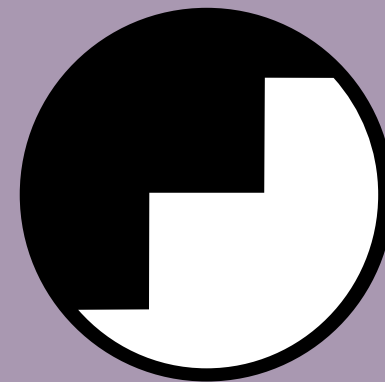
WHAT IS GNUSTEP?

GNUstep is a free, standard, object-oriented, cross-platform, Objective-C based development environment that provides high quality programming and visual interface design tools, a cohesive user interface, and an attractive, high-productivity workspace. GNUstep is based on, and completely compatible with, the OpenStep specification developed by NeXT (now Apple Computer Inc.) and Sun Microsystems. GNUstep also plans to track changes to Mac OS X in order to ensure maximum compatibility with the latest specification.

WHY?

The OpenStep specification provides the frameworks necessary for writing good applications with ease. There is a lot of anecdotal evidence that OpenStep developers have written very complex commercial applications in weeks or months, rather than the years it might have taken had they been working in other development environments. Using GORM, the GNUstep visual interface modelling application, it's possible to construct just the interface your program requires with little or no coding.

It's not just C, it's Objective-C

GNUstep follows in the tradition of NeXTSTEP, OPENSTEP and Mac OS X by utilizing Objective-C as its implementation language. Objective-C is based on C, with a few simple additions to make it truly object-oriented. Objective-C is a very minimal, yet powerful language that can be learned by C programmers in a weekend. GNUstep also provides bindings for additional languages, such as Java, Guile and Ruby.

See http://www.gnustep.org/information/statement.html for more reasons to use GNUstep.

PROJECTS USING GNUSTEP

In addition to the many server applications available for GNUstep, many desktop applications using the GNUstep frameworks are ready to go out of the box:
- email   - IRC
- MP3 and multimedia players   - FTP
- CD burner   - SMB
- vector drawing programs   - games

Many more apps are being created everyday as developers realize the simplicity and power afforded by the GNUstep environment.

GNUstepWeb

GNUstepWeb is a server side application framework which can be configured to be nearly compatible with WebObjects 4.5, and allows for the creation of powerful dynamic web sites using GNUstep libraries and Objective-C. Databases using GDL2 can be easily plugged in, and Web components can be created which follow a Model-View-Controller paradigm, where an object is the model and the view is an HTML component.

Backbone

While GNUstep aims to be a cross-platform and powerful object-oriented development system, and not a desktop, many are waiting for a free Unix Desktop based on OpenStep technology. Backbone's goal is to create a powerful and easy to use desktop using GNUstep libraries.

OpenGroupware.org

OpenGroupware.org is a free groupware server, using the GNUstep Database Library.

GNUSTEP ADVANCED TECHNOLOGIES

Distributed Objects & Distributed Notifications

GNUstep provides built-in multi-platform communication across threads, across programs, and even across machines with different endianness and type sizes.

Objective-C naturally handles remote calls, so calling a remote object is no different than calling a normal object. With the notification server, easily send notifications to any and all applications that request them.

GDL2: GNU Database Library

GDL2 is a GNUstep library compatible with Enterprise Object Framework 4.5 (EOF4.5). This library allows for the mapping of objects onto database fields, tables and relations. It is also an abstraction layer for databases, as different adaptors for common databases exist.

StepTalk

StepTalk is the official GNUstep scripting framework and allows for the easy addition of scripting capabilities to any application.

Ready in 7 Lines

The seven lines to the right are all you need to compile (debug, cross-platform), install and package your application as an RPM.

```
include $(GNUSTEP_MAKEFILES)/common.make
PACKAGE_NAME = Bob
APP_NAME = Bob
Bob_MAIN_MODEL_FILE = Bob.gorm
Bob_RESOURCE_FILES = Bob.gorm BobInfo.plist
Bob_OBJC_FILES = main.m DissolveView.m
include $(GNUSTEP_MAKEFILES)/application.make
```
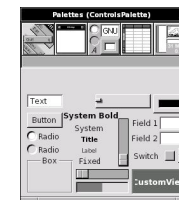
RAPID APPLICATION DEVELOPMENT

GNUstep provides two excellent applications for program development: GORM and ProjectCenter.

GORM: Graphical Object Relationship Modeller

Build user interfaces with the simplicity of drag and drop.

Gorm makes it possible to construct complex applications in a very short amount of time. Gorm eliminates the need to code GUIs by hand and gives you a totally WYSIWYG way to build your application's interface as well as to define how objects within the application interact. This allows the developer to spend more time focusing on the logic of the application itself.

ProjectCenter: Create and Manage Your Projects

Automatic Makefile creation. Easily build, test and install packages.
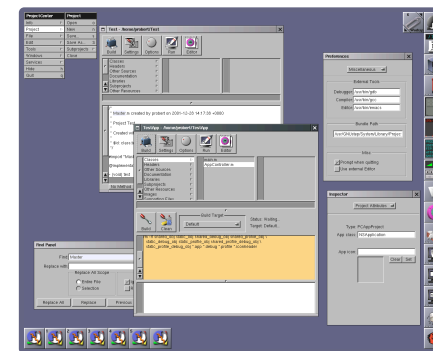
CROSS-PLATFORM AND INTEGRATED

One of GNUstep's goals is to be truly cross-platform. GNUstep is available for many different systems, including BSD, Linux and Mac OS X. An alpha port of GNUstep is even available for Microsoft Windows. In the future, a further goal will be better integration with the host platform and host desktop.

Mac OS X

Because Mac OS X's main programming API, Cocoa, is a direct descendant of the OpenStep API, it's quite easy to port GNUstep applications to Mac OS X and visa-versa. Generally, the most important work in the port is to reconstruct the graphic user interface of the application with either Interface Builder or GORM. Using Renaissance, an interface description technology, makes even this step unnecessary.
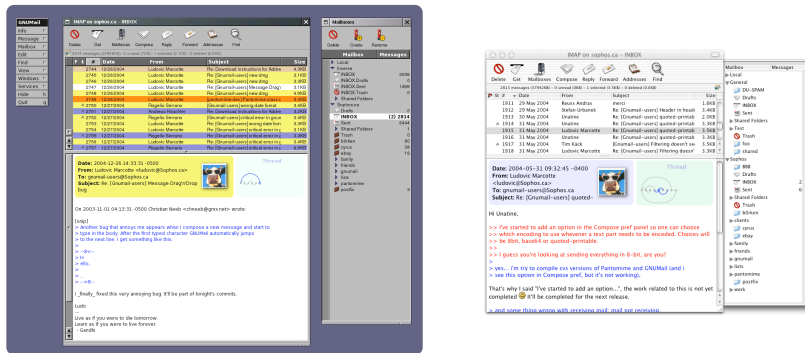
GNUMail: an prime example of portability.

Renaissance

Renaissance for GNUstep allows for the description of user interfaces in simple and intuitive XML files, using an open, standard format describing the logic of the interface. The connections between the objects created from the XML files, and the other objects in the application are done via outlets, as traditionally done in OpenStep; a new, quick and intuitive syntax has been developed to make creating outlets as easy as possible.

Perhaps the greatest strength of Renaissance is the ease with which it allows porting of user interfaces to other Renaissance-capable operating systems, such as Mac OS X.

http://www.gnustep.it/Renaissance

A Rebirth in Interface Portability

Two Renaissance-generated windows with controls, and the single piece of XML code used to create them.
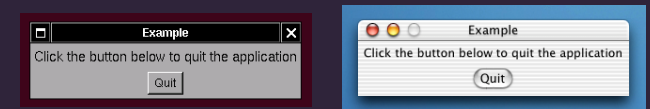

```
<window title="Example">
    <vbox>
        <label font="big">
            Click the button below to quit the application
        </label>
        <button title="Quit" action="terminate:"/>
    </vbox>
</window>
```