

GNUSTEP:

OBJECTIVE C UNTER LINUX

**EINE KLEINE EINFÜHRUNG FÜR RASPBERRY PI UND LINUX
VON JACEK WISNIOWSKI, COCOAHEADS AACHEN, 27.11.14**

RASPBERRY PI

VORBEREITUNG

RASPBERRY PI MIT
RASBIAN INSTALLATION

NETZWERKZUGANG

Installation von GNUStep?

- * `sudo apt-get install gnustep`
- * Installation dauert ca. 3 Minuten
- * `sudo apt-get install gnustep-make`
- * `sudo apt-get install clang`
- * `sudo apt-get install libblocksruntime-dev`
- * `sudo apt-get install libdispatch-dev`
- * `sudo apt-get install libgnustep-base-dev`
- * `sudo apt-get install libobjc2 libobjc4`
- * `sudo apt-get install build-essential clang libblocksruntime-dev libkqueue-dev libpthread-workqueue-dev gobjc libxml2-dev libjpeg-dev libtiff-dev libpng12-dev libcups2-dev libfreetype6-dev libcairo2-dev libxt-dev libgl1-mesa-dev`
- * Beispielcode: <https://github.com/kwigbo/RaspberryPI>

Diese Pakete sollte man installieren

- * `sudo apt-get install build-essential clang libblocksruntime-dev libkqueue-dev libpthread-workqueue-dev gobjc libxml2-dev libjpeg-dev libtiff-dev libpng12-dev libcups2-dev libfreetype6-dev libcairo2-dev libxt-dev libgl1-mesa-dev gnustep-make libdispatch-dev libgnustep-base-dev libobjc2 gnustep-examples gnustep-base-common gnustep-back-common gnustep-devel gnustep-gui-common libgnustep-base-dev libgnustep-gui-dev`

CODEBEISPIELE

EINFACHE BEISPIELE ZUM
TESTEN VON
GNU-MAKE

FOR YOUR CONVENIENCE

- * Einfach mein Begrüßungspaket auf dem „raspberry“ installieren:
- * `git clone https://github.com/baltobor/cocoaPi`
- * Technische Details in den README.md files
- * getestet auf raspbian-image vom 09.09.2014, installiert am 24.11.2014
- * Funktioniert noch nicht alles, wird aber in github aktualisiert
- * GNUstep Ordner: `/usr/lib/GNUstep/`
- * GNUstep Programm starten: `openapp ./<appname>.app`

Funktioniert GNUstep?

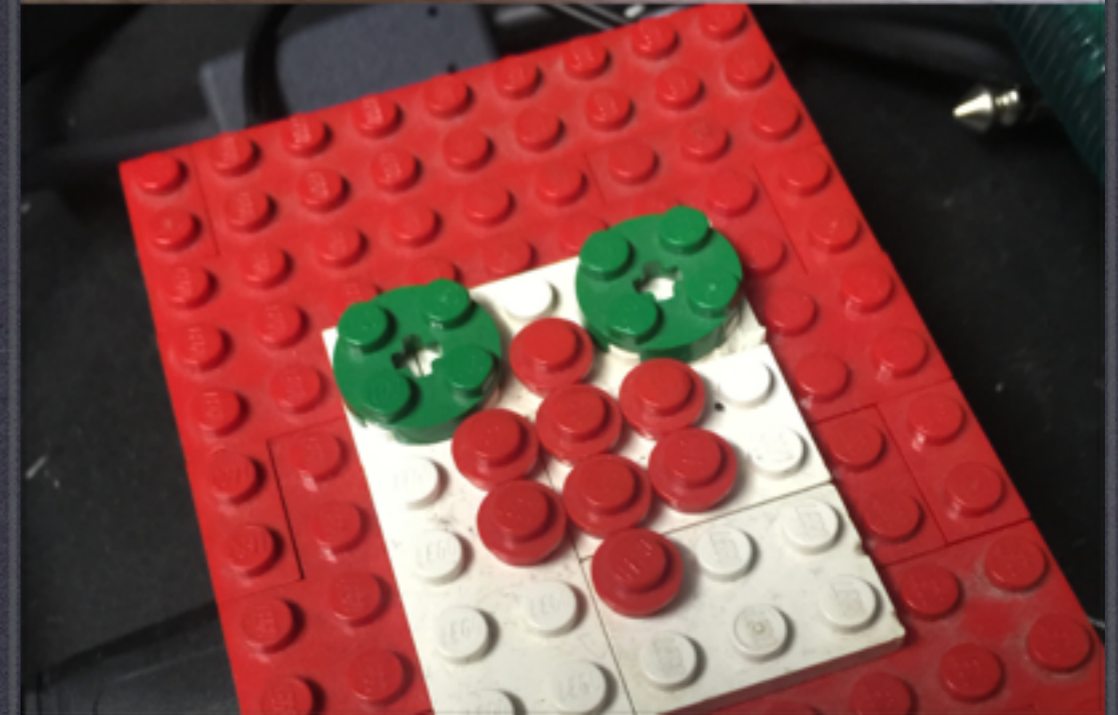
- * Testen mit Beispielen:
- * `objC/arc_test`
- * `objC/baltobor/open_gl`
- * `objC/ljackman`



ARC

KICK RASPBERRY PI'S ASS!
RECYCLE YOUR APPLE CODE

HOPEFULLY ...



Don't Panic!

- * Compilieren führt zu Fehler? Selber kompilieren ist angesagt. Guter Einstieg: <http://blog.tlensing.org/2013/02/24/objective-c-on-linux-setting-up-gnustep-clang-llvm-objective-c-2-0-blocks-runtime-gcd-on-ubuntu-12-04/>
- * GNUStep sourcen laden:
- * `wget ftp://ftp.gnustep.org/pub/gnustep/core/gnustep-make-2.6.6.tar.gz`
- * `wget ftp://ftp.gnustep.org/pub/gnustep/core/gnustep-base-1.24.7.tar.gz`
- * `wget ftp://ftp.gnustep.org/pub/gnustep/core/gnustep-gui-0.24.0.tar.gz`
- * `wget ftp://ftp.gnustep.org/pub/gnustep/core/gnustep-back-0.24.0.tar.gz`
- * `wget http://download.gna.org/gnustep/libobjc2-1.7.tgz`
- * `tar xvfz <paket>`
- * Oder simples Skript aus Begrüßungspaket ausführen.

1. GNUstep make

- * `cd gnustep-make-x.x.x`
- * `./configure --enable-objc-nonfragile-abi`
- * `sudo make install`

2. compile and install libobjc2 using clang

- * `export CC=clang`
- * `make`
- * `sudo make install`
- * Anschliessend ggf. nochmal GNUMake bauen

3. GNUstep base

- * UTF8 support: `sudo apt-get install libicu-dev`
- * `cd gnustep-base-x.x.x`
- * `./configure --enable-objc-nonfragile-abi`
- * `make`
- * `sudo make install`

4. GNUstep GUI

- * `cd gnustep-gui-x.x.x`
- * `./configure`
- * `export LD_LIBRARY_PATH=/usr/local/lib/`
- * `make`
- * `sudo make install`

5. GNUstep back

- * `cd gnustep-back-x.x.x`
- * `./configure`
- * `make`
- * `sudo make install`

Test-Code für ARC

- * <https://gist.github.com/starbugs/5021960/>
- * clang compiler bekommt Falsch aus „gnustep-config“
- * compile: clang `gnustep-config --objc-flags` -o main -x objective-c main.m -fconstant-string-class=NSConstantString -fobjc-nonfragile-abi -fblocks -Ignustep-base -Ignustep-gui -ldispatch -I/usr/include/GNUstep -L/usr/lib/GNUstep
- * Siehe github repository.

GNUstep funktioniert, Workflow und UserDefaults

- * App compilieren: `make`
- * App testen: `openapp`-Befehl zum starten des bundles: `openapp ./<name>.app`
- * ggf. `LD_LIBRARY_PATH` setzen
- * GNUstep-ordner im home-Verzeichnis enthält `NSUserDefaults`

The screenshot displays the Xcode IDE with the following components:

- Project Browser (Left):** Shows a tree view of the project structure, including Classes, Headers, Other Sources, Interfaces, Images, Other Resources, Subprojects, Documentation, Supporting Files, Libraries, and Non Project Files.
- Source Code Editor (Center):** Displays the implementation of the `VEAppController` class. It includes copyright information (© 2007-2010 by Ing. Riccardo Mottola), license text (GNU GPL version 3), and Objective-C code for actions like `addBookmark:`, `addBkPanelAdd:`, `addBkPanelCancel:`, `chooseFont:`, and `updateFontPreview:`.
- Debugger (Center-Right):** Shows the status as 'Idle' and provides a list of debugging actions: Go, Pause, Continue, Restart, Next, Step Into, Step Out, Up, and Down. The console output shows the GDB startup sequence.
- Vespucci - Project Inspector (Right):** Displays project attributes: Project Type: Application, Project Name: Vespucci, Language: English, Application Type: GORM, and Application Class: NSApplication.
- Vespucci - Project Build (Bottom-Right):** Shows the build status as 'Vespucci - Build succeeded' and lists the compilation steps for various source files.
- Vespucci - Loaded Files (Top-Right):** Lists the files loaded into the IDE: `VEAppController.m`, `VEAppController.h`, and `VEWinController.m`.

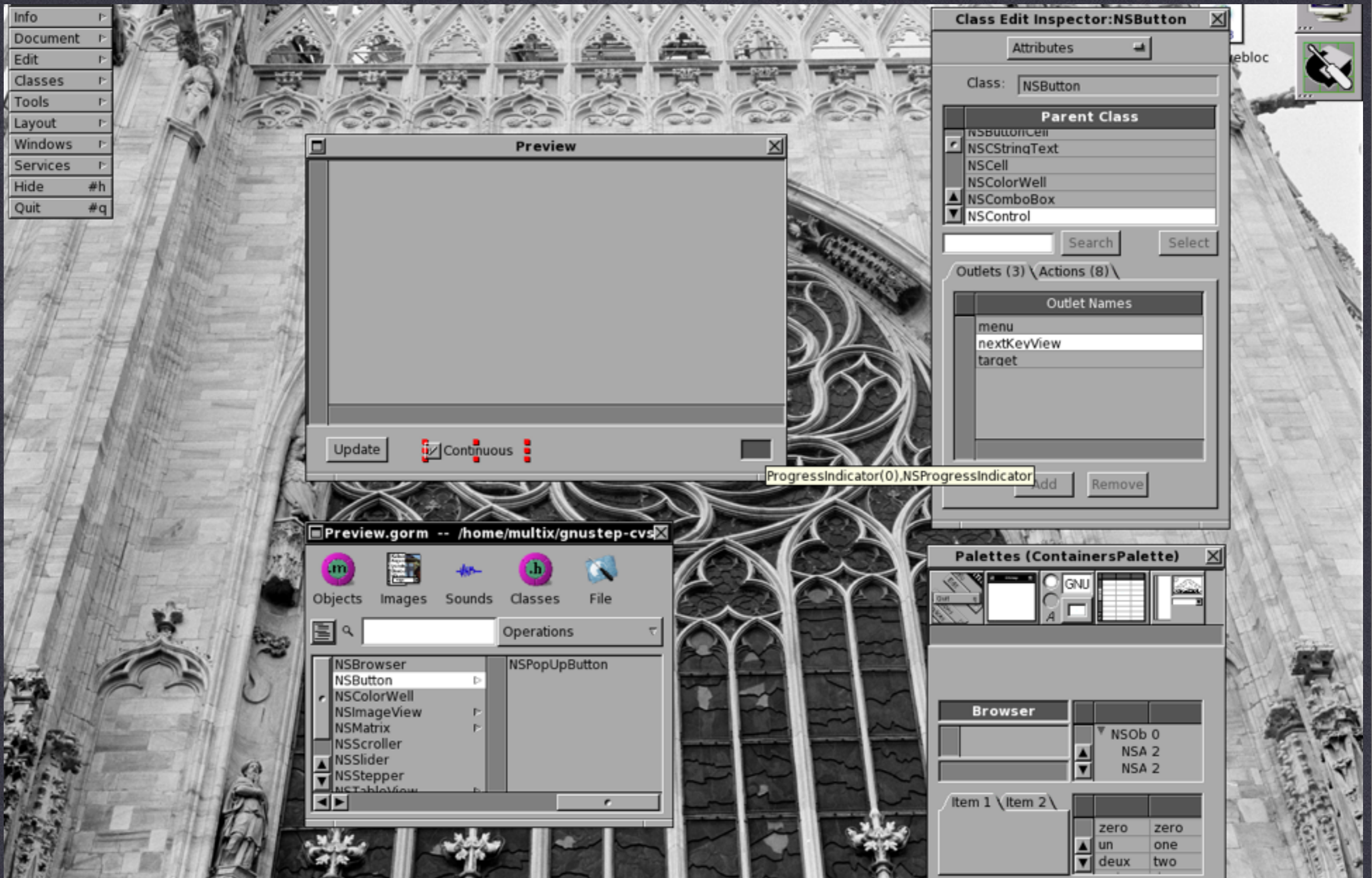
PROJECT CENTER

[HTTP://WWW.GNUSTEP.ORG/EXPERIENCE/PROJECTCENTER.HTML](http://www.gnustep.org/experience/projectcenter.html)

objc IDE unter linux

- * Integrierte Entwicklungsumgebung für „Apps“
- * Voll funktionsfähig.
- * apt-get install projectcenter
- * <http://www.gnustep.org/experience/ProjectCenter.html>
- * <https://packages.debian.org/de/sid/projectcenter.app>





GORM - GRAPHICAL OBJECT RELATIONSHIP MODELLER

[HTTP://WWW.GNUSTEP.ORG/EXPERIENCE/GORM.HTML](http://www.gnustep.org/experience/gorm.html)

UI Designer unter linux

- * Userinterface Designer für „Apps“
- * Voll funktionsfähig.
- * `apt-get install gorm`
- * Angelehnt an Project Builder und Interface Builder von OPENSTEP, NeXT Computer Inc.



Mélodie

Artist - Album - Track

Volume

Search: Clear New Playlist

	Title	Artist	Name
<input type="radio"/>	Bajo Andaluz	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Ghâzali	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Goodjinns	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Hommage à Ostâd	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Jam Bulería	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Jullundur	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	Oriental Bass	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	San Juan	Renaud Garcia-Fons	Oriental Bass
<input type="radio"/>	March	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	Nuclear Summer	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	Waiver	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	But You Can't Run	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	Pala Minima	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	JEM	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	Dead Man Stomping	Youngblood Brass Band	Is That A Riot?
<input type="radio"/>	Ake	Youngblood Brass Band	Is That A Riot?



About Étoilé

Let your environment grow

Host Name: ubuntu-bouiboui	Machine: i686
Operating Linux	CPU: Genuine Intel
Étoilé Version: 0.4	CPU MHz: 2.00 GHz
Kernel Version: 2.6.22-14-generic	Memory: 512 MB

Copyright (C) 2005 - 2008 Étoilé contributors
Released as an open source project

New Account

Jabber Identity (JID)

By default, the client will attempt to connect to the server

Server

Cancel Set Account

PROJEKT

ETOILÉ

HTTP://ETOILEOS.COM

DATUM

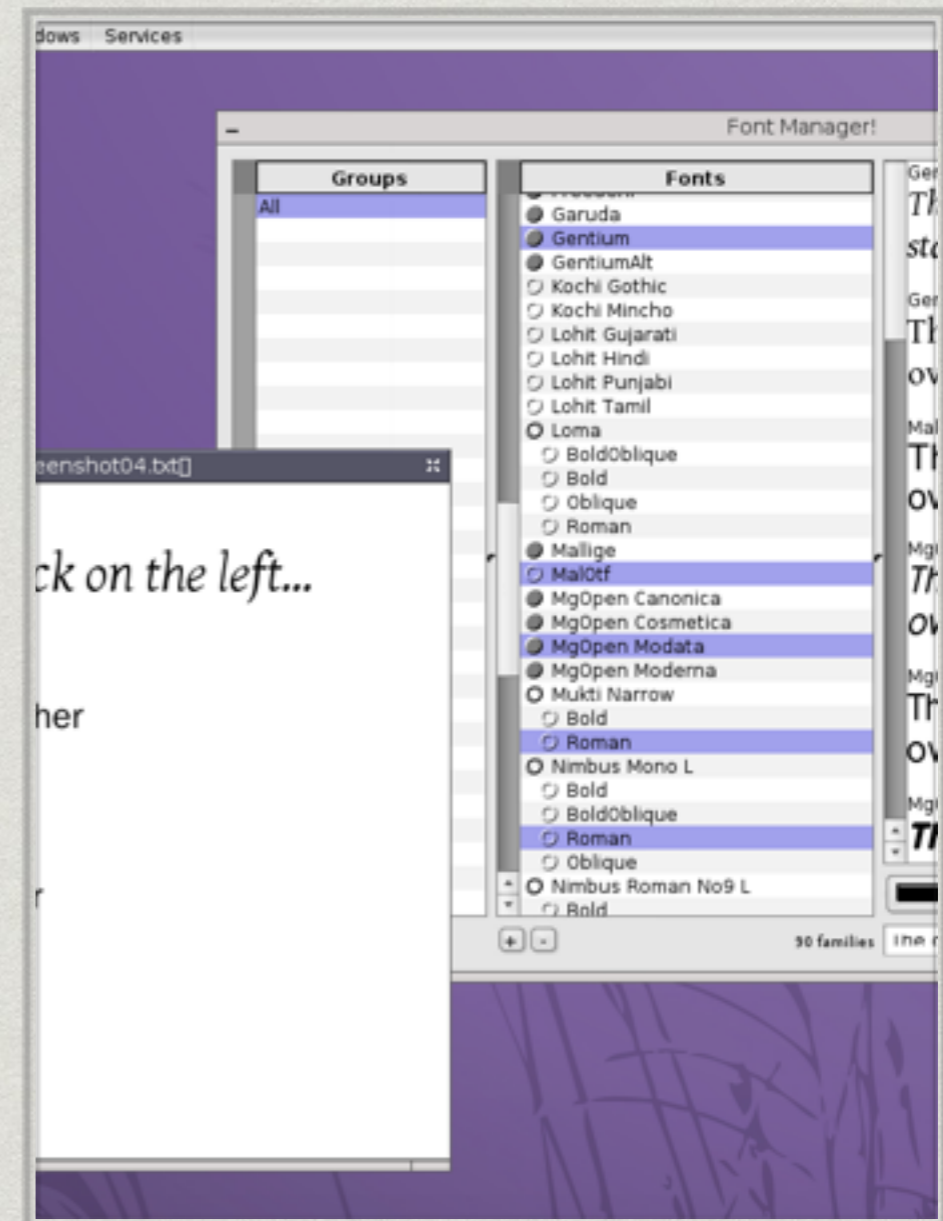
2010-20??

KUNDE

PUBLIC DOMAIN

Ist Etoile ein OS?

- * Sollte es ein OS sein?
- * Es hat sich zwischendurch viel geändert.
- * Es könnte was werden!
- * Aktives Projekt mit dem Ziel High Level Development Frameworks für GNUstep zu entwickeln.
- * Kooperation mit GNUstep.



Ausblick:

- * Etoilé <=> OS X?
- * Raspbian <=> iOS?
- * Selbst compilieren:
http://wiki.gnustep.org/index.php/GNUstep_under_Ubuntu_Linux
- * Cocoa Sprite Kit:
http://sourceforge.net/projects/csk/files/csk/Beta%202/csk_beta2.tar.gz/download
- * GNUstep „App-Store“:
<http://www.nongnu.org/gap/>

„And now make great apps.“

–*Steve Jobs*