

LIS-5364

A brief but comprehensive history
of everything...

How we got here...aka Why is the Internet so weird?

I mean.... like the technological part....

The Prof's million foot view.

(1) **More open** generally wins in the long run.

(2) Piracy?* Meh.

**No but seriously don't do anything illegal, immoral, or violative of FSU rules*

The First PCs

- BASIC
- Freeware and Purchased Software
- Connect to TVs, frequently
- Some basic independent “Office” apps
- Very very open. Apple Clubs and such.

Pioneers of freedom?

Apple II/Macintosh series

Apple v. IBM (COMPATIBLE)

MS Windows v. OS/2

In other news...

- 1985 - Windows 1.0
- 1990 - Windows 3.0
- 1995 - (hey guess)
- 1984 - 1st Macintosh
- 1986 - Apple IIs
- 1998 - iMac

The Dominance of MS

Probably not Windows the OS, but....

The Dominance of MS

Probably not Windows the OS, but....



How (not) to kill a giant

Direct Competition

- (they just buy you out, or EEE)

Government Intervention

The original “Surface” (2003-2007)



PHOTO: DAVID PAUL MORRIS/GETTY IMAGES

The Microsoft Tablet (2002)



Embrace, Extend, Extinguish

(I didn't make this up, they used it INTERNALLY)

Either BUY OUT your competition, or E,E,E.

(e.g.)

.Net

ActiveX

DirectX vs. OpenGL

Attempted with odt.

This prevents you from having to competitively innovate.
(and is kind of understandable.)

Not even the (U.S.) gov't.

United States v. Microsoft, 253 F.3d 34 (2001)
(mostly over IE.)



Europe did, but without much consequence...except that you can legally now say
“Convicted Monopolist, Microsoft”

Wow, so how do you kill a giant?
(slowly)

The Internet
AND
Free (and open source) Software

(also, shouts out to Moore's Law and non-computer devices)

- “Sometimes we do get taken by surprise. For example, when the Internet came along, we had it as a fifth or sixth priority.”

– Bill Gates

Microsoft:

Home Computer as **Household Appliance**
(running proprietary/closed source software)

...but what about those other big computers
and networks and stuff...old school?

Unix



Unix

- Multi-User from the beginning
- “Buying” software? What?
- The Unix Way
 - Write programs that do 1 thing well
 - Write programs to work together
 - Write programs to handle text, the universal interface

Unix Descendants

(aka, why am I talking about all this?)

- Linux (“real” Linux or GNU/Linux e.g. Ubuntu, Mint, etc.)
- Just the Linux Kernel
Android
- BSD (very similar, different License)
- Mac Os X, all other Apple operating systems
- Backend of most websites and servers, including iSpace
or, more simply...

Unix Descendants
(aka, why am I talking about all this?)

LITERALLY EVERYTHING
THAT ISN'T WINDOWS

GNU (Gnu's Not Unix)

Richard Stallman, 1983ish

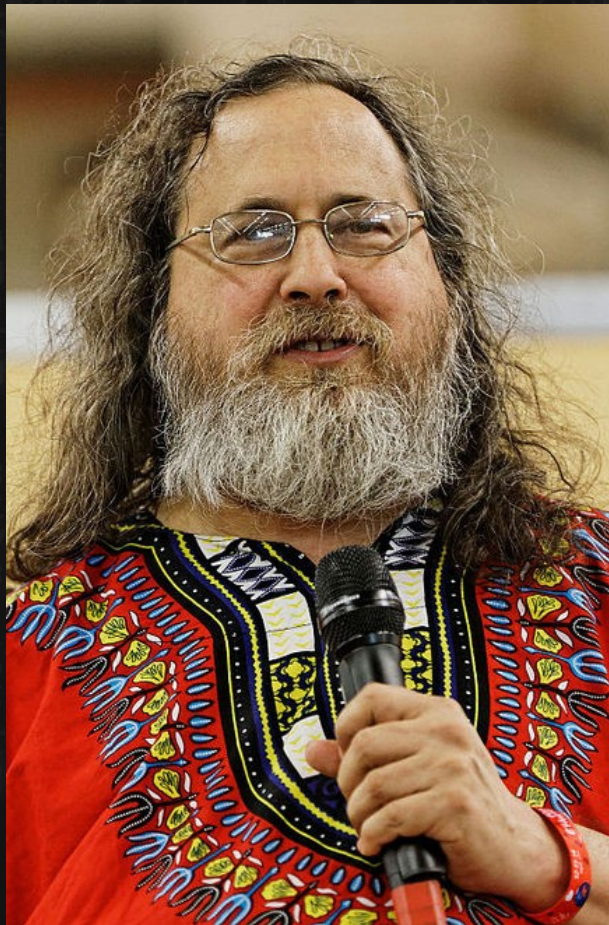
“complete Unix-compatible software system”

The GNU Manifesto → Golden Rule → GPL

But..no kernel...

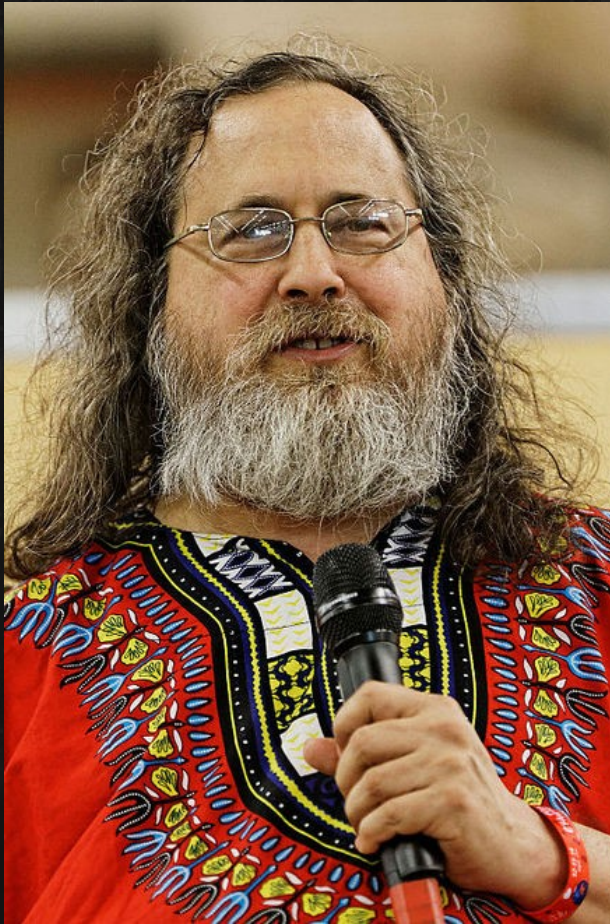
Richard Stallman:

Weird, picky guy who says crazy things



Richard Stallman:

Weird, picky guy who says crazy things



THAT ALWAYS END UP BEING TRUE IN THE LONG RUN

Richard Stallman:

Weird, picky guy who says crazy things, e.g

DON'T call it Linux. Call it GNU/Linux!!!

and

They're going to go into your home
and burn your books!!

Linux (Linux Is Not Unix)

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: What would you like to see most in minix?
Summary: small poll for my new operating system
Message-ID: <1991Aug25.205708.9541@klaava.Helsinki.FI>
Date: 25 Aug 91 20:57:08 GMT
Organization: University of Helsinki

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi)

PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-).



“Open Source”

More complicated than one might think..

Wow, so how do you kill a giant? (slowly)

- “Non-computer” devices
 - (thank you Moore's Law)
- The Internet

BOTH POWERED BY:

Free (and not-so-free-but-free-ish) **Software**

A bit more on the whole Free/Open Source thing:
(because English is silly)

“Free as in speech,
not free as in beer.”

No restrictions (libre)

No cost (gratis)

Free Software (came first)

The principle?

Just like the “Golden Rule,” really:

“We gave this to you for free, without restriction.
Please do the same if you choose to give it to others”

Alas, sometimes

“We gave this to you for free, without restriction.
Please do the same if you choose to give it to others”

In legalese?

The General Public License, or GPL.

Why not “public domain?”

Public Domain is the “without copyright” default.

No restrictions at all? Seems right?

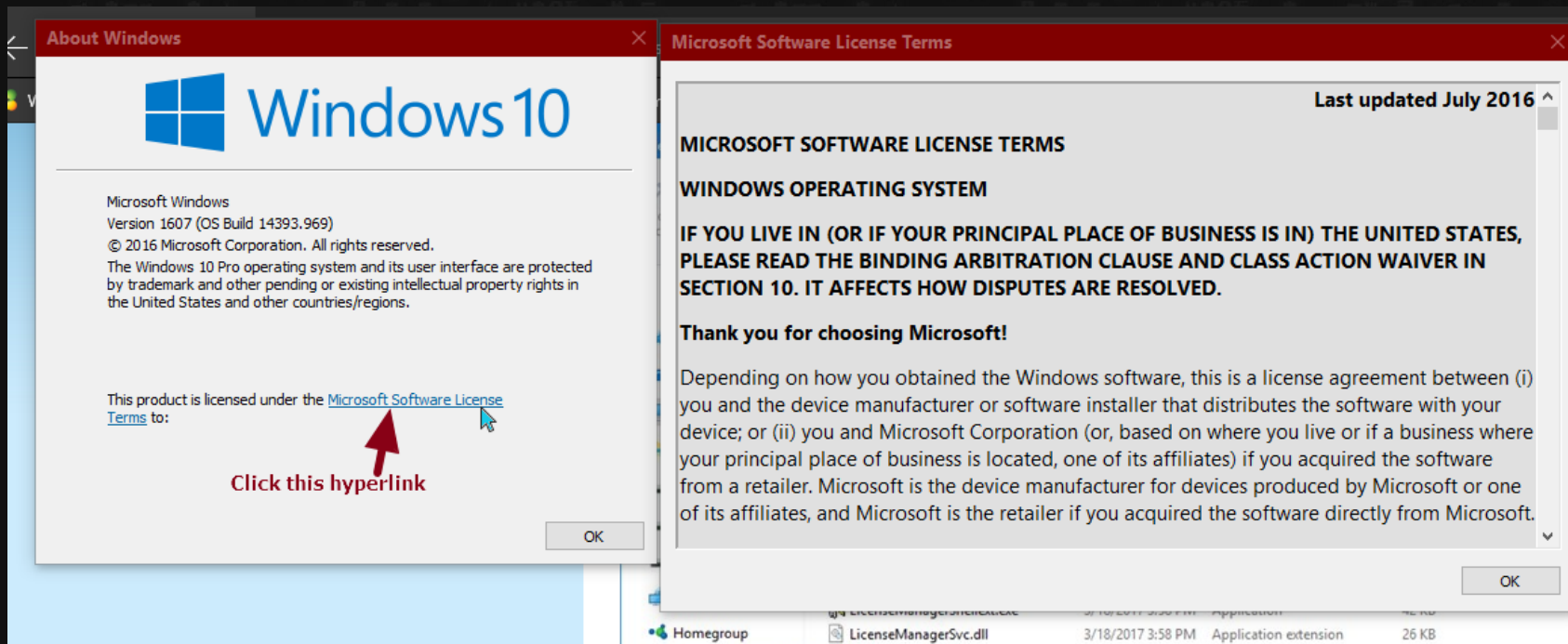
But think about, e.g. Shakespeare.....

How this works:

Who here owns Microsoft
Software?

EULA

aka, all the stuff you can't do...



GPL

Similar.

You don't own it. But the terms are
MUCH nicer.

GPL

You may copy

You may modify

You may keep forever and never give away, even if you change it

You may “sell,” even.

BUT

If you DO give to anyone? You **MUST** allow whoever you give it to all of the above (like everyone else did for you)

Real hard to sell the idea of making money with something that says “free” (Darn you, English)

So, “Open-Source” is adopted by some, and the definitions are slightly modified.

All free software is open source, but not all open source software is free (as in speech or otherwise)

And so, you get a mix....

This slide is better.

Free Software / FOSS / FLOSS

Here's some code, do what you want, but
whatever you re-release? Share freely.

Open Source

Here's some code, do literally whatever you
want.(even if you want to lock it back down)

Open Source (“permissive”/not “free”)

You can do most anything with it, *including locking it back down*.

BSD, Apache Web Server, the MIT License



Free Software

- You can do anything with it yourself, EXCEPT you may NOT re-release it “closed.”

GNU/Linux, Firefox

OLPC (and their cost, whoa) ->



PDAs (but this and a phone?)



MP3 Players?



Ipod, et al.



Nokia N900 (straight up Linux) (EEE?)



The iPhone

- (Darwin, POSIX Compliant, BSD derivative, now basically closed)



Android. (Linux Kernel, Weird/Java OS)



Effectively closed source (when's kit-kat or marshmallow or whatever coming out?)
(stallman was right, this is Linux, but it ain't "Linux.")

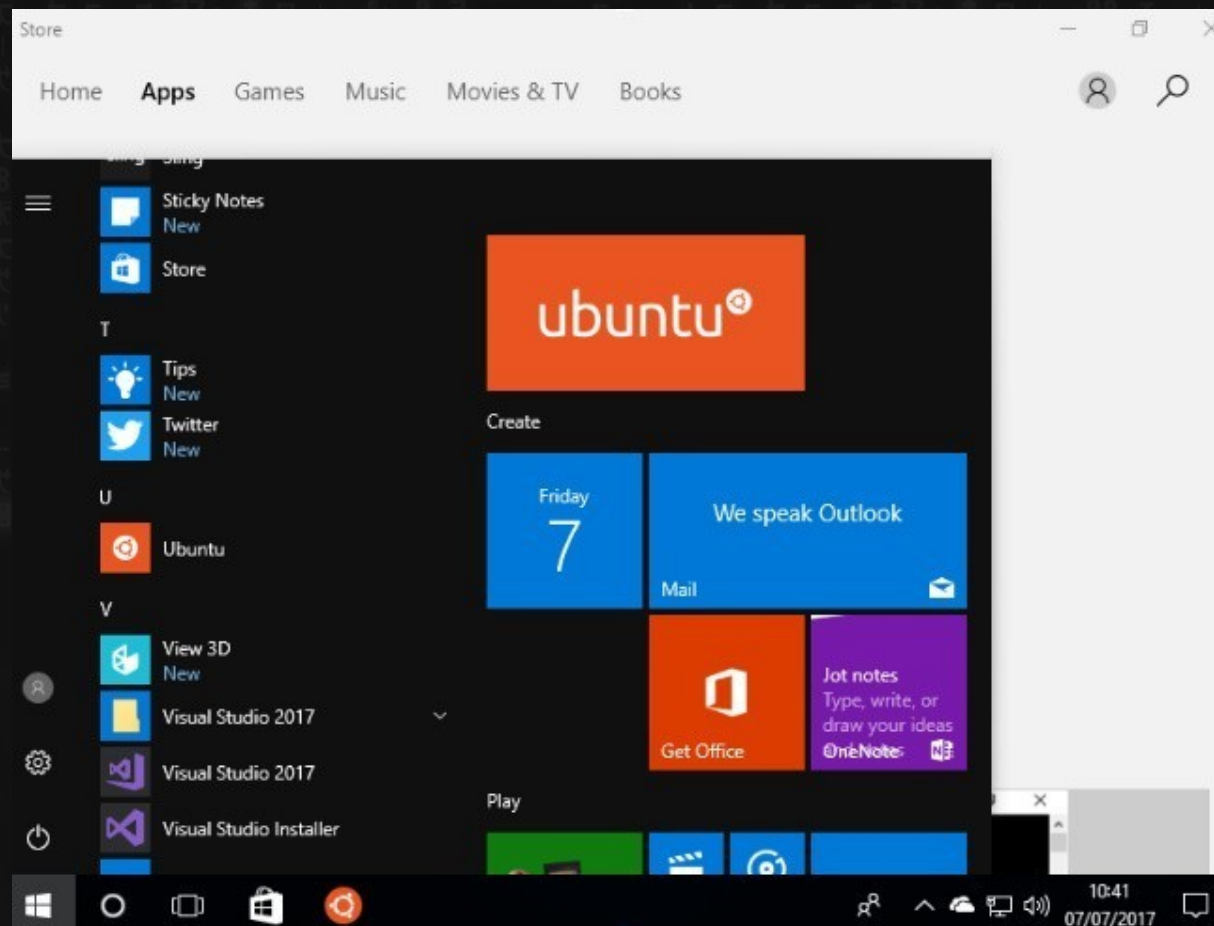
Unix Descendants
(aka, why am I talking about all this?)

**LITERALLY EVERYTHING
THAT ISN'T WINDOWS**

(including most web technologies, look and act like
Unix/Linux in many, if not most ways)

Unix Descendants

(aka, why am I talking about all this?)



Unix Descendants

(aka, why am I talking about all this?)

So: understanding Unix/Linux stuff will help you immensely with understanding the shape of the web.

ESPECIALLY file management, one of the most important things.

This is the main reason why I'm making you do a Linux install...because....

The OS wars are over, and “Linux” and “Open-Source” won.

Microsoft  Linux

The OS wars are over, and “Linux” and “Open-Source” won.

Microsoft  Linux

...but

Did we get “Freedom” or something else?



android



All “Open-Source” powered...
...but also not particularly free.

Did we get “Freedom” or something else?



(lots of people don't say “Free Software” or “Linux” and even hate the GPL. Mostly **Developers**)

Unix Descendants

(aka, why am I talking about all this?)

Speaking of file management...a REALLY good question is:

Why do LOTS of devices these days ship
WITHOUT easy access to a **file manager**
– if they have one at all?

The other thing?



amazon.com®



**IS WATCHING
WHAT YOU
READ**

What is an OS, really?

Lots of different kinds of software at different levels.

(Apple/Windows just squishes them all together)

A rough car analogy

Linux is a Kernel



A rough car analogy

GNU is the other stuff. I don't know what all of it together is called because I'm not a car guy. But, you know, this:



A rough car analogy

Ubuntu Linux? = Model/Make

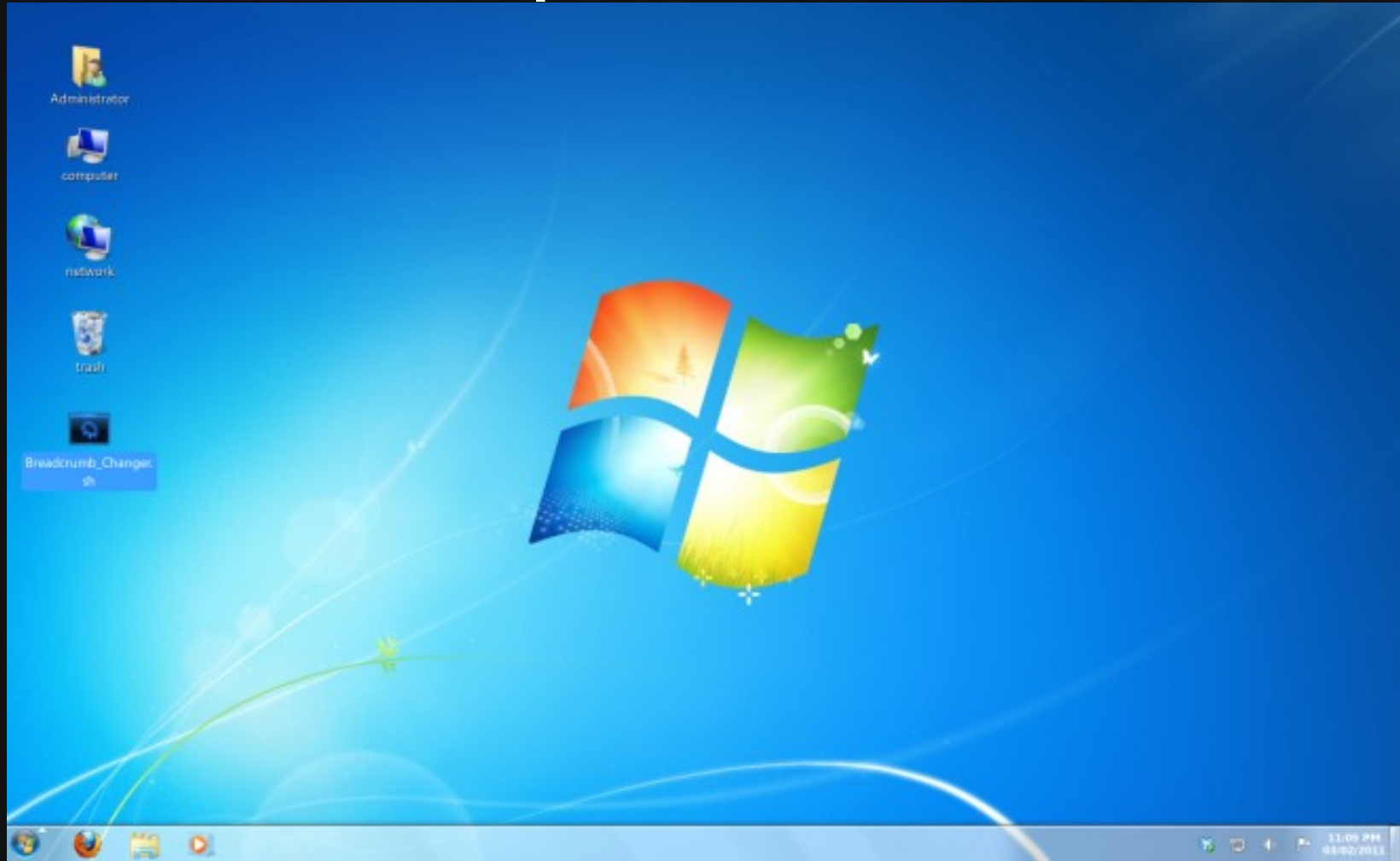


A rough car analogy

LXDE / Unity? / KDE / etc.



For comparison – Win 7?



OS X?



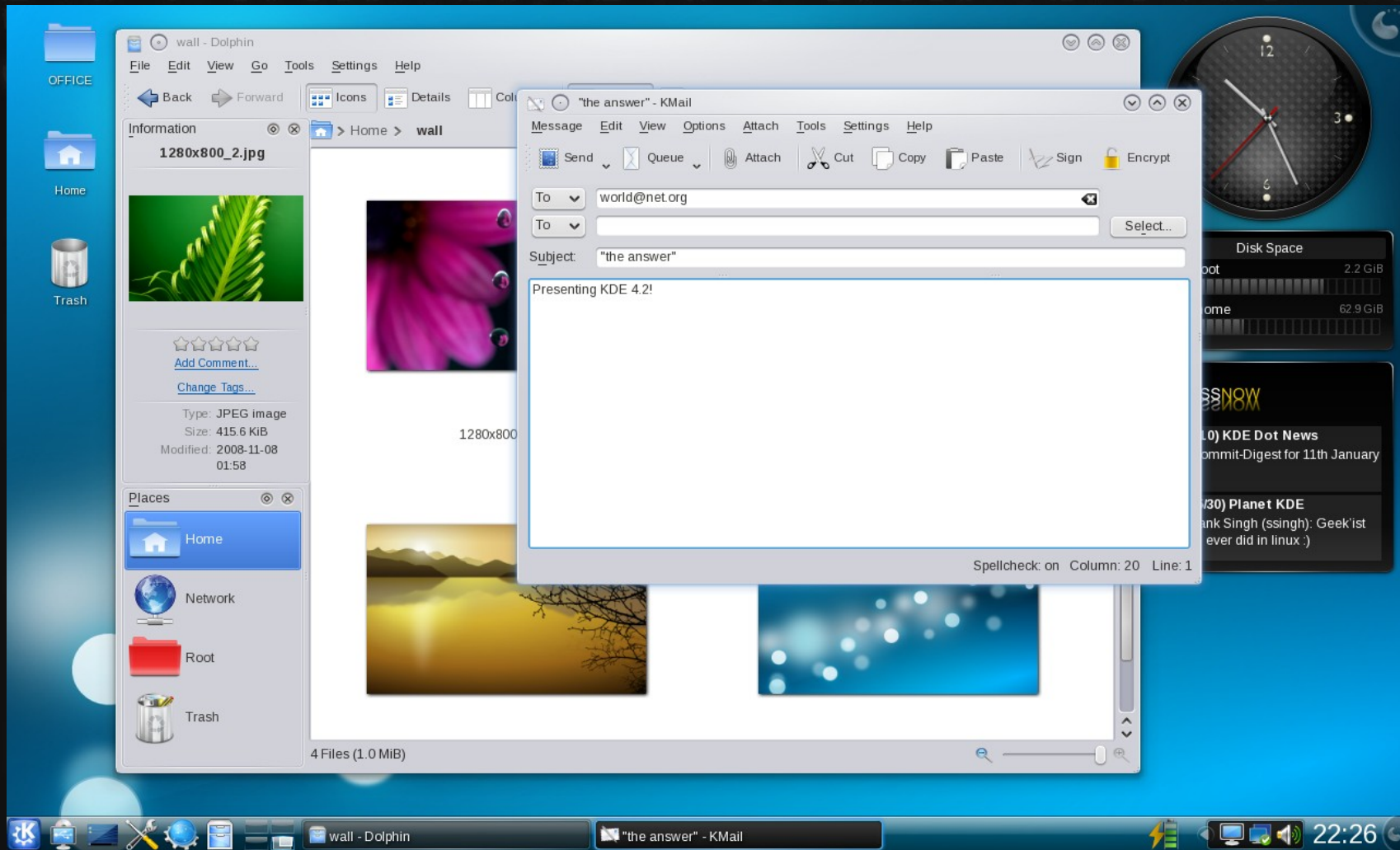
Choices choices choices (for better or worse)

Linux has many different

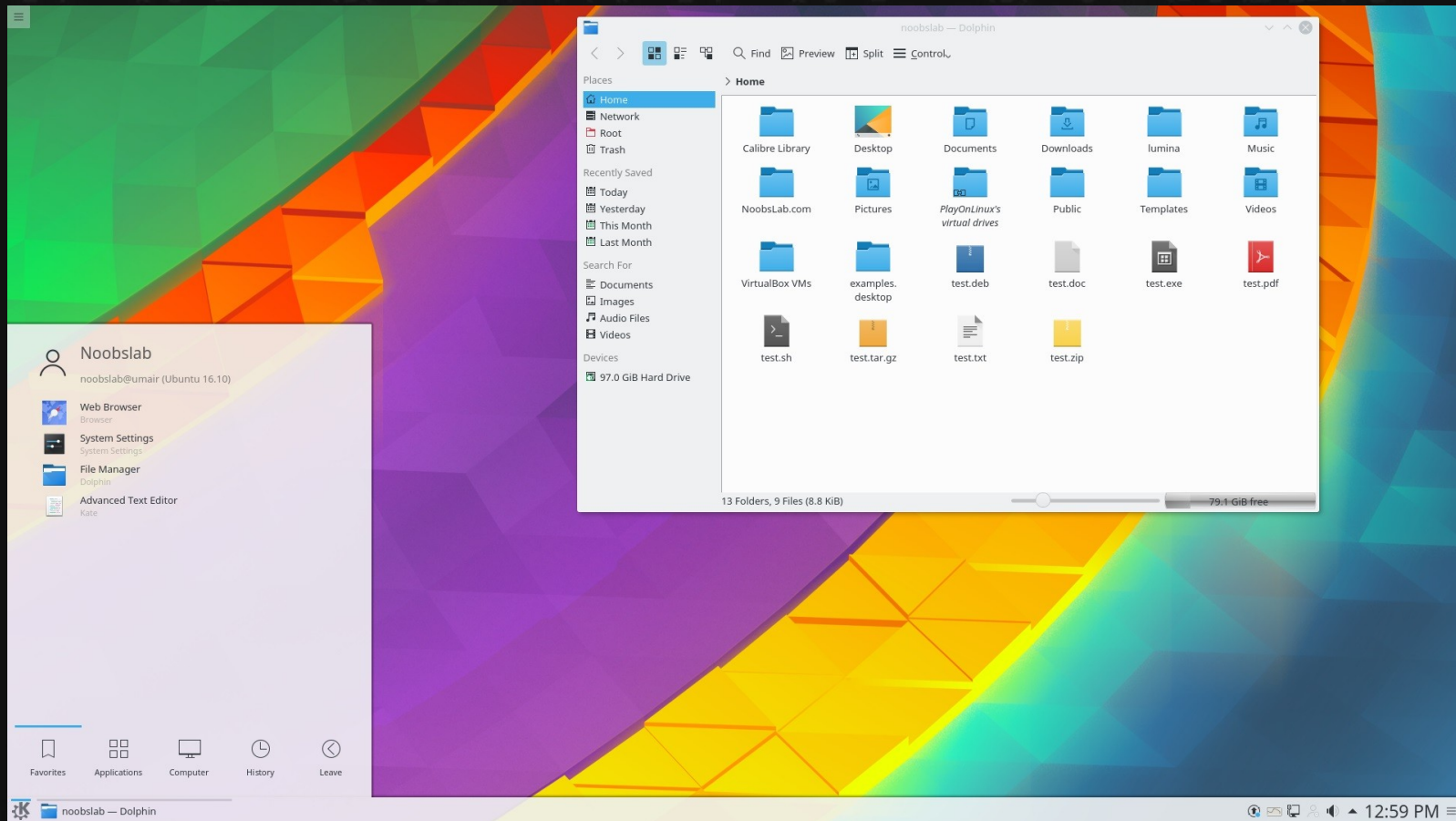
“Desktop Environments”
(or Window Managers)

(which, to most, probably look like completely different operating systems)

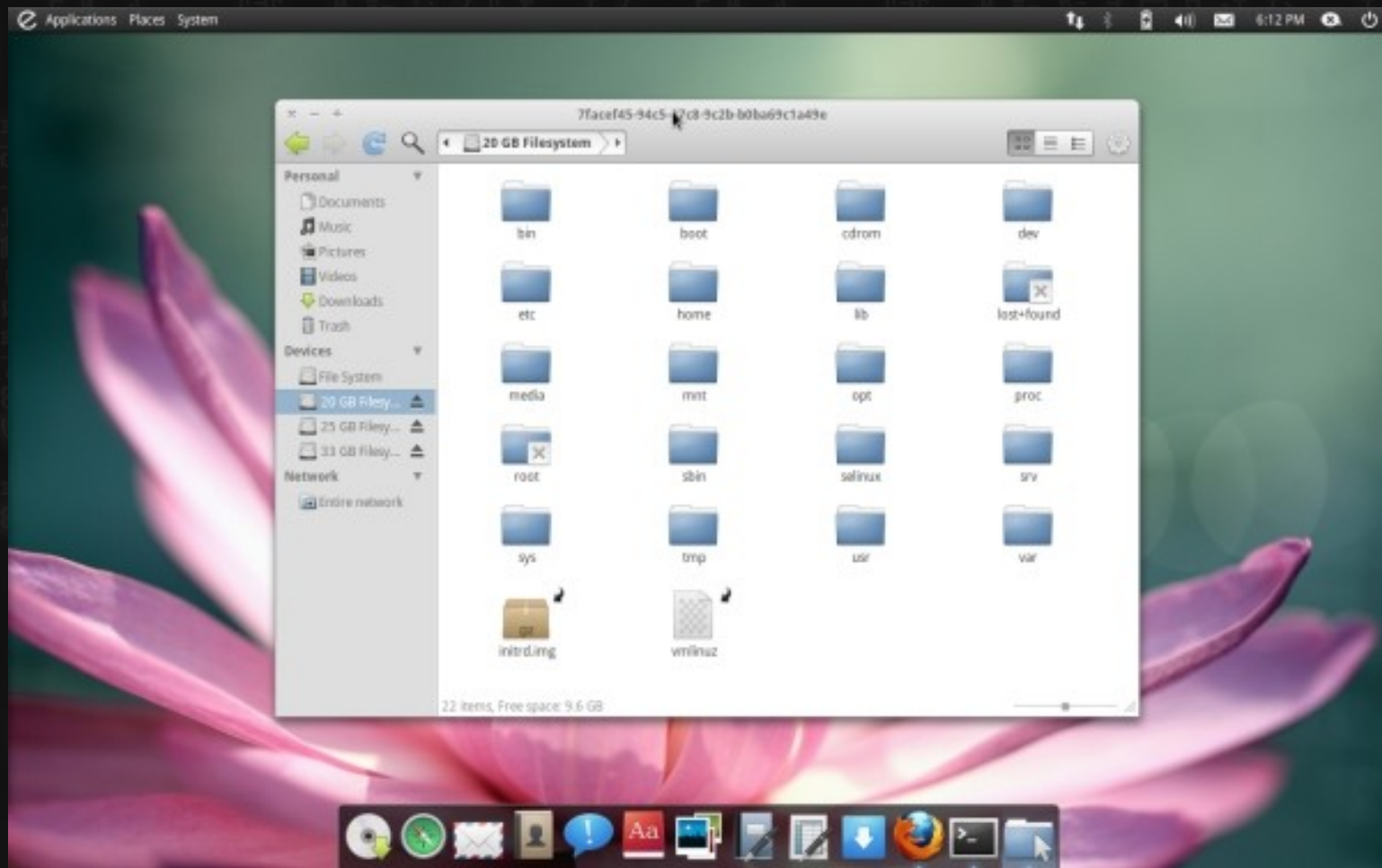
KDE (old)



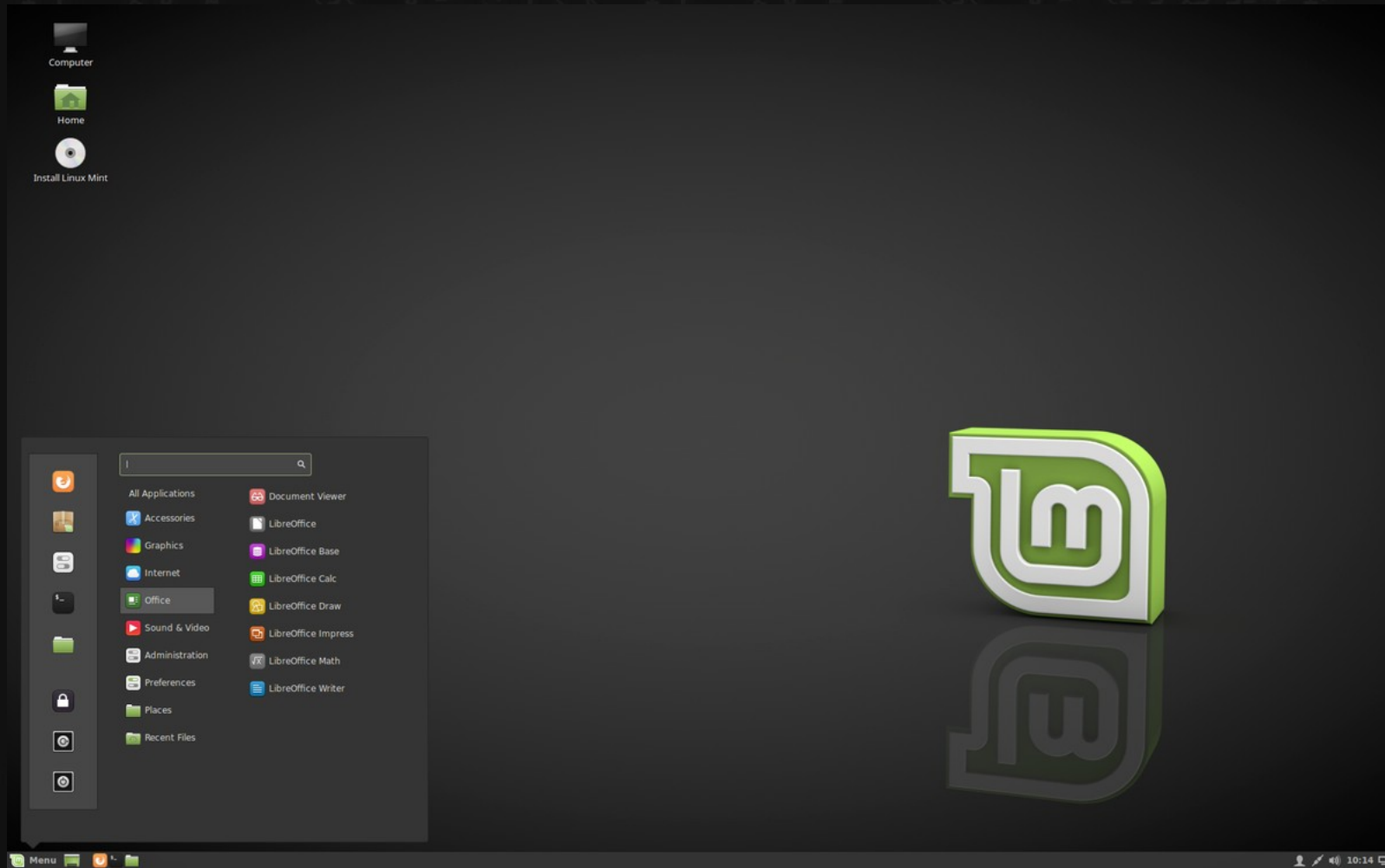
KDE



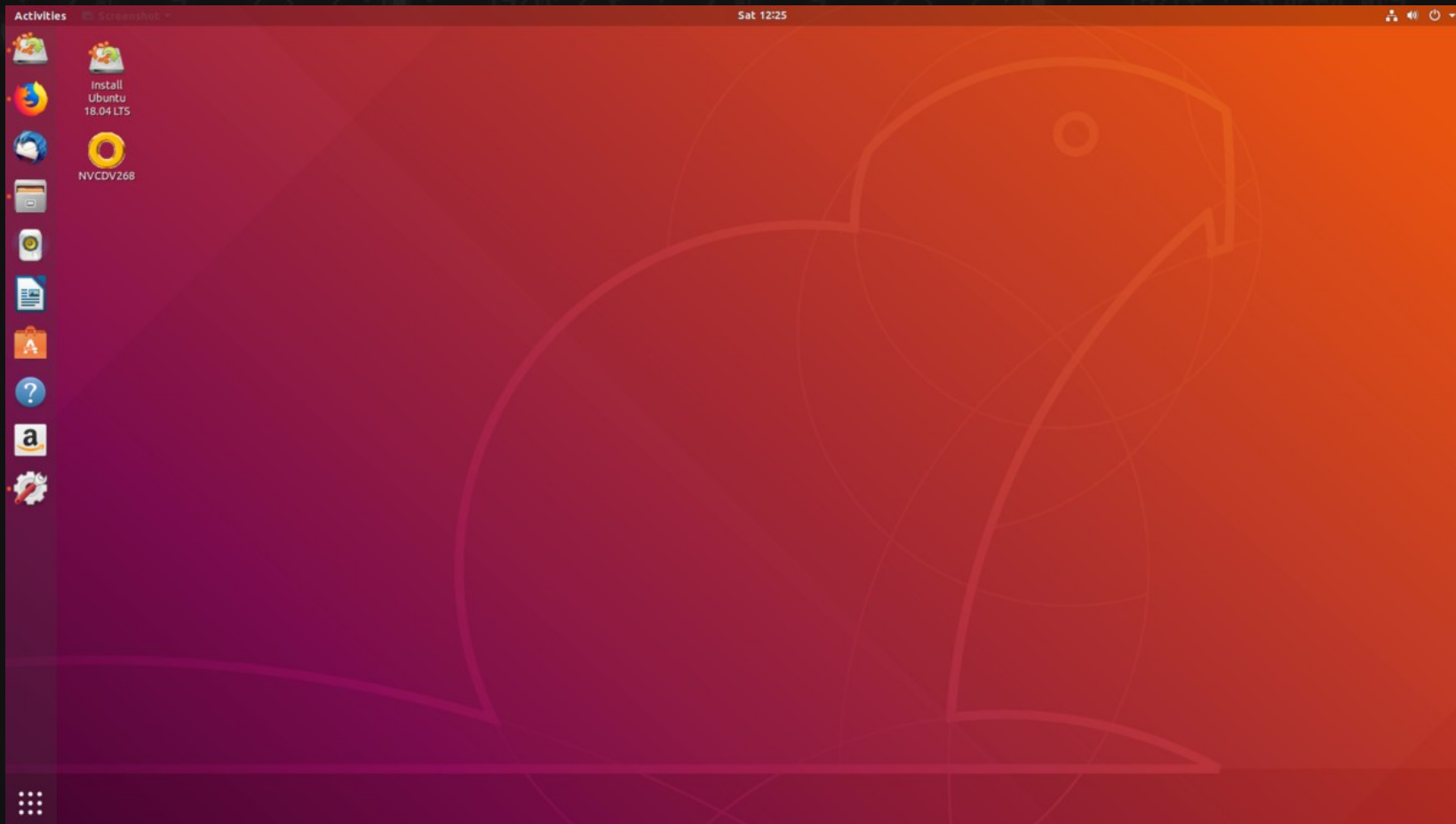
Elementary



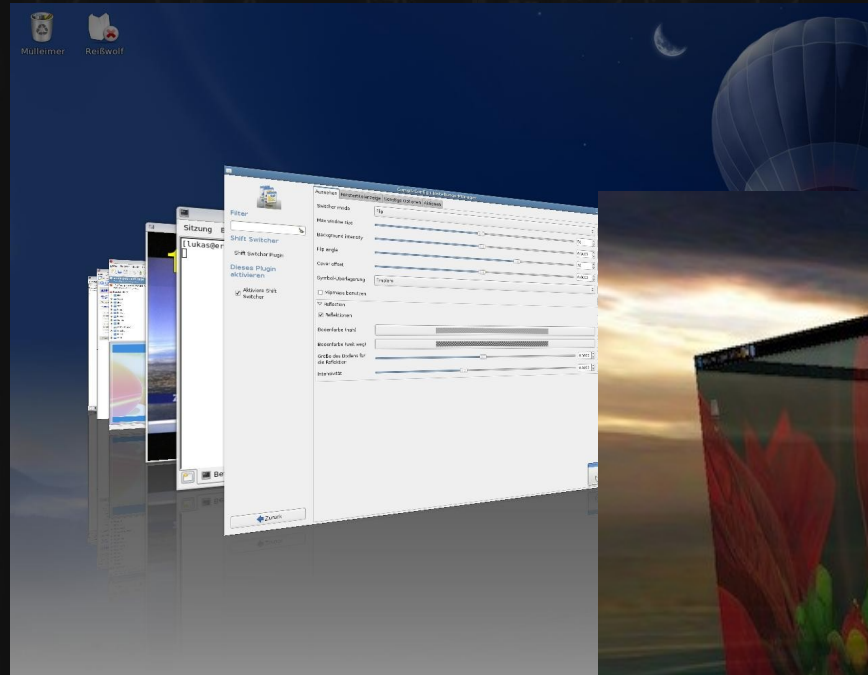
Linux Mint



Ubuntu (GNOME)



Fancy compiz fanciness



OpenElec (XBMC/Kodi)

67030 - Colwich, KS
90°F Scattered Clouds

Downloading TV show information
Scanning for new content

1:16 PM
Mon, Jun 4, 2012

The Legend of Korra - s01e08
When Extremes Meet

Game of Thrones - s02e08
The Prince of Winterfell

Family Guy - s10e23
Internal Affairs

Family Guy - s10e22
Viewer Mail #2

Recently added episodes

Search

DEOS MOVIES TV SHOWS MUSIC PROGRAMS

Recently Added Title Genres Years Actors

ESPN Free Cable Hulu Revision3

★ ⏻ e 2012: Update - Google Summer of Code 2012 - XBMC 11 Eden: RC2

Awesome

about - awesome window manager - Vimperator

index.mdwn (~/.Work/src/awesome/www) - VIM

Mutt with 516 messages

1215630123 time_

about - awesome window ma...

awesome

home concepts news download community wiki

A window manager is probably one of the most used software in your day-to-day tasks, with your Web browser, mail reader and text editor. Power users and programmers have a big range of choice between several tools for these day-to-day tasks. Some are heavily extensible and configurable.

awesome tries to complete these tools with what we miss: an extensible, highly configurable window manager.

To achieve this goal, **awesome** has been designed as a framework window manager. It's extremely fast, small, dynamic and heavily extensible using the [Lua](#) programming language.

We provide an easily usable and very-well documented API to configure and define the behaviour of your window manager.

Did you ever imagine press one key and see all your windows arranged automatically?

Did you ever imagine type a window's name and get it back in front of you?

Did you ever imagine *ssh* to a computer and see the load average of this one to be graphed directly in the titlebar of your terminal emulator?

awesome allow you to do that, and more, as long as you can express it in a programming language.

Features and non-features

- × Very stable;
- × Complete and very well documented source code and API;
- × No mouse needed: everything can be performed with keyboard;
- × Real multithread support (XRandR, Xinerama or Zaphod mode);
- × Implement many [Freedesktop](#) standards: [EWMH](#), [XDG Base Directory](#), [XEmbed](#), [System Tray](#);
- × Some real transparency support (using Composite extension and xcompmgr);
- × Doesn't distinguish between layers: there is no floating or tiled layer;
- × Whether or not the clients of currently selected tag(s) are in tiled layout, you can rearrange them on the fly. Popup and fixed-size windows are always floating, however;
- × Layout handling: can automatically manage your windows placement according to the chosen policy for each tag;
- × Use tags instead of workspaces: allow to place clients on several tags, and display several tags at the same time;
- × [D-Bus](#) support;
- × And more.

This gonna be LEGEN... wait for it... DARY!

34 Developers

Copyleft 2007-2008, awesome project

Last edited Wed Jul 9 19:44:40 2008

http://awesome.naquadah.org/newsite/ [+]

[2/2] Top 2002:d455:9aae:1 +1

18 We provide an easily usable and very-well documented API to configure and

19 define the behaviour of your window manager.

20

21 Did you ever imagine press one key and see all your windows arranged

22 automatically?

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24 Did you ever imagine type a window's name and get it back in front of you?

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27 to be graphed directly in the titlebar of your terminal emulator?

28

29 **awesome** allow you to do that, and more, as long as you can express it in a

30 programming language.

31

32 • Features and non-features

33 • Very stable, fast, small and simple;

34 • Complete and very well documented source code and API;

35 • No mouse needed: everything can be performed with keyboard;

36 • Real multithread support (XRandR, Xinerama or Zaphod mode);

37 • Implement many [Freedesktop](#) standards:

38 [EWMH](#)(<http://standards.freedesktop.org/ewmh-spec/ewmh-spec-latest.html>),

39 [XDG Base Directory](#)(<http://standards.freedesktop.org/basedir-spec/basedir-spec-latest.html>),

40 [XEmbed](#)(<http://standards.freedesktop.org/xembed-spec/xembed-spec-latest.html>)

41 [System Tray](#)(<http://standards.freedesktop.org/systemtray-spec/systemtray-spec-latest.html>);

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48 the chosen policy for each tag;

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50 display several tags at the same time;

index.mdwn [ikiwiki] 33,37 802

401 5F Jul 01 To awesome@naquadah.org (0.8K) ↳Re: [PATCH] add a tags target- create area

492 r Jul 02 Marco Candrian (1.6K) [PATCH] [widgets/progressbar] add fg.off to s

493 S Jul 02 Marco Candrian (1.4K) ↳Re: [PATCH] [widgets/progressbar] add fg.o

494 rs Jul 02 Marco Candrian (1.8K) ↳

495 5F Jul 02 To awesome@naquadah.org (1.0K) ↳

---Mutt: =list-awesome/ [Msgs:516 19M]---(threads/date)----- (95%)---

From: calmar <mac@calmar.us>

To: awesome@naquadah.org

Subject: Re: [PATCH] [widgets/progressbar] add fg.off to set + fix copy/paste typo

Date: Wed, 2 Jul 2008 02:54:42 +0200

Mail-Followup-To: calmar <mac@calmar.us>, awesome@naquadah.org

User-Agent: Mutt/1.5.17 (2008-04-09)

[-- PGP output follows (current time: Wed Jul 9 21:01:38 2008) --]

pgp: Signature made Wed Jul 2 02:54:42 2008 CEST using DSA key ID 59D90F4D

pgp: Good signature from "Marco Candrian <mac@calmar.us>"

pgp: WARNING: This key is not certified with a trusted signature!

pgp: There is no indication that the signature belongs to the owner.

Primary key fingerprint: 9514 F43C B0CC 584C 958A B8F2 F6B4 B34C 6309 0F4D

[-- End of PGP output --]

[-- The following data is signed --]

On Wed, Jul 02, 2008 at 02:48:35PM +0200, marco candrian wrote:

Hi all,

there is another issue with the progressbar (probably also with

the graph).

area_t is used as something like a vector - for the color-gradient.

Therefore width and height can have negativ values, and therefore

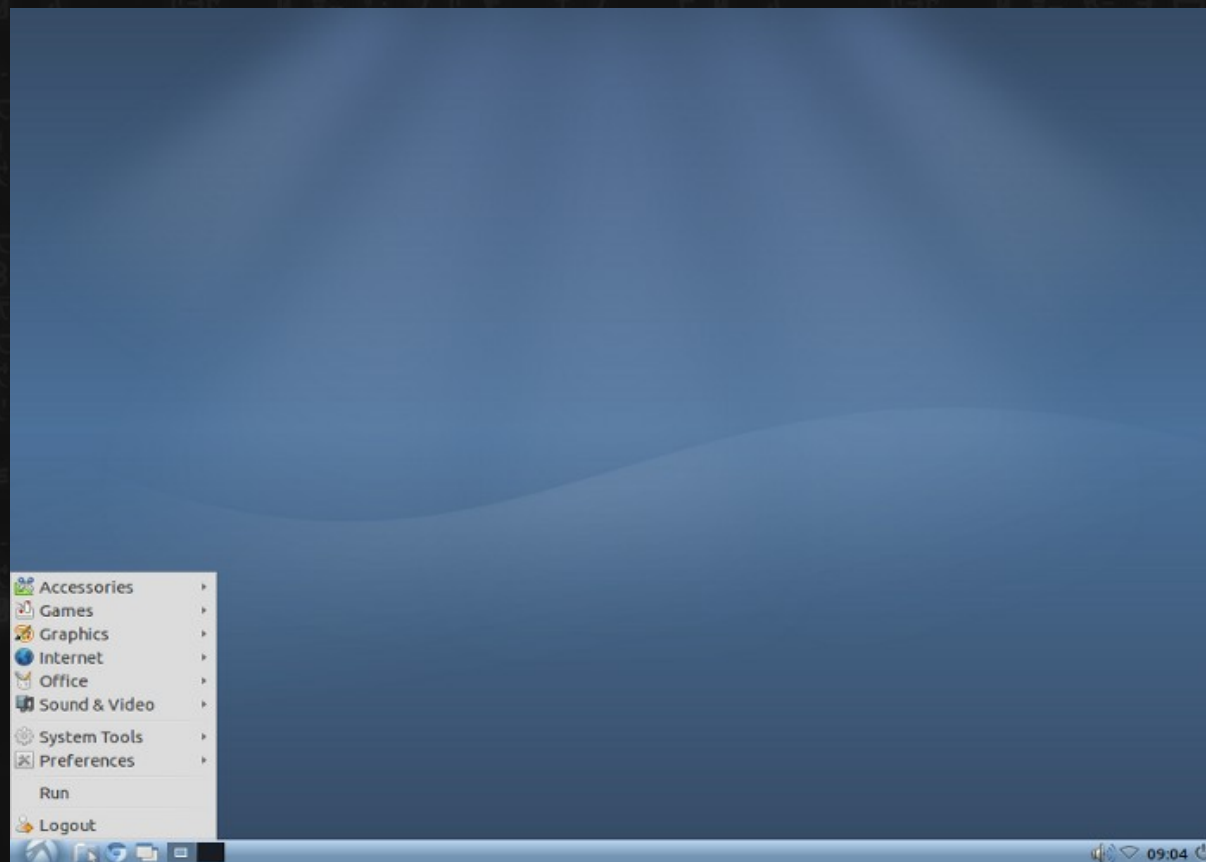
should not but unsigned, what area_t is so.

So, either something different to area_t as a 'vector' has to be

- S - 495/516: Marco Candrian Re: [PATCH] [widgets/progressbar] add -- (69%)

PGP signature successfully verified.

LXDE (Lubuntu)



Let's take a trip...

Here.



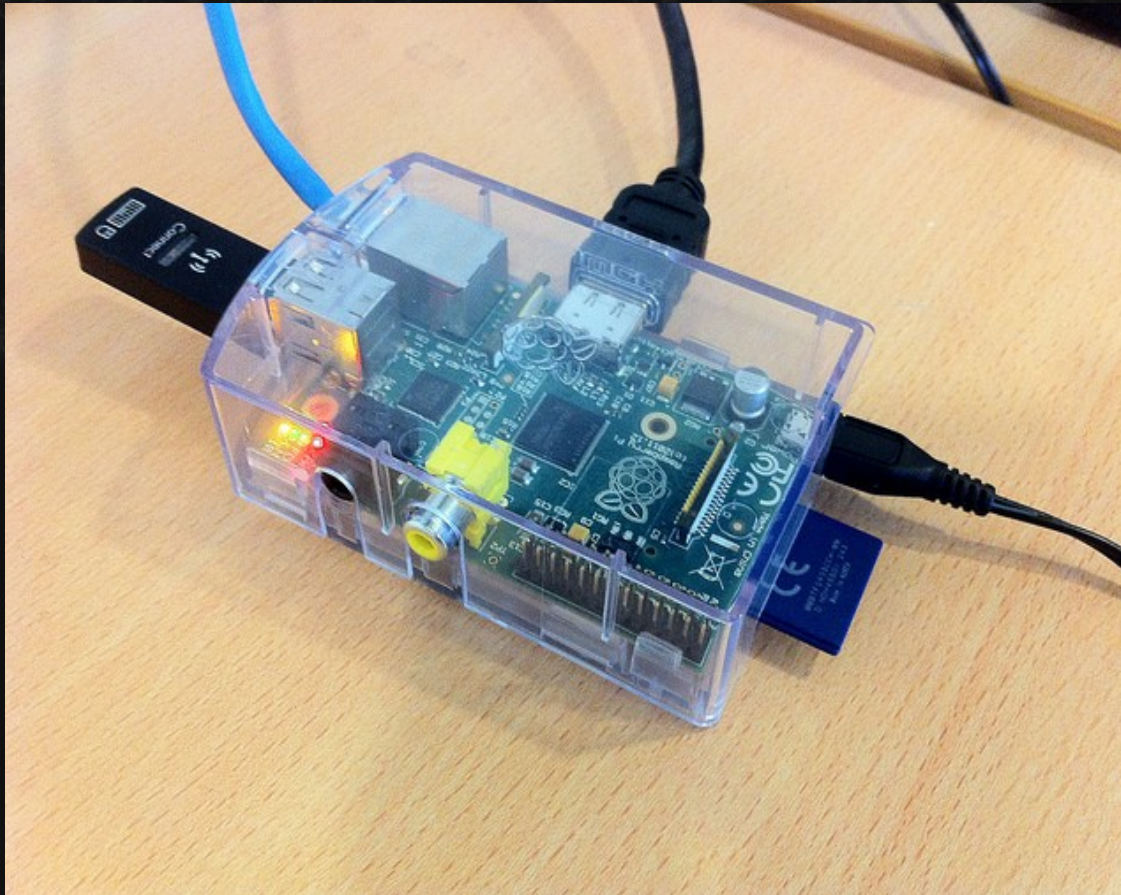
iSpace (maybe?)



jrm4.com (HostDime)



And finally. My House.
(not my actual house. Too messy.)



EDITOR

Simple Text Editor
(notepad, leafpad)

Complex Text Editor:
(jedit, gedit, Sublime Text, notepad++)

IDE

NetBeans, Eclipse

Web Server

“Presents” or serves the pages

LAMP “Stack”:

Linux – operating system

Apache – web server software

MySQL – database software

PHP – common web programming language

Web Browser

Firefox, IE, Chrome, Safari, etc:

NOTE: for basic HTML and CSS (and Javascript)
testing:

The WEB BROWSER can imitate most of the
functions of the WEB SERVER.

(but is NOT identical)