



FOSS Communities: A Sanity Check

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FOSS Studies at the Center for AT & DWR

- **Research group: Innovation and Organization of Research Work. Subgroup for FOSS and the Open Development Model**
- **FOSS adoption and development in Finnish business. Linux User Groups**
- **“Hybrid” studies**
 - OpenOffice.org, community building, motivation
 - GNOME, commercial FOSS, organization of large Free Software projects



“Linux Community ?”



- **Linus: “Largest collaborative project in history”**
- **Network of communities**
 - kernel: 100 active lkml authors
 - operating system distributions. Debian: 1000 developers
 - user interfaces. GNOME: 400 Foundation members
 - applications
 - users
 - businesses



Linux is NOT a typical FOSS project!

- **Linux as the Open Source cover-boy project**
- **Most FOSS projects are nothing like Linux**
 - some projects are less “open”: BSD
 - most projects are tiny in size and uninteresting in ways of organization
 - democracies (Debian)
 - Leader-centered (Linux, Perl)
 - Company-driven (OpenOffice.org, MySQL)



FOSS Communities

- **Distributed work (Moon & Sproull)**
- **Virtual community (Castells)**
- **Bazaar, noosphere (Raymond)**
- **Hacker ethic (Himanen)**
- **Communities of practice (Wenger)**
- **Social movement (Stallman)**

- **Activity systems based on common objects**
- **Historical emergence of FOSS communities**



Real-Life FOSS Communities

- **Essential features of FOSS**
 - Open Source
 - Open development model
- **Contingent features of FOSS**
 - Ideology
 - Organizational features, copyright arrangements
- **Commercial FOSS**
 - The Linux kernel and hardware manufacturers
 - GNU/Linux distribution vendors and service providers
 - Corporate GNOME
 - Sun and OpenOffice.org
 - Community-originated startup businesses



Why Hack on FOSS?

- **Free Software activism**
- **Learning, experimenting, fun**
- **“Scratching an itch”**
- **Money**



Commercial FOSS

- **The Linux kernel and hardware manufacturers**
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- **Governmental FOSS: Brazil, Peru, Germany...**



FOSS and the Homesteading of Intellectual Commons

- **Information society and knowledge as commodity**
- **Defense of innovation and free movement of knowledge**
 - Intellectual property rights and the public domain
 - Distributed development model, the scientific ideal and Enlightenment
- **Free software and the liberation of users and developers**
- **Open Source, the Open Development Model, and better software**



Linux Kernel Community

- **“The GNU Emacs of terminal emulators”**
- **The Minix problem**
- **GPL, Internet, and the open development model**
- **Proprietary drivers and Linux**

NOTE: this copyright does **not** cover user programs that use kernel services by normal system calls (...) does **not** fall under the heading of “derived work”

- **BitKeeper**



GNU/Linux Distributions

- **Operating systems for end-users**
- **Compilations of software, installation and configuration tools, branding**
- **“People don't drive cars. They drive Hondas and Fords”**
- **Debian and Debian derivatives**
- **Red Hat, SuSE**
- **Acrobat, Flash, Java and the woes of free alternatives**



Userland, the Final Frontier

- **Systems software, network infrastructure**
 - generic technologies, platforms for end-user products
 - basic system software and servers are often liberally licensed for maximum distribution of development efforts
 - typical licenses: academic licenses (BSD, Artistic, Apache)
- **Special purpose programs, end-user applications**
 - less incentive for collaboration, competitive market
 - typical licenses: Mozilla-style, specific to a project/company
- **Multimedia codecs, games**
 - codecs often proprietary and patented, games with short lifetimes almost never Open Source



```

jacob@bron-yr-aur:jacob$ mail
Mail version 8.1 6/6/92.  Type ? for help.
"/var/spool/mail/jacob": 7 messages
>  1 ralph      Tue Feb 29 10:00 19/683  "Re: vacation"
   2 wanda     Tue Feb 29 16:00 19/687  "Re: new fishtank"
   3 rupert    Tue Feb 29 20:00 19/691  "Re: Wednesday Night"
   4 rupert    Wed Mar  1 16:00 19/689  "Re: Wednesday Night"
   5 wanda     Thu Mar  2  04:00 19/685  "Re: new fishtank"
   6 ralph     Thu Mar  2 10:00 19/681  "Re: vacation"
   7 wanda     Thu Mar  2 16:00 19/685  "Re: new fishtank"
&

```

DEG 0

1/x	x^2	SQRT	CE/C	AC
INV	sin	cos	tan	DRG
e	EE	log	ln	y^x
PI	x!	()	/
STO	7	8	9	*
RCL	4	5	6	-
SUM	1	2	3	+
EXC	0	.	+/-	=

File Config Search View Help

23:52 June 1992

Mon	Tue	Wed	Thu	Fri	Sat	Sun
▶ 1	2	3	4	5	6	7
▶ 8	9	10	11	12	13	14
▶ 15	16	17	18	19	20	21
▶ 22	23	24	25	26	27	28
▶ 29	30	1	2	3	4	5
▶ 6	7	8	9	10	11	12

Dali Clock

11:20:29

Netscape: GNU's Not Unix! - the GNU Project and the Free Software Foundati

File Edit View Go Bookmarks Options Directory Window Help

Location:

GNU's Not Unix!



xterm

Mailbox is '/var/spool/mail/jacob' with 7 messages [ELM 2.4ME+ PL73 (25)]

1	Mar 2	To jacob	(19)	Re: new fishtank
2	Mar 2	To jacob	(19)	Re: vacation
3	Mar 2	To jacob	(19)	Re: new fishtank
4	Mar 1	To jacob	(19)	Re: Wednesday Night

You can use any of the following commands by pressing the first character;
d)delete or u)ndelete mail, m)ail a message, r)eply or f)orward mail, q)uit
To read a message, press <return>. j = move down, k = move up, ? = help

Command:



Home directory

Window title: /usr/share/pixmaps

Menu: File Edit Layout Commands Help

Navigation: Back Up Forward Rescan Home Icon Brief Detailed Custom

Location: /usr/share/pixmaps

gnotepad+	gnome-audio2.png	gnome-background.png	gnome-balsa2.png	gnome-calc2.png
gnnumeric	gnome-calendar.png	gnome-color-browser.png	gnome-cromagnon.png	gnome-default-dlg.png
gstripchart	gnome-ee.png	gnome-error.png	gnome-file-c.png	gnome-file-h.png
gturing	gnome-folder.png	gnome-gedit.png	gnome-gegl.png	gnome-gemvt.png
guile				
i18n				
icons				
idl				
locale				
mc				
metatris				
mime-info				
pixmaps				
cards				
fish				
gkb				
gnibbles				
gnobots				
gnobots2				
gnome-stones				
gnometris				
gnotravex				
iagno				
mahjongg				
mailcheck				

Show all files

Taskbar icons: Gnome logo, Terminal, Nautilus, Calculator, Help

Taskbar icons: Netscape: Welc..., Control Center, /usr/share/pixm..., The GIMP

Wed Feb 24 07:12 PM

FreeCiv

Game Kingdom View Orders Reports Help

Home directory CD-ROM 0 Floppy 0 www.redhat.com

Electric Eyes - Edit Controls

Colour Settings

Gray Controls

Colour Modifications: Apply Keep Reset Always Apply



Gnumeric: Phone.xls.gnumeric

File Edit View Insert Format Tools Help

E3 =vlookup(\$B3,Numbers!\$A\$2:Numbers!\$B\$1

	C	D	E	F
1	Duration	Cost	Destination	
2	508	0.00:45	£ 0.042	Atkinson's
3	508	0.06:28	£ 0.235	Atkinson's
4	5171	0.01:06	£ 0.042	Alma Vale pub
5	344	0.03:09	£ 0.105	Abbie
6	344	0.01:16	£ 0.042	Abbie
7	508	0.03:46	£ 0.133	Atkinson's
8	5119	0.00:08	£ 0.042	Mum's work
9	344	0.00:28	£ 0.042	Abbie
10	5119	0.02:16	£ 0.151	Mum's work
11	344	0.00:38	£ 0.042	Abbie
12	344	0.00:56	£ 0.042	Abbie
13	344	0.01:09	£ 0.042	Abbie
14	5750	0.00:04	£ 0.042	Connors'

Numbers Sean Totals

Control Center

File Help

- Desktop
 - Background
 - Screensaver
 - Theme Selector
 - Window Manager
 - Gnome Edit Properties
- Multimedia
 - Keyboard Bell
 - Sound
- Peripherals
 - Keyboard
 - Mouse
- Session Manager

GIMP Tip of the day

The GIMP uses layers to let you organize your image. Think of them as a stack of slides or filters, such that looking through them you see a composite of their contents.

Show tip next time

Prev. Tip Next Tip Close

Screen Saver

- Helix
- Hopalong
- Hypercube
- Iifs
- Imsmap
- Interference
- Jigsaw
- Julia
- Kaleidoscope
- Kumppa

Kumppa Settings

Screen Saver Demo

Screen Saver Settings

Start After 20 Minutes.

Require Password

Priority: Low

Taskbar and System Tray

FreeCiv Electric Eyes Electric Eyes - Edit ... Gnumeric: Phone.xls... Control Center GIMP Tip of the day

Thu Jun 24 01:30 PM 83% 4:10

has started.



1997: “Configurability is always preferable”:
the Unix way

2002: “Make it Just Work”:
Eazel, Helix, Ximian, Sun, Novell

File Management Preferences

Views Behaviour Display List Columns Preview

Behaviour

- Single click to activate items
- Double click to activate items
- Always open in browser windows

Executable Text Files

- Run executable te
- View executable te
- Ask each time

Wastebasket

- Ask before empty
- Include a Delete c

Help

Configuration Editor - preferences

File Edit Bookmarks Help

- gconf
- gthumb
- gwget2
- iagno
- libgda
- liferea
- logview
- mahjongg
- mail-notification
- mergeant
- metacity
- mini-commander
- multisync
- nautilus
 - desktop
 - icon_view
 - list_view
 - preferences**
 - sidebar_panels
 - nautilus-cd-burner
 - netstatus_applet
 - panel

/apps/nautilus/preferences/click_policy

Name	Value
always_use_browser	<input type="checkbox"/>
background_color	#ffffff
background_filename	
background_set	<input type="checkbox"/>
click_policy	double
confirm_trash	<input checked="" type="checkbox"/>
date_format	iso
default_folder_viewer	icon_view
desktop_font	Sans Bold 11
desktop_is_home_dir	<input type="checkbox"/>
directory_limit	
enable_delete	

Key Documentation

Key name: /apps/nautilus/preferences/click_policy
 Key owner: nautilus
 Short description: Type of click policy
 Long description: Possible values: a single click, a double click

```

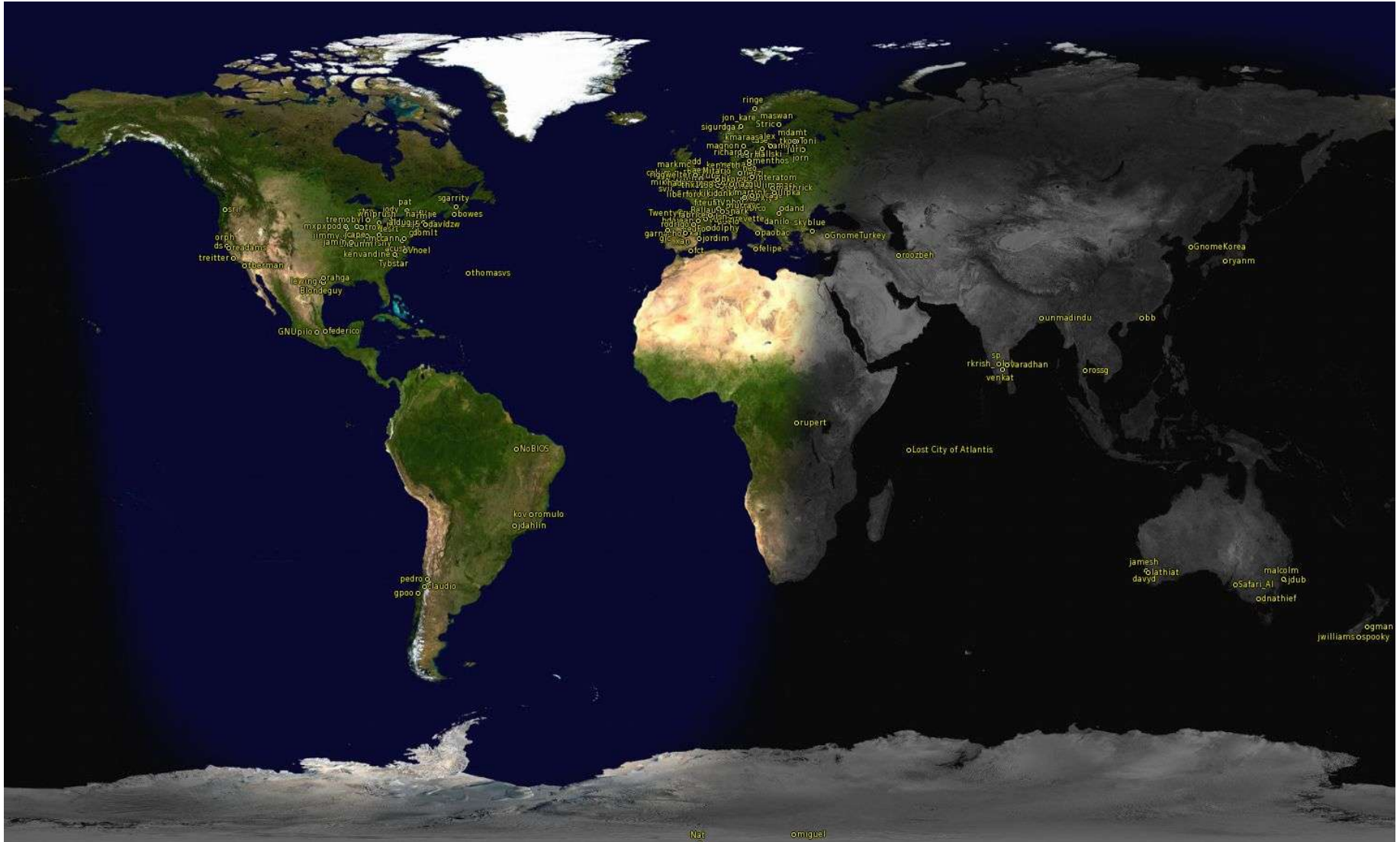
juha@marvin.mosa.homelinux.org: /home/juha
<?xml version="1.0"?>
<gconf>
  <entry name="no_ubuntu_spatial" mtime="1113132725" type="bool" value="true" />
  </entry>
  <entry name="date_format" mtime="1111931473" type="string">
    <stringvalue>iso</stringvalue>
  </entry>
  <entry name="default_folder_viewer" mtime="1106489655" type="string">
    <stringvalue>icon_view</stringvalue>
  </entry>
  <entry name="navigation_window_saved_geometry" mtime="1112943862" type="string">
    <stringvalue>811x602+511+413</stringvalue>
  </entry>
  <entry name="click_policy" mtime="1101561898" type="string">
    <stringvalue>double</stringvalue>
  </entry>
  <entry name="sidebar_width" mtime="1109755624" type="int" value="178">
  </entry>
  <entry name="always_use_browser" mtime="1097510034" type="bool" value="false">
  </entry>
</gconf>
.gconf/apps/nautilus/preferences/%gconf.xml
  
```



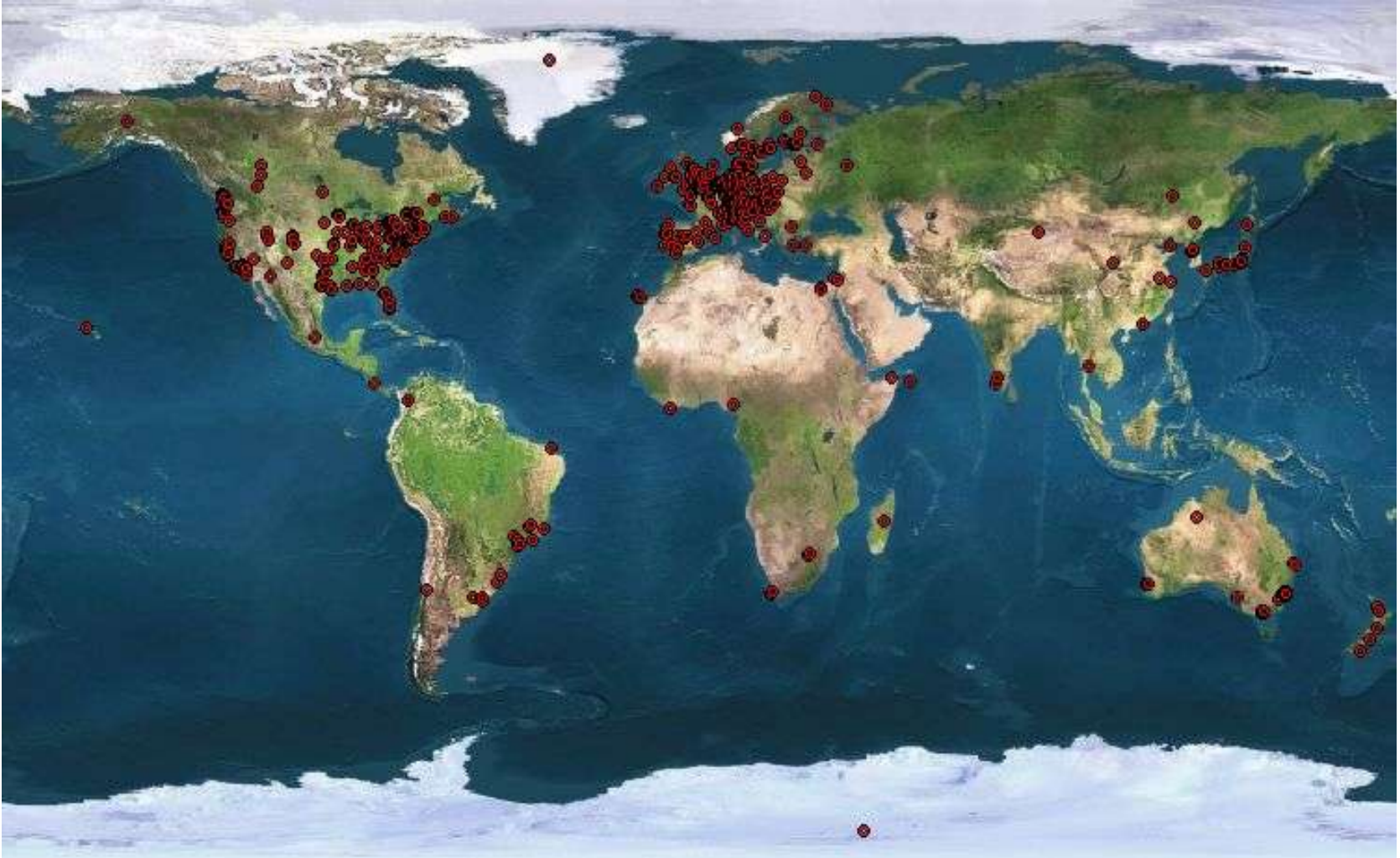
FOSS for Everyone

- **The Ubuntu Manifesto**
 - software should be free of charge
 - tools should be usable by people in their local language
 - tools should be usable by people despite any disabilities
 - people should have the freedom to customise and alter their software
- **GNOME: 92 translation projects**
- **OpenOffice.org: 42 languages in Debian**
- **Mozilla Firefox: 35 languages in Debian**
- **Accessibility**

GNOME Hackers map



Debian Hackers Map





Internet Connectivity

World Regions	Population (2005 Est.)	Internet Usage, Latest Data	Penetration (% Population)	World Users %
Africa	900,465,411	13,468,600	1.5 %	1.5 %
Asia	3,612,363,165	302,257,003	8.4 %	34.0 %
Europe	730,991,138	259,653,144	35.5 %	29.2 %
Middle East	259,499,772	19,370,700	7.5 %	2.2 %
North America	328,387,059	221,437,647	67.4 %	24.9 %
Latin America/Caribbean	546,917,192	56,224,957	10.3 %	6.3 %
Oceania / Australia	33,443,448	16,269,080	48.6 %	1.8 %
WORLD TOTAL	6,412,067,185	888,681,131	13.9 %	100.0 %



Problems of Commercial GNOME

- **Ximian Connector**

There is no simple business model for free software
(...) Novell has a big channel and a support and
services organization that can bring in revenue for
the free software that Ximian and SUSE provide

- **The Desktop Integration Bounty Hunt**

“Who decides what features are important? The one with
money! How do we get hackers to do something? Offer
them money!”



GNOME Organization

Maintainers

Everybody Else



Building a FOSS Community: OpenOffice.org

- **Netscape and Freeing the Lizard**
- **Sun, StarOffice and OpenOffice.org**
- **StarOffice release cycle and the frustration of hackers**
- **Monolithic design of proprietary software**
- **Java**
- **Failure of the Groupware project**



The Last Slide

- **There is no FOSS community: there exists a network of numerous communities**
- **Rising from systems software to userland applications, there is a trend towards “hybrid” communities with volunteer and corporate involvement**
- **Hybridization of FOSS reveals internal problems of information capitalism and the open development model**
- **Geographically, FOSS resembles any other information technology and is dominantly European and North American**
- **FOSS has potential for accessibility and internationalization work that would not be interesting for companies whose main revenue comes from software licenses**