State of the Shell

Carlos Garnacho
Florian Müllner
Georges Stavracas
Jonas Ådahl
Robert Mader
Welcome!
Mutter
Explicit buffer readiness

- Heavy OpenGL less likely to negatively effect compositor framerate
- Smoother overall experience
Experimental HDR mode

What we now have

∙ Not proper HDR
∙ Meant to make it easy to test the HDR kernel support

Then what?
∙ Dull down the shell on HDR monitors
KMS thread

- Real time scheduled
- Cursor updates bypasses main thread
- Building block for future improvements
Experimental VRR

- Dor Askayo
- Lots of usability issues to figure out, including better kernel behavior
- Want to have at least something first
No more GTK3*

- No GTK at all in compositor process
- X11 window decorations handled in dedicated GTK4 client
- New tray icon implementation
- * GTK3 still used for some tests
Plumbing input with libei

- More extensible remote desktop input support
- Capture input
Input improvements

Grabs
  Active
  Implicit

Gestures
Fractional scaling

- Now also communicated to Wayland clients via a new protocol
- Example: 1920x1080@125%
  - $1536 \times 864 \times 2^2 = 5308416$
  - $1920 \times 1080 = 2073600$
  - $2073600 / 5308416 \approx 0.39$
- Pixel alignment – sharper results for non-fullscreen windows and subsurfaces (@msizanoen1)
YUV support

- New optimal fast paths now possible
- Good for performance / battery life everywhere
- Especially good for embedded and mobile
- Crucially good for development for embedded systems
- Future work: more formats, direct-scanout improvements (libliftoff)
Special Mentions
Special Mentions

- Triple buffering by Daniel van Vugt
- Better default (fractional) scale selection by Adrian Vovk
- Improvements for remote login by Pascal Nowack and Joan Torres
GNOME Shell
Quick Settings

- Split buttons
- Subtitles
- Bluetooth devices menu
- Background apps
Recording improvements

- Screen recorder aware of predicted frame times
- More stable recordings
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- Use OpenGL to enable DMABuf sharing
- Frame timing improvements
- Camera indicator
Light Theme

- Follows “prefer-light” system setting
- Use “light-style” extension to make it default
- Replaces “classic” styling
Keyboard backlight

- Usually accessible via keyboard
- New quick settings toggle when it isn’t
“GNOME breaks extensions every release”

The Internet
ESM

- EcmaScript modules is the standard for imports in JS
- Familiarity, tooling support
- To a lesser extent: Some more compatibility with “foreign” modules
- Implemented by the JavaScript engine itself (except for GIR support)
- Caveat: ES modules and gjs’ custom imports are incompatible in practice
Special Mentions
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- Improved Drag n’ Drop in the app grid
- Overhauled keyboard layout previews
- Auto-generated toolbox images with up-to-date dependencies
- Running GNOME Shell in CI for tests
Thank You!
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Title

• Bullet point 1
• Bullet point 2