

FermoLUG
Gruppo Utenti Linux
del Fermano



www.linuxfm.org

Linux Day 2011

Giornata nazionale di GNU/Linux e del software libero

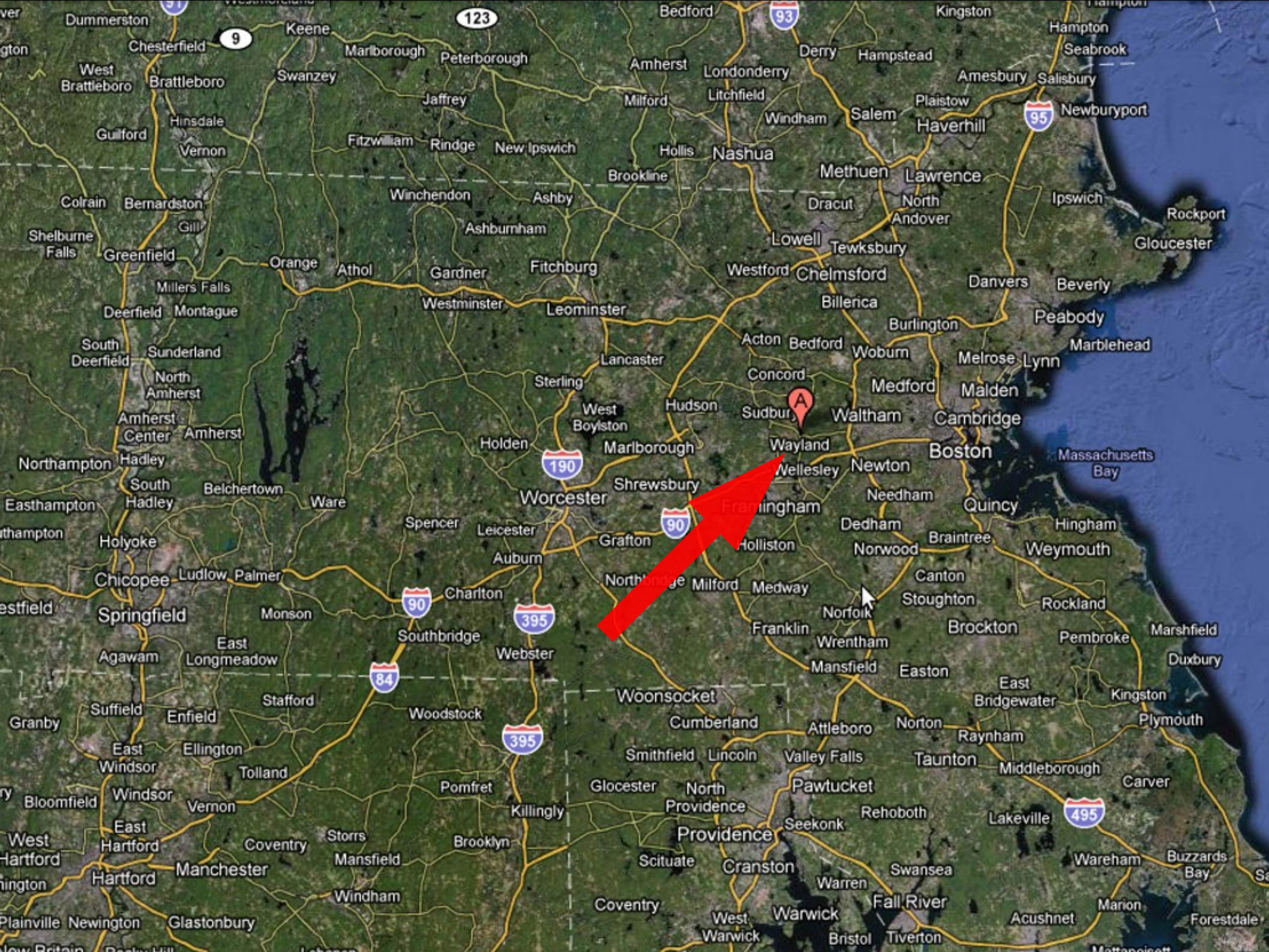


Wayland:
il futuro dei server grafici su Linux?

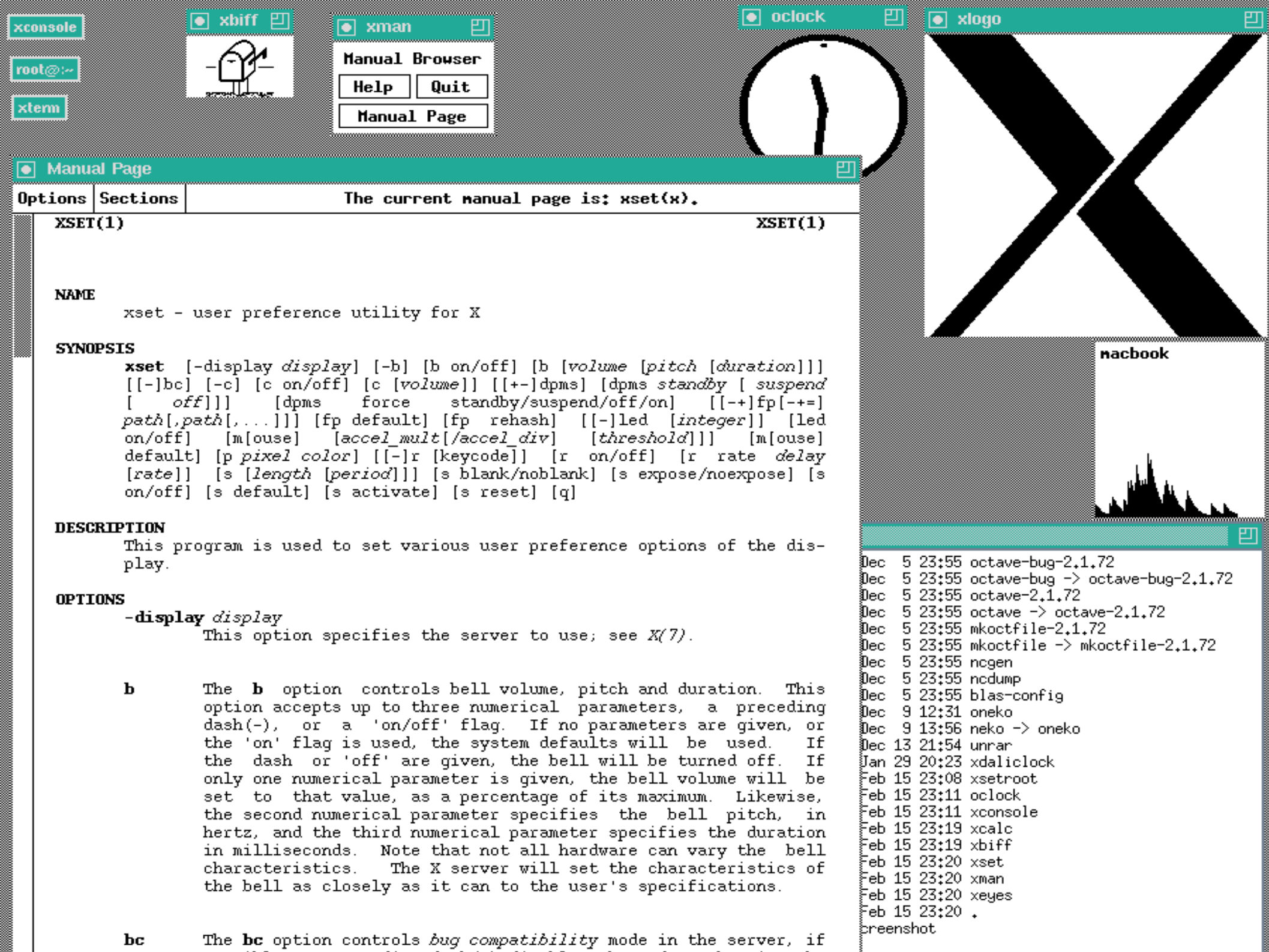
Andrea Colangelo
Ubuntu Developer

SABATO 22 OTTOBRE ORE 15:30

FERMO, Aula Magna Scuola Media Fracassetti-Betti (Largo Mora, 2)







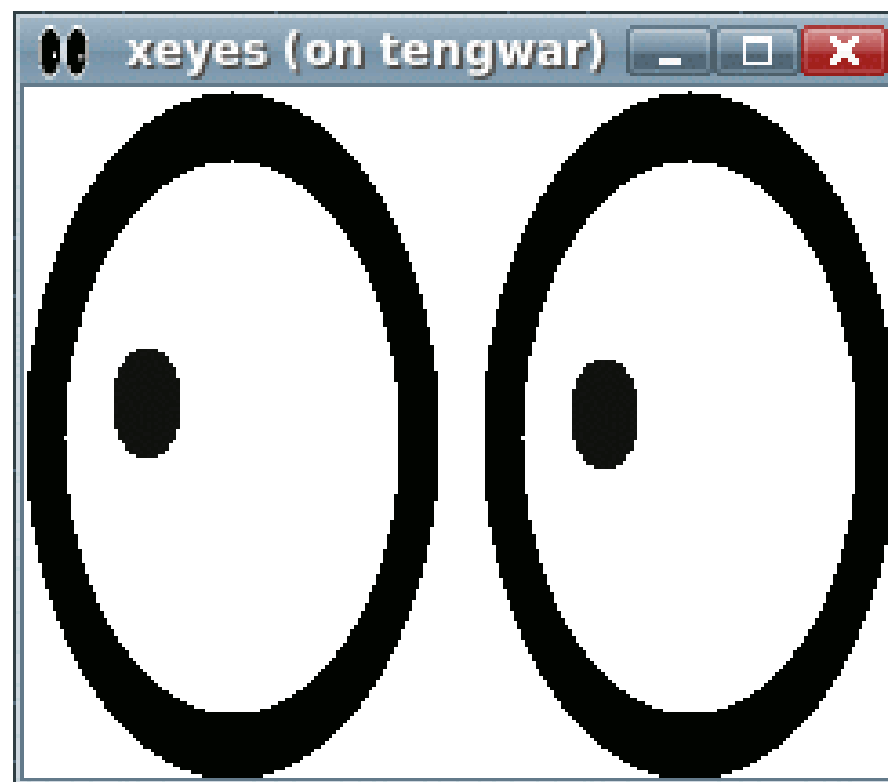
josh@tengwar: /home/josh

```
josh@foofighter:~$ ssh -X tengwar
Linux tengwar 2.2.20 #1 Sat Apr 20 11:45:28 EST 2002 i686 GNU/Linux
No mail.
```

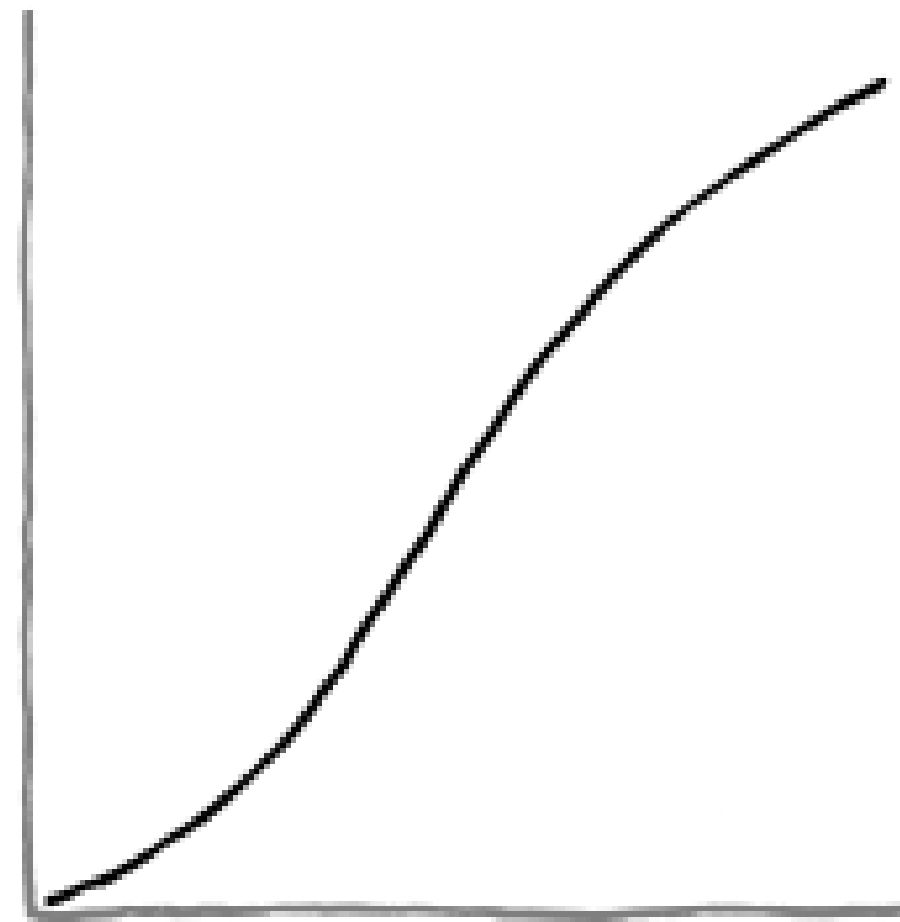
```
Last login: Sun Mar 12 21:10:59 2006 from foofighter
```

```
josh@tengwar:~$ xeyes
```

```
█
```



GENERAL
SATISFACTION
WITH HOW MY
LIFE IS GOING



TIME SINCE I LAST
HAD TO OPEN XORG.CONF

Kernel

gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)

Kernel

gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)

X server

Kernel

gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)

X server

Compositor

Kernel



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The Hitchhiker's Guide

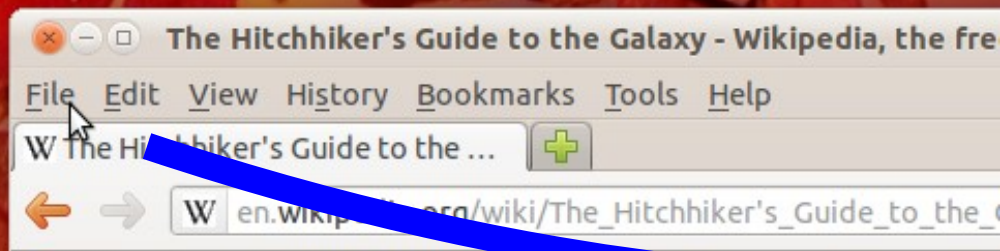
From Wikipedia, the free encyclopedia

This article is about the franchise. Several other articles discuss the [High Harmonic Generation](#).

The Hitchhiker's Guide to the Galaxy is a science fiction franchise created by [Douglas Adams](#). It was first broadcast on BBC Radio 4 in 1978, it was later adapted to other media, becoming a cultural phenomenon. Adaptations have included [stage plays](#), a [TV series](#), a [comic book](#) by DC Comics between 1993 and 1996. There was also a "official version" of *The Hitchhiker's Guide to the Galaxy* and filmed in the UK, was released in April 2005. Many of these adaptations, including the novel, were done by Adams himself, and some of the other adaptations. The title is the name of a [fictional](#), eccentric, [eccentric](#), [eccentric](#) character. *The Hitchhiker's Guide to the Galaxy*^[3] is often referred to as a chapter title in *Don't Panic* and later by the only character, "Hitchhiker's", or simply "[The] Guide". This franchise is widely distributed, having been translated into

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The Hitchhiker's Guide

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The title is the name of a fictional, eccentric, and humorous character. *The Hitchhiker's Guide to the Galaxy*^[3] is often referred to as a chapter title in *Don't Panic* and later by the online community as "**Hitchhiker's**", or simply "**[The] Guide**". This series is widely distributed, having been translated into many languages.

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The Hitchhiker's Guide to the Galaxy - Wikipedia, the free encyclopedia

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- 4.1 The Hitchhiker's Guide to the Galaxy

gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)

X server

Compositor

Evento

Kernel



gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)

Compositor

X server

Selezione client

Kernel



gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)



X server

Compositor



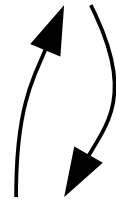
Kernel

Richiesta rendering

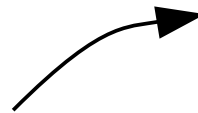
gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)



X server



Compositor



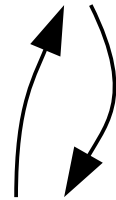
Kernel

Damage event

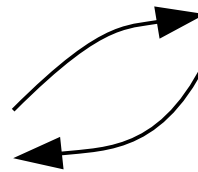
gedit
(X client 2)

LibreOffice
(X client 3)

Firefox
(X client 1)



X server



Compositor



Kernel

Rendering

gedit
(X client 2)

LibreOffice
(X client 3)

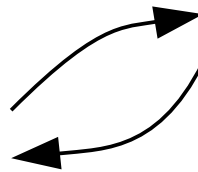
Firefox
(X client 1)

X server

Compositor

Kernel

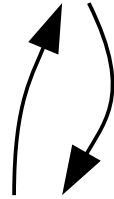
Pageflip



gedit

LibreOffice
(X client)

Firefox



Wayland



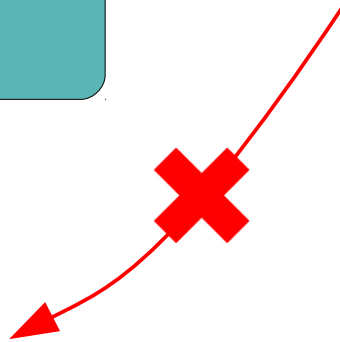
Kernel

Et voilà! :)

gedit

LibreOffice
(X client)

Firefox



Wayland



Kernel

:/

gedit

LibreOffice
(X client)

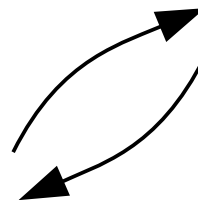
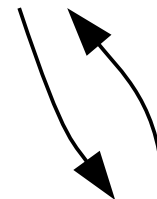
Firefox

X server

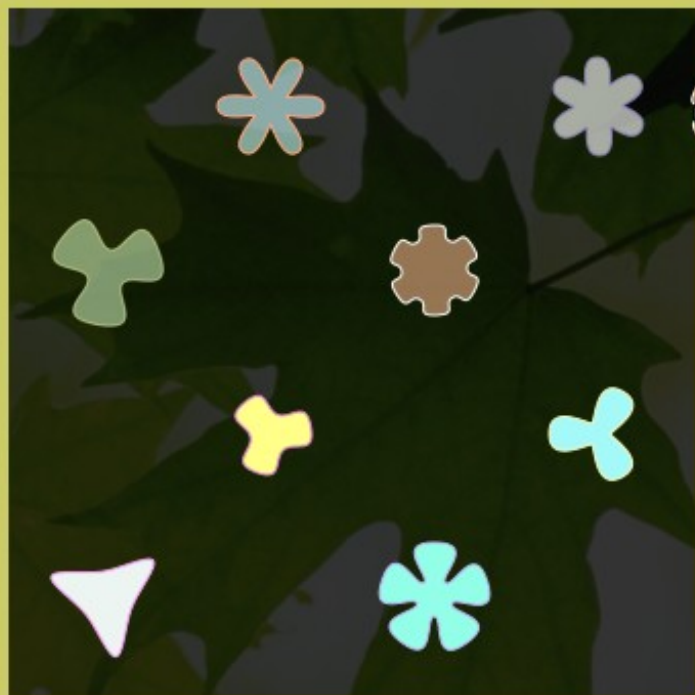
Wayland

Kernel

Retrocompatibilità



Wayland Drag and Drop Demo



Drag & Drop

Wayland Compositor

```
~ickle@78.156.66.37 (freenode)
06:40 <krh> overlay? nyuv overlays? I thought danvet fixed that
06:40 <ickle> he did, just a couple of residual issues it seems
06:42 <krh> ah he did, just a couple of residual issues it seems
06:42 <ickle> besides which, TexturedVideo had lower cpu overhead than
06:42 <ickle> OverlayVideoh, TexturedVideo had lower cpu overhead than
06:42 <ickle> clflush ftw
06:42 <krh> really? sh ftw
06:42 <krh> that's surprising
06:42 <ickle> hit was surprising
06:43 <ickle> now, I just have a PGTBL_ERR on start
06:43 <krh> but considering the entire system (gpu+cpu), overlay probably
06:43 <krh> still draws less power entire system (gpu+cpu), overlay probably
06:43 <krh> or not draws less power
06:43 * <krh> doesn't now
06:44 <krh> supposedly overlay has a better scaler too
06:44 <ickle> possibly true, I still haven't started measuring power
06:44 <ickle> consumption, I still haven't started measuring power
06:44 <krh> multitap filters instead of just bilinear sampling
06:44 <ickle> and vsync filters instead of just bilinear sampling
11:30 <krh> ok, this is more like it
[11:30] [krh(+i)] [17:freenode/ickle] [Act: 2,4,6,7,8]
[ickle] ok, this is more like it
```

Emulatore di terminale



Clutter



Clutter

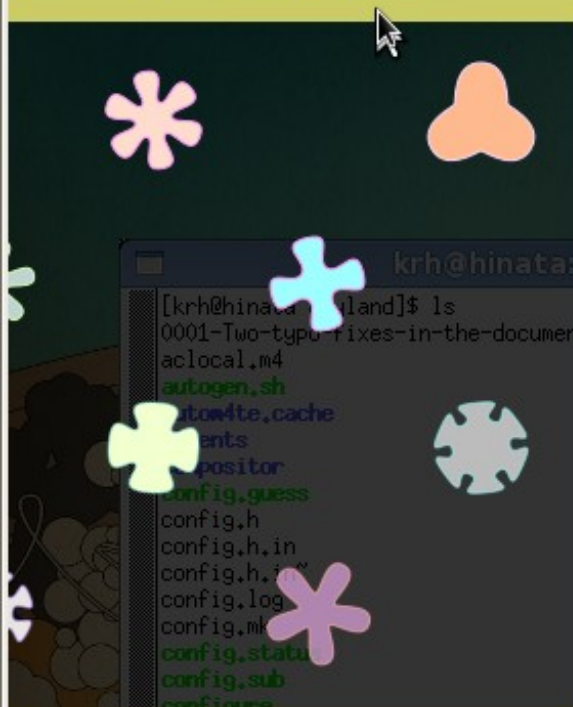


Clutter

Clutter

Wayland Compositor

Wayland Drag and Drop Demo



Wayland Terminal

```
[krh@hinata wayland]$ X.org rootless under wayland ...
```

krh@hinata: /src/wayland

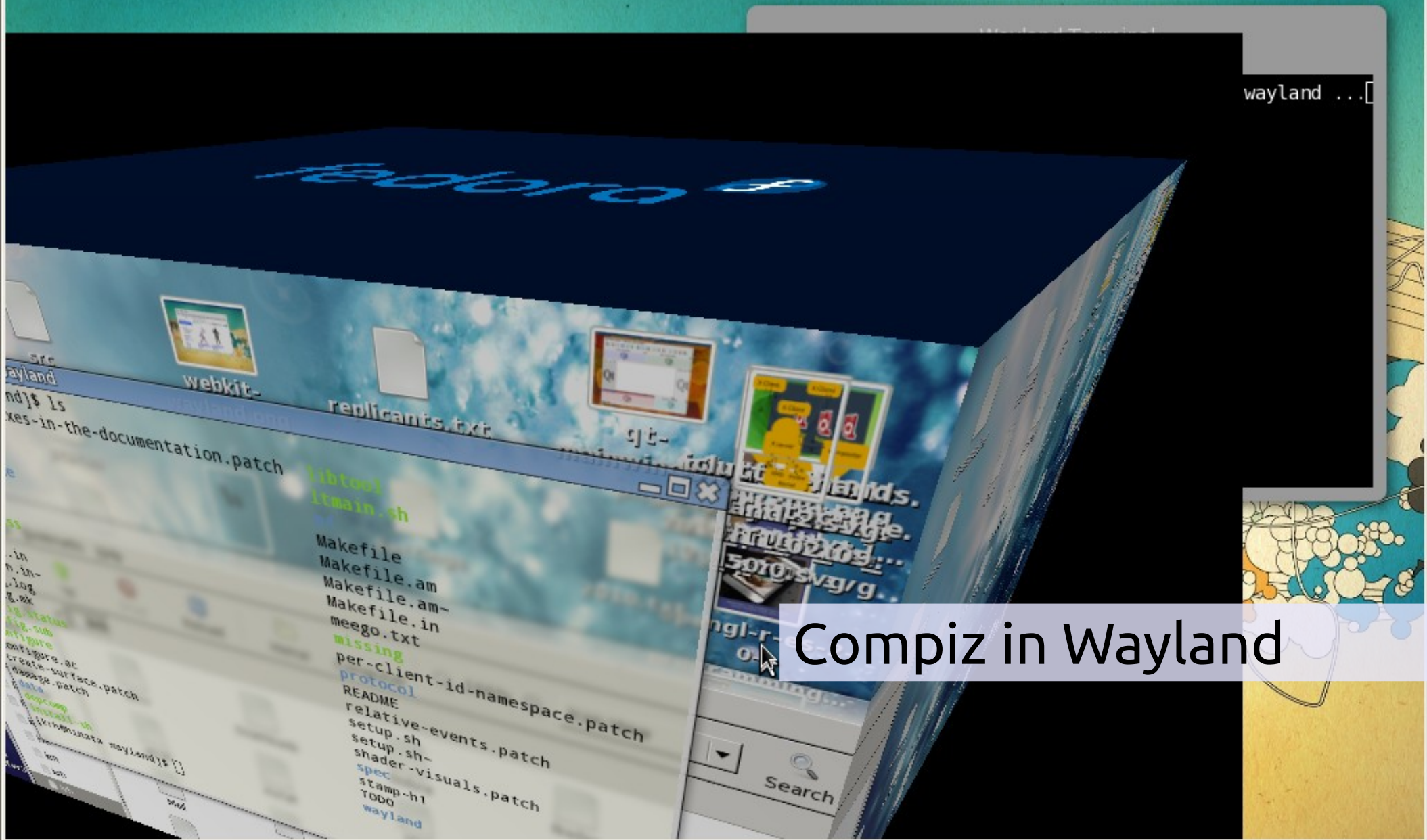
```
[krh@hinata wayland]$ ls
0001-Two-type-fixes-in-the-documentation.patch  libtool
aclocal.m4                                       ltmain.sh
autogen.sh                                       m4
atom4te.cache                                   Makefile
compositor                                      Makefile.am
config.guess                                    Makefile.am~
config.h                                         Makefile.in
config.h.in                                     meego.txt
config.log                                       missing
config.mk                                        per-client-id-namespace.patch
config.status                                   protocol
config.sub                                      README
configure.ac                                    relative-events.patch
create-surface.patch                           setup.sh
damage.patch                                   setup.sh~
data                                             shader-visuals.patch
depcomp                                         spec
install-sh                                     stamp-h1
[krh@hinata wayland]$ good old xterm
```

X.org in Wayland

Wayland Compositor

wayland ...

Compiz in Wayland



Andrea Colangelo
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andreacolangelo.com