The Ultimate Development Environment

http://www.gnustep.org
What's GNUstep?

GNUstep is a free, standard, object-oriented, cross-platform development environment that is meant to provide generalized visual interface design, a cohesive user interface, and look good as well. GNUstep is based on, and completely compatible with, the OpenStep specification developed by NeXT (now Apple Computer Inc.) and Sun. We also plan to track future changes to the MacOS X System in order to remain compatible.

Because it provides most of the framework for writing good applications. There is a lot of anecdotal evidence that OpenStep developers have written very complex commercial applications in weeks or months, rather than years (or often never) in the case of other development environments. Using the visual interface modelling application, you can construct a decent user interface skeleton in a day with no coding.

http://www.gnustep.org/information/statement.html

Why bother?

Objective-C?

GNUstep is written in the object-oriented language Objective-C, which is based on C, with a few additions to make it object-oriented. Objective-C is a very simple language (a day or so to learn) and yet it is very powerful. Don't like Objective-C? GNUstep also provides Java, Guile and Ruby bindings.

http://www.gnustep.org
Rapid Application Development

GNUstep provides two excellent applications for creating your programs: **GORM** and **ProjectCenter**

Create your user interfaces with drag and drop

**GORM**: Graphical Object Relationship Modeller

Connect your objects!

http://www.gnustep.org
ProjectCenter: create and manage your projects

automatic Makefile creation, build, test, install packages...

GNUstep makefiles: Easy and Powerful!

All you need to compile (debug, cross-platform), install and package as an rpm in 7 lines:

```
include $(GNUSTEP_MAKEFILES)/common.make

PACKAGE_NAME=Bob
APP_NAME=Bob
Bob_MAIN_MODEL_FILE=Bob.gorm
BobRESOURCEFILES=Bob.gorm BobInfo.plist
BobOBJCFILES=main.m DissolveView.m

include $(GNUSTEP_MAKEFILES)/application.make
```
Distributed Objects and Distributed Notifications

Provides built-in multiplatform communication across **threads**, across **programs**, across **machines** (endianness, type sizes). Objective-C naturally handles remote calls, so it's not different than calling a normal object. With the notification server, you could send notifications to any/all applications that request it.

Renaissance allows you to describe your 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 in OpenStep); a new quick and intuitive syntax has been developed to make creating outlets as easy as possible. Renaissance lets you port your application without a single change on other Operating Systems (for the moment, **MacOS X**).

[http://www.gnustep.it/nicola/Renaissance](http://www.gnustep.it/nicola/Renaissance)

**GDL2: GNUstep Database Library**

GDL2 is the GNUstep Database Library 2 which aims to be compatible with Enterprise Objects Framework 4.5 (**EOF 4.5**). This library lets you map objects to database rows, fields and relations. It is also an abstraction layers for databases, as different adaptors for common databases exist.

[http://www.gnustep.org](http://www.gnustep.org)

**StepTalk**

StepTalk is the official GNUstep **scripting framework** and allows you to easily add scripting capacities to your application.
One of GNUstep's goal is to be truely cross-platform. GNUstep is available for many different systems, including BSD, Linux, OS-X and a Microsoft Windows alpha port. In the future, a further goal will be better integration with the host platform (or the host desktop).

As MacOS X's main programming API, Cocoa, is a direct descendant of the OpenStep API, it's quite easy to port GNUstep applications to MacOS X and vice versa. Generally, the most important work in the port is to redo the graphic UI of the application (with InterfaceBuilder or with Gorm). But if you are using Renaissance, even that is superfluous!

A portability example...

GNUMail!
Projects using GNUstep

Additionally to server applications, a more traditional playfield for GNUstep apps, more and more desktop applications are created: Mail, MP3 and multimedia players, CD Burner, Vector apps, IRC, FTP, SMB clients, games...

GNUstepWeb

GNUstepWeb is server side application framework which can be configured to be nearly compatible with WebObjects 4.5, and lets you create powerful dynamic websites using GNUstep libraries and Objective-C. You can easily plug in a database (using GDL2), and you create and use Web components following a Model-View-Controller paradigm, where an object is the model while the view will be 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 GNUstep Database Library.
Links

News

http://www.gnustep.us
http://www.gnustep.de
http://www.gnustep.net

Projects

http://www.gnustep.org
http://wiki.gnustep.org
http://steptalk.agentfarms.net
http://www.gnustepweb.org
http://www.nongnu.org/backbone
http://www.opengroupware.org
http://simplygnustep.sourceforge.net
http://www.linuxstep.org
http://gnustep.made-it.com

Developers sites

http://savannah.gnu.org/projects/gnustep
http://www.gnustep.it
http://www.collaboration-world.com
http://www.roard.com/docs
http://gnustep-apps.org/fabien
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