<big>Clutter: a State of the Union</big>

Emmanuele Bassi - GUADEC 2010, The Hague

September
where were we a year ago?

Introduction to the GNOME Shell
Owen Taylor
Gran Canaria Desktop Summit
5 July 2009

Moblin 2.0
Cabildo de Gran Canaria
INNOVACIÓN
www.grancanaria.com
Gran Canaria
Desktop
summit
Emmanuele Bassi

Moblin 2.0
Clutter 1.0
Cabildo de Gran Canaria
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Desktop
summit
Emmanuele Bassi

Moblin 2.0
✔ API stability & clean up
✔ simple animation API
✔ reworking of all the internals
Cabildo de Gran Canaria
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www.grancanaria.com
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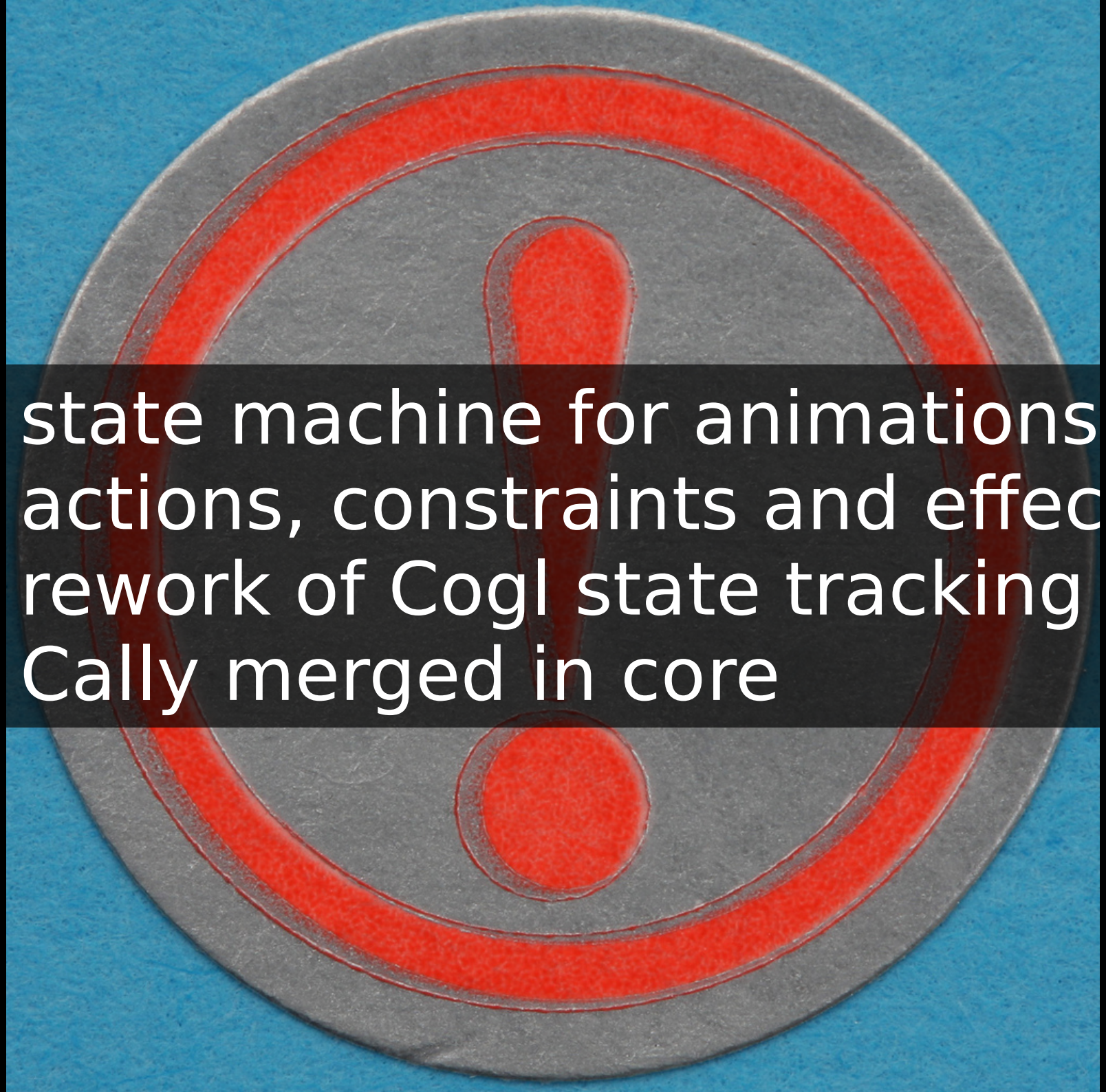
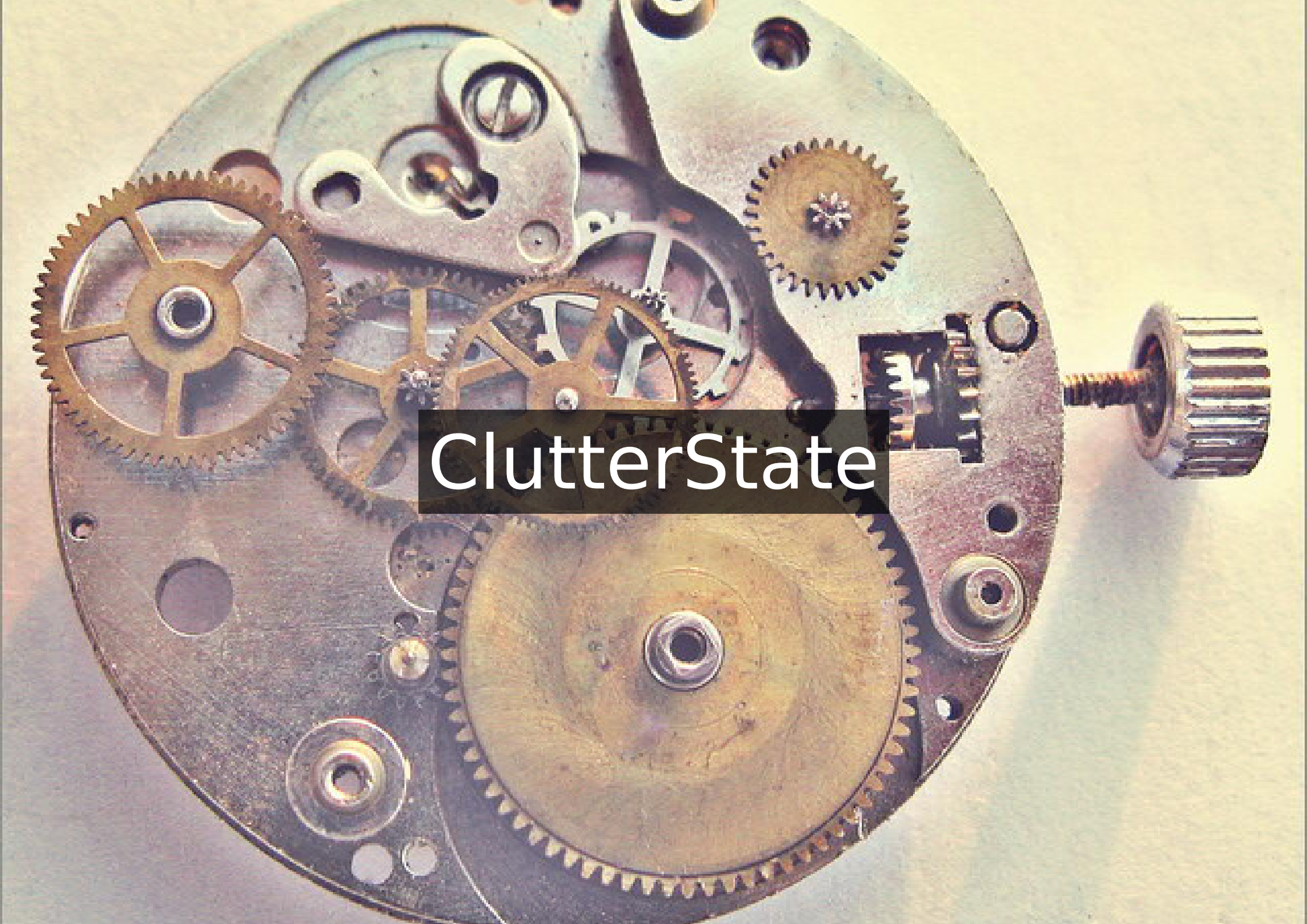
summit

Clutter 1.2

- ✔ layout managers
- ✔ performance improvements
- ✔ enhanced portability
- ✔ serializable animations

Clutter 1.4


✔ state machine for animations
✔ actions, constraints and effects
✔ rework of Cogl state tracking
✔ Cally merged in core


ClutterState

any state → named state
named state → named state

deserialization with ClutterScript

```
{
  "type" : "ClutterState",
  "transitions" : [
    {
      "source" : null, "target" : "show", "keys" : [
        [ "foreground", "y",       "linear", 1024 ],
        [ "background", "opacity", "linear", 0    ]
      ]
    }
  ]
}
```

actions, constraints and effects

OOP by **composition**, not inheritance

stacking

actions → how does the actor **react**?

user input and feedback

U-CONTROL
drag and click

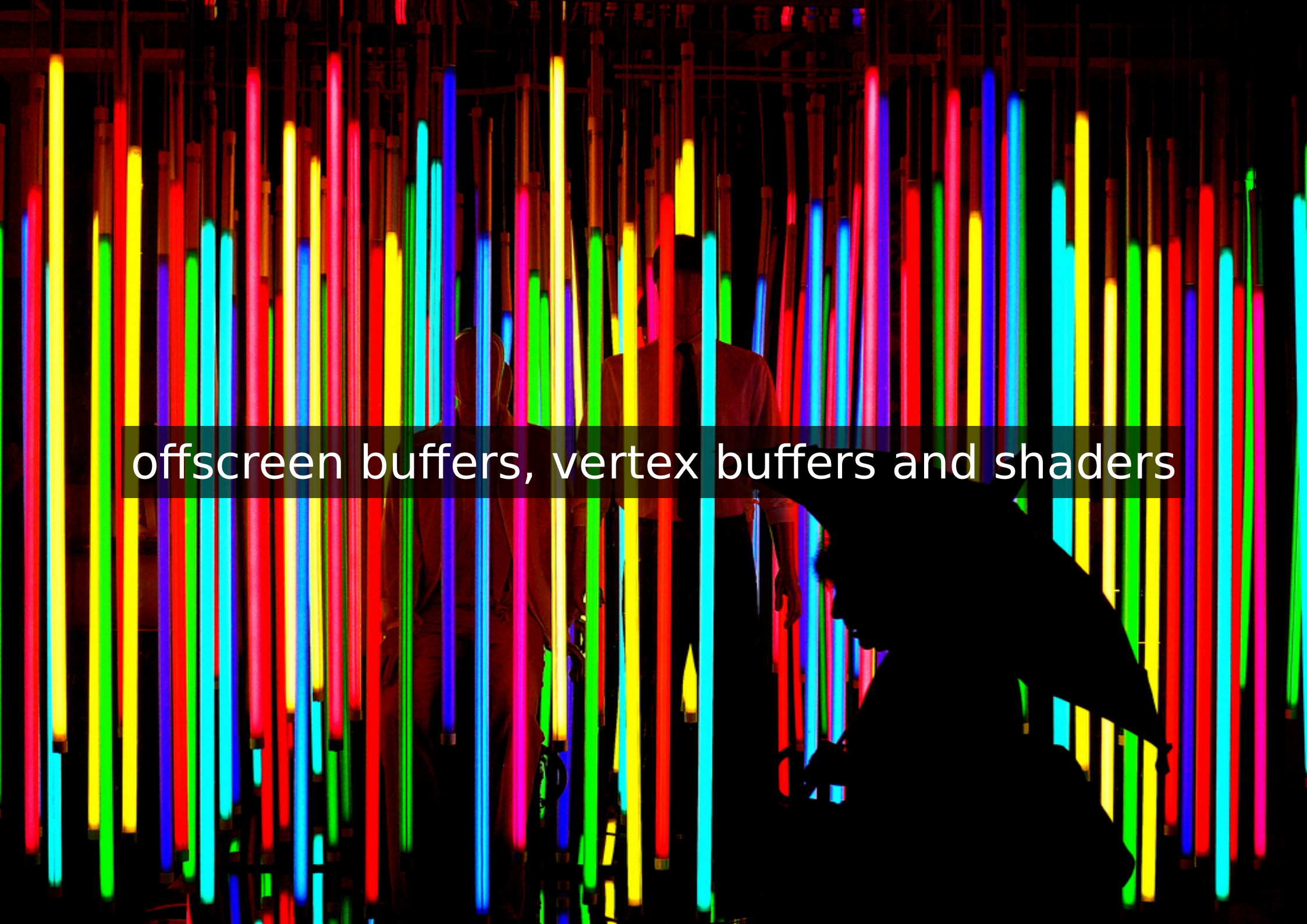
constraints → how is the actor **positioned**?

fixed layout management with a twist

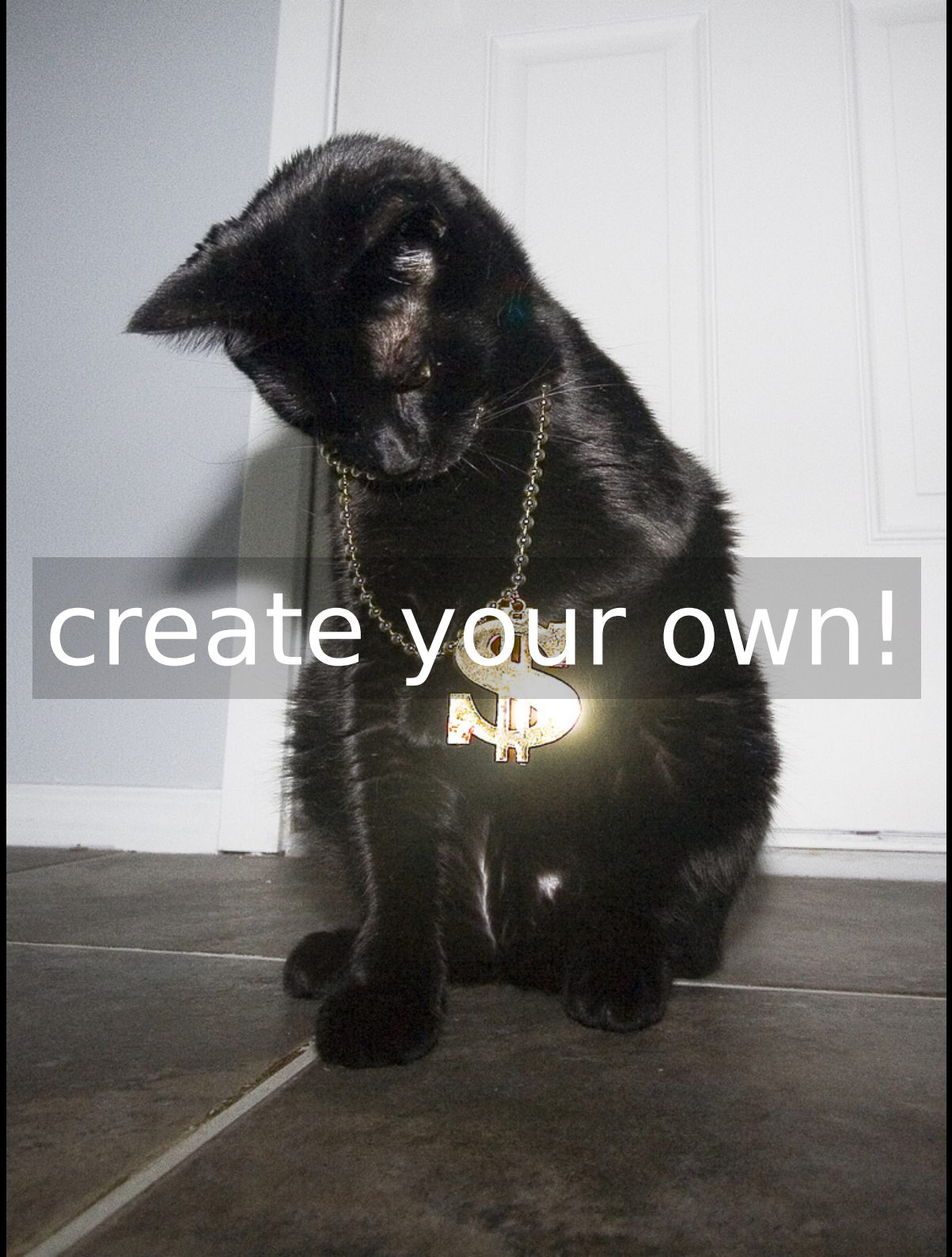
ere... where does
. This goes here
ng to fit togethe
much fun. Like a
trying to expres
undetermined. I
and I try to fo
skin, making a surface wound
interest, is interest paid on ca
accumulated interest [L. compone
together].
compound (kom'pound) n. in the
enclosure about a house; in S.
enclosed area in which native
reside [Malay, kampong, an enclos
comprehend (kom-prē-hend') v.t.
stand; to grasp with the mind; t
to include; to comprise; to
capacity of the mind to perceive a
within narrow limits; extensiv
capacious; inclusive.—comprehen'si
comprehen'siveness n. [L. compre
N
NET.

align, bind

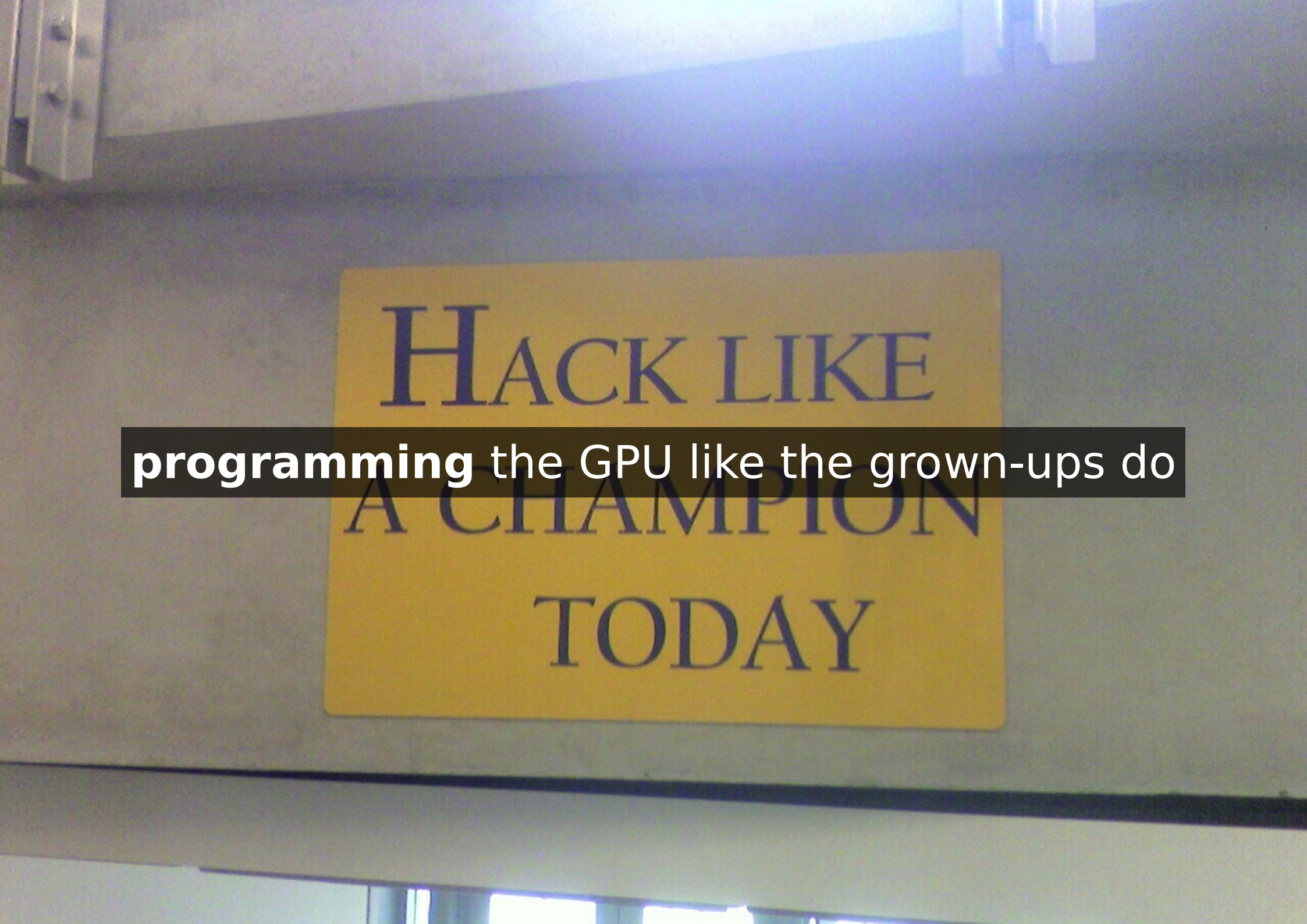
effects → how does the actor **paint** itself?


offscreen buffers, vertex buffers and shaders

blur, colorize, deform, desaturate


create your own!

state tracking in Cogl



programming the GPU like the grown-ups do

CHANGE
fewer state changes

future: re-organize the paint sequence

cally: accessibility library

MOAR! MOAR COWBELL!

new logo

clutter-project.org

Image search for gcds ... | Sponsored by GNOME |... | Vincent Untz presenting ... | Owen Taylor and GNOM... | 5 1/4" floppy disk | Flick... | Clutter

http://www.clutter-project.org/

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clutter

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ABOUT CLUTTER

Clutter is an open source (LGPL 2.1) software library for creating fast, compelling, portable, and dynamic graphical user interfaces. It is a core part of MeeGo, and is supported by the open source community. Its development is sponsored by Intel.

Clutter uses OpenGL for rendering (and optionally OpenGL|ES for use on mobile and embedded platforms), but wraps an easy to use, efficient, flexible API around GL's complexity.

Clutter enforces no particular user interface style, but provides a rich, generic foundation for higher-level toolkits tailored to specific needs.

Go to Docs to get started with Clutter.

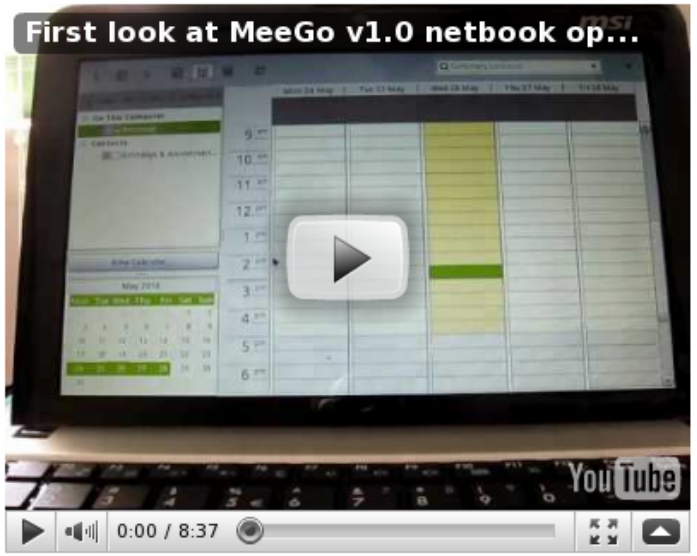
FROM THE CLUTTER BLOG...

Clutter 1.3.8 - developers snapshot

WHO'S USING CLUTTER?

MeeGo Netbook User Experience (UX)

MeeGo's netbook UX makes extensive use of Clutter:



Chromium OS

guadec-2009.jpg | cake-2.jpg | Show all downloads...

wiki.clutter-project.org

clutter

Navigation

- Main Page
- Recent changes
- Random page
- Help
- Clutter website

Search

Go | Search

Toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link

MAIN PAGE | page | discussion | edit | history | move | unwatch

Clutter Workspace

Welcome to the Clutter workspace! This wiki serves as a central repository for all the knowledge about the Clutter project.

Contents [hide]

1 Resources
- 1.1 Web
- 1.2 Git repository
- 1.3 Bugzilla
- 1.4 Contact
- 1.5 API discussion
  - 1.5.1 Roadmaps
- 1.6 Documentation
  - 1.6.1 API reference
  - 1.6.2 Cookbook
  - 1.6.3 Tutorials
- 1.7 Miscellaneous

2 Bindings

3 Integration Libraries

4 See Also

Resources [edit]

Web [edit]

- Website: http://www.clutter-project.org
- Project blog: http://www.clutter-project.org/blog
- Sources: http://source.clutter-project.org/sources/clutter/
  - Mirror: http://download.gnome.org/sources/clutter/

Git repository [edit]

no more copyright assignment/waiver
TM

who **makes** Clutter?

66 developers, > 15 employers
Fays cakes

28 developers, > 5 employers for 1.3 alone

Neil Roberts
Øyvind Kolås
Damien Lespiau
Owen W. Taylor
Chris Lord
Richard Hughes
Adel Gadllah
Chris Leick
raven
Nate Stedman
Kristian Høgsberg
Sunil Sadasivan
Rob Bradford
Bastian Winkler
Robert Bragg
Elliot Smith
Alejandro Piñeiro
Colin Walters
Brian Tarricone
Johan Bilien
José Dapena Paz
Chris Kühl
happyaron
Alexandros Frantzis
Dan Winship
Jussi Kukkonen
Fridrich Strba

if you are in there, thank you!

if your aren't, **what are you waiting for**? ☺

the **future**!

❃ more integration

☑ XSETTINGS
☑ XKB
☐ XI2

❃ more performance tuning

- fully retained paint model
- re-organization of the paint sequence

❃ more backends

- wayland
- gdk?

✽ cogl in charge

CoglDisplay, CoglRenderer, CoglProgram

sliced Stages, multi-head support

✽ ${INSERT_YOUR_FEATURE_REQUEST_HERE}

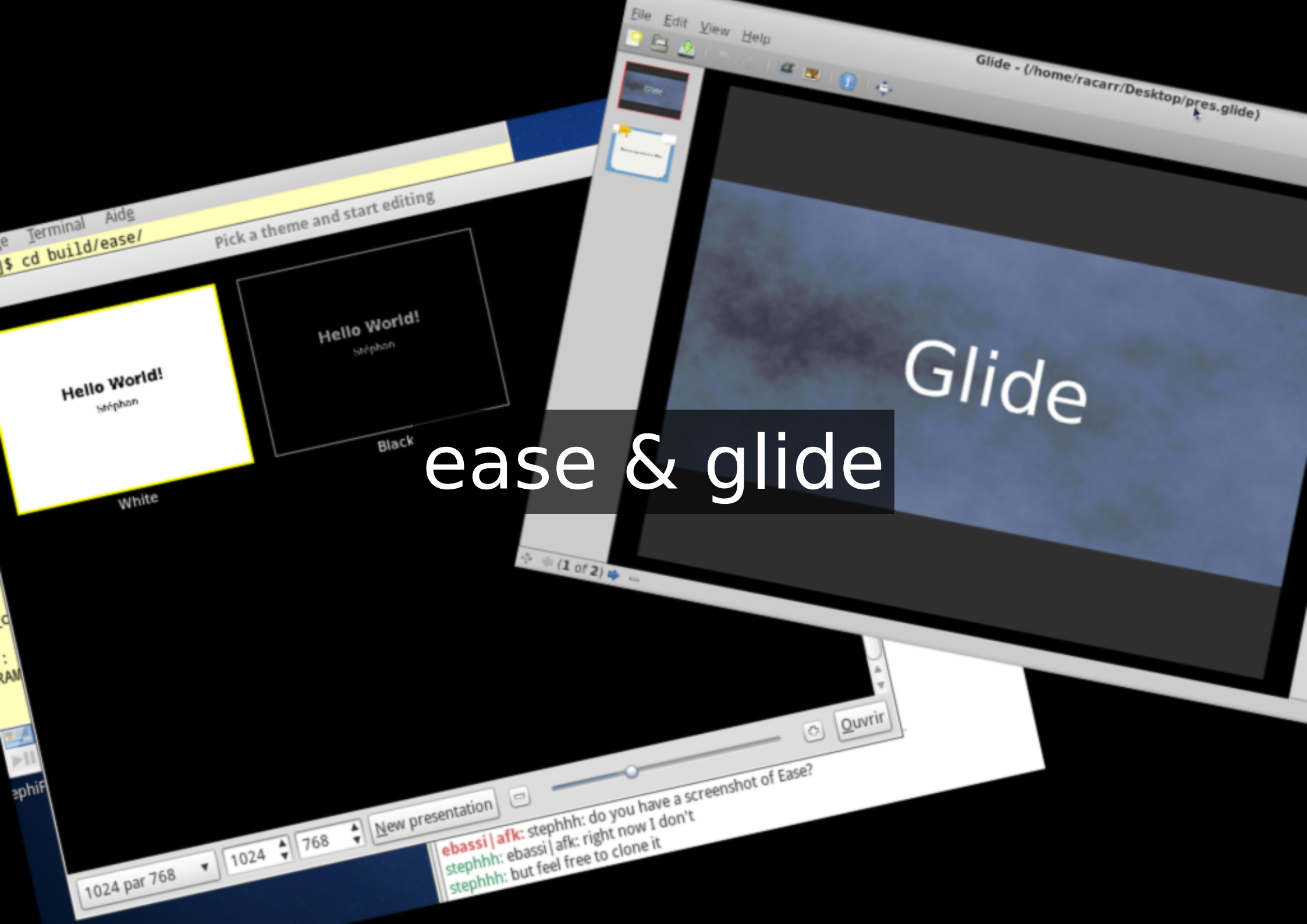
- http://wiki.clutter-project.org/wiki/ClutterRoadMap
- http://wiki.clutter-project.org/wiki/CoglRoadMap

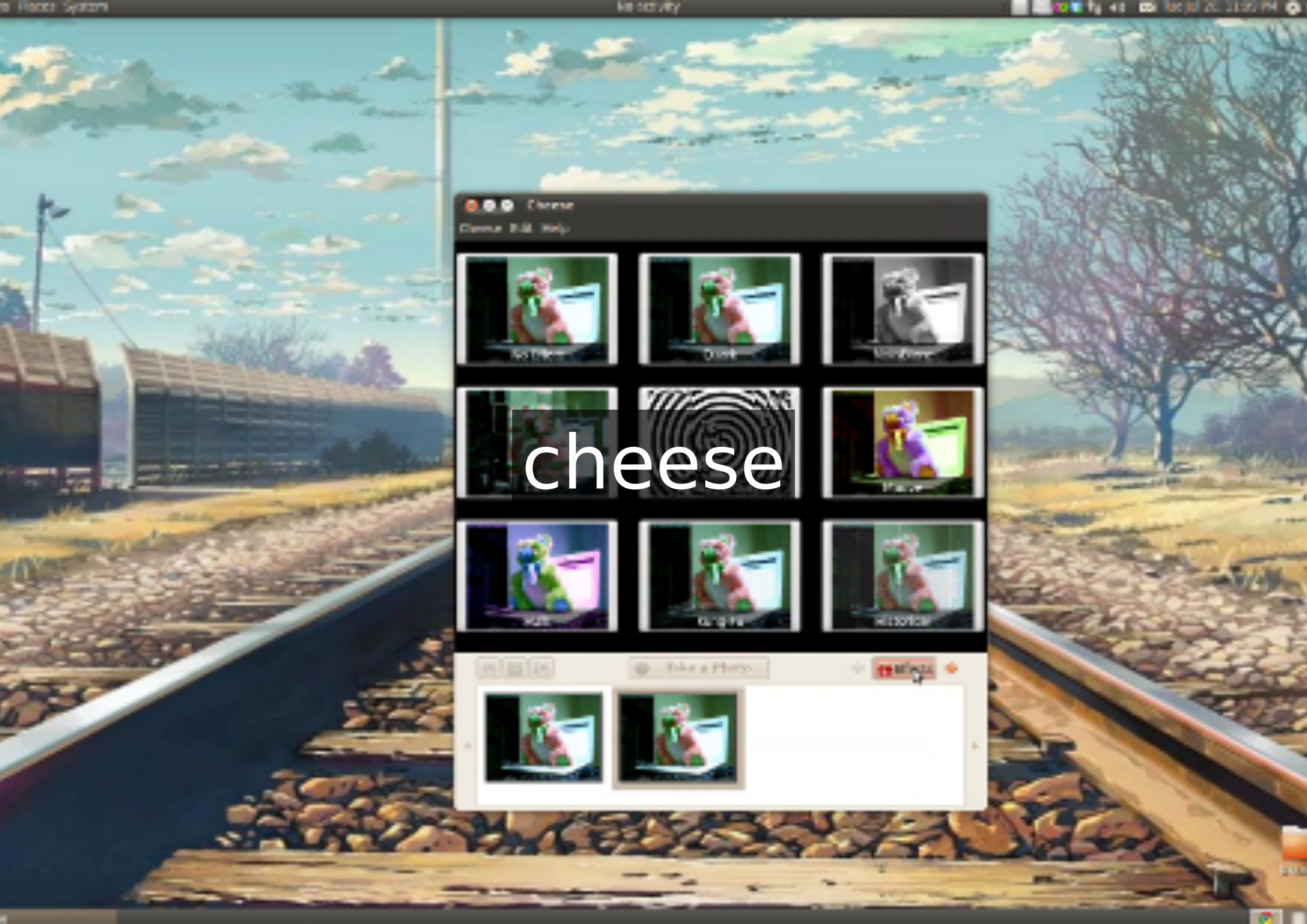
talks @ GUADEC 2010

pippin: ClutterSmith

bpeel, Cwiiis, damien_l: cool bling-o-trons!

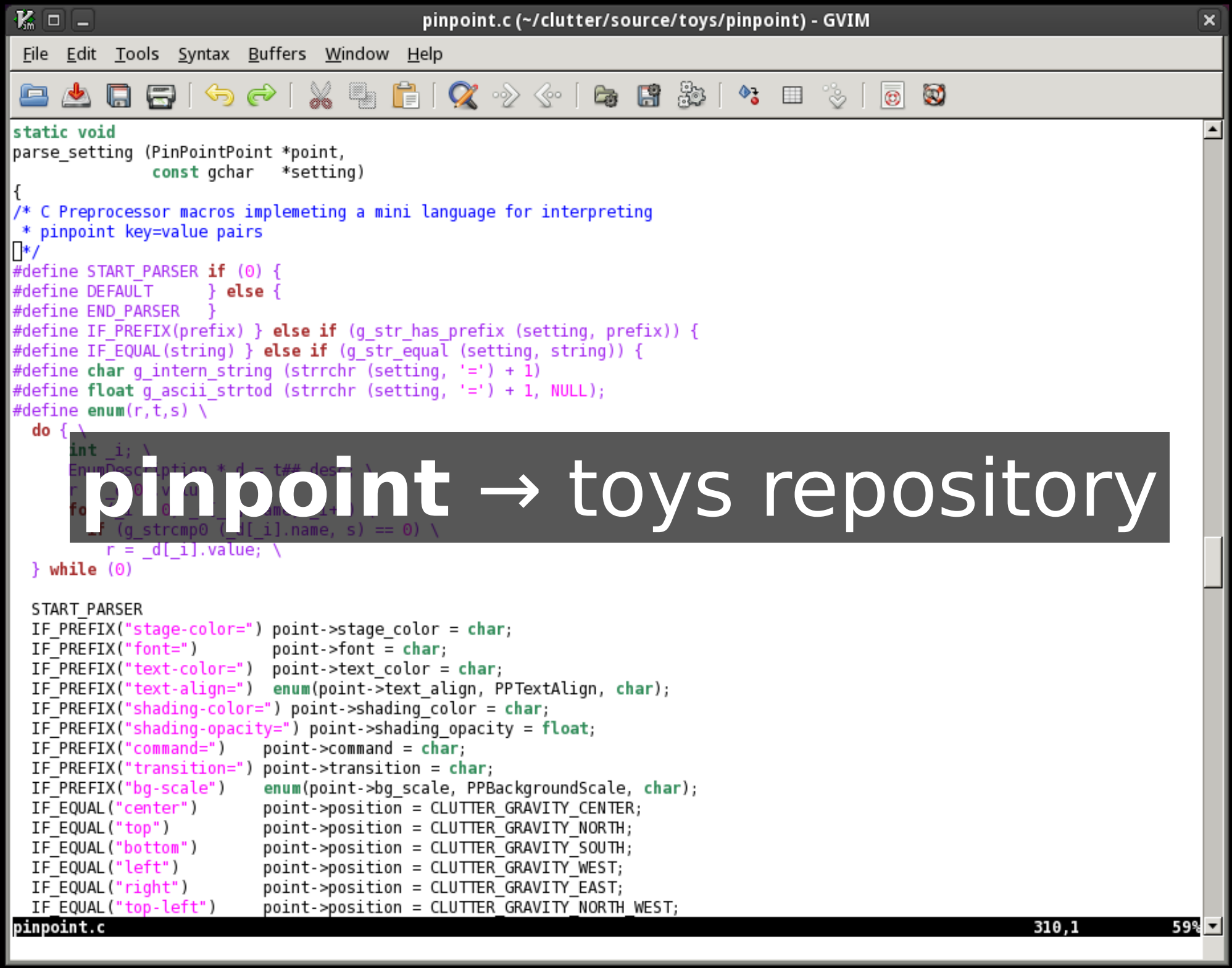
recent users


Terminal Aide
$ cd build/ease/
Pick a theme and start editing
Hello World!
Stéphan
White
Hello World!
Stéphan
Black
File Edit View Help
Glide - (/home/racarr/Desktop/pres.glide)
Glide
(1 of 2)
ease & glide
1024 par 768
1024
768
New presentation
Ouvrir
ebassi|afk: stephhh: do you have a screenshot of Ease?
stephhh: ebassi|afk: right now I don't
stephhh: but feel free to clone it


cheese

Questions?

Thank
YOU
Have **fun**!



pinpoint.c (~/clutter/source/toys/pinpoint) - GVIM

File Edit Tools Syntax Buffers Window Help

```
static void
parse_setting (PinPointPoint *point,
               const gchar   *setting)
{
/* C Preprocessor macros implemeting a mini language for interpreting
 * pinpoint key=value pairs
 */
#define START_PARSER if (0) {
#define DEFAULT      } else {
#define END_PARSER   }
#define IF_PREFIX(prefix) } else if (g_str_has_prefix (setting, prefix)) {
#define IF_EQUAL(string) } else if (g_str_equal (setting, string)) {
#define char g_intern_string (strrchr (setting, '=') + 1)
#define float g_ascii_strtod (strrchr (setting, '=') + 1, NULL);
#define enum(r,t,s) \
  do { \
      int _i; \
      EnumDescription * d = t## desc; \
      r = 0; value
      for _i = 0; _i < _d.name; _i++ \
        if (g_strcmp0 (_d[_i].name, s) == 0) \
          r = _d[_i].value; \
  } while (0)

  START_PARSER
  IF_PREFIX("stage-color=") point->stage_color = char;
  IF_PREFIX("font=")        point->font = char;
  IF_PREFIX("text-color=")  point->text_color = char;
  IF_PREFIX("text-align=")  enum(point->text_align, PPTextAlign, char);
  IF_PREFIX("shading-color=") point->shading_color = char;
  IF_PREFIX("shading-opacity=") point->shading_opacity = float;
  IF_PREFIX("command=")    point->command = char;
  IF_PREFIX("transition=") point->transition = char;
  IF_PREFIX("bg-scale")    enum(point->bg_scale, PPBackgroundScale, char);
  IF_EQUAL("center")       point->position = CLUTTER_GRAVITY_CENTER;
  IF_EQUAL("top")          point->position = CLUTTER_GRAVITY_NORTH;
  IF_EQUAL("bottom")       point->position = CLUTTER_GRAVITY_SOUTH;
  IF_EQUAL("left")         point->position = CLUTTER_GRAVITY_WEST;
  IF_EQUAL("right")        point->position = CLUTTER_GRAVITY_EAST;
  IF_EQUAL("top-left")     point->position = CLUTTER_GRAVITY_NORTH_WEST;
```

pinpoint.c 310,1 59%

pinpoint → toys repository

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CA 94105
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clutter