E20 Super Gigante Dance Party, Feat. Wayland!

With MC zmike!
E20 Target “Features”
E widget → Elm widget conversion

- In-place conversion
  - Avoid rewriting everything
    - not the module, but also the module
  - Keep existing functionality

- E widgets now DEPRECATED
  - Existing “good” code will be refactored
  - No new features will use deprecated widgets
- Some widgets not replaced yet
  - Livethumb (T1973)
  - e_icon
Elm Conversion

Pros:
- Less EDC required for themes
- Less code to maintain in E
  - Some new widget features
    - ATSPI
Elm Conversion

Cons:

• Elm bugs

• Different sizing models
  – Sync (E widgets)
  – Async (Elm widgets)

• Widget parenting
  – e_comp->elm
  – Internal elm_wins
Elm Conversion

Status

- Mostly done
E20 Target “Features”

Wayland

- itshappening.gif
Wayland In E: What Has Devilhorns Been Doing?

- Dec 2011: First EFL rendering in Wayland
- Jan 2012: EFL rendering with shm/egl
  - First EE engine
  - Elm rendering in Weston
- March 2012: First DRM output module, shell module
- April 2012: Moved to UK
  - April 2012: Overdosed on crumpets
- May 2012 – Nov 2012: The RandR months
- Dec 2012: Major progress on Wayland in E begins
Wayland In E:
You Mean There's More?

• Yes
• March 2013: First Wayland clients in E(18)
• August 2013: “Functional” Wayland compositor
  – lol
• August 2013: E19 branch pushed, previous Wayland compositor scrapped
• Sept 2013: New Wayland compositor, first output module
  – X11
• Oct 2013: Live E19 Wayland demos at LinuxCon EU
Wayland In E: Are We There Yet?

- No
- Jan 2014: E19 branch merged
  - Exactly zero people happy about this
- Feb 2014: E19 Wayland at FOSDEM
- May 2014: Wayland compositor rewrite #2
  - E18 → E19
- June 2014: Cursor rewrites
- Sept 2014: E19 released
- 29 Oct 2014: Whitespace cleanups in desktop shell
Wayland In E: Effectively Using Presentation Time

- Jan 2015: @zmike: “oh it's on like donkey kong”
  - #barrel
- Feb 2015: @manmower: “make your code better”

Monthly Wayland-ish E commits since Jan 2014
Wayland In E: Status Update

- The only slide that matters in this entire deck
Wayland In E: Status Update

- Most things work
- Things that don't work:
  - Evry launcher
  - DnD
  - External clients with buffer stride != w * sizeof(int)
    - Yes, that's a real thing
  - RandR
Wayland In E: Rage Story Time!

- Async render with zero copy shm buffers
  - TL;DR: Not ideal
- Close animations
  - Oh, you were using that buffer?
- Client cursors
  - A compositing success story
- App/Toolkit reliance on unimplemented features
  - Gnome-terminal voted #1 popup display app
E20 Target “Features”

API cleanups

- Remove multihead
- Taking E_Comp out of e_comp
- Remove E_Comp references
- Remove E_Manager
And all kinds of crazy stuff you can do*

Enlightenment Developers Day USA, 2015/03/26
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* Yeah my previous presentation had the same subtitle
Clipping
Masking
Masking vs. clipping

- Clipping a clipper
  - Geometry change
  - Color multiply
- Clipping a mask
  - Add color multiplier
- Masking a mask
  - New mask surface needs to be rendered
- SW vs. GL engine
  - Scaling on-the-fly in GL for IMAGE masks
Future plans

- Smart objects as masks
  - Box/table for layout
  - RECT, IMAGE for actual masking
- Use masking in Evas VG
Q&A