The **qt** **wayland** **systemd** **btrfs** phone...

The Jolla phone
Who am I?

David Greaves

lbt on #mer #sailfishos ...

Co-founder of the Mer Project

work at Jolla

systems and infrastructure (OBS, QA, gitlab, bz ... VMs)

HA Documentation

Mer tools
This is not a Jolla pitch

... but
This is not a Jolla pitch...

but

Nexus 4

Galaxy S3

Sailfish on Android
This is not a Jolla pitch...

but
Talk about Technology
Talk about Technology

Qt 5.2

Why?
- QML
- Performant
- Open
- Not Java
- Huge developer base
Talk about Technology

Qt 5.2

Qt replaces SurfaceFlinger
Still more to come using hwcomposer.
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systemd

Love it?
Hate it?
Talk about Technology

Fast
Simple / documented
Predictable
Journal
User Sessions
UI
Act dead

Problems:
tracks kernel too tightly
Various WTFs
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Reliable

Featureful

Dynamic subvolumes

Wishes:

• Priority quotas

“we'd choose it again next time”[1]
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- Difficult issues – simply expressing requirements is hard.
- Real upstream improvements recently (eg: usb)

“Writing ifup/ifdown by hand would have been even worse”
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ofono / pulseaudio

Not been a problem

Hard to find good people

Martti is talking in depth about it.
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Compositing
Technically not insanely hard
Share a GPU buffer to the compositor

wayland
Talk about Technology

libhybris

Shim between GNU libc and bionic libc

Enables use of glibc stack on top of Android BSP
Talk about Technology

libhybris

Patches to bionic - relatively few:

- Thread local storage
- pthreads
- errno
- hard vs softfp
- /dev/log
android_dlopen("libEGL.so");

myeglCreateWindowSurfaceFP = android_dlsym("eglCreateWindowSurface");

*myeglCreateWindowSurface(....)

Talk about Technology

libhybris

Gets you

- libEGL.so
- libGLESv2.so

as wrappers which present to glibc space
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libhybris

Rinse and repeat for:
• Gralloc
• OpenGL ES 1.1/2.0
• NFC
• Hardware HAL
• OpenCL
• SurfaceFlinger
• OpenMAX
• Camera
• Hwcomposer
• and so on ...
Talk about Technology

- git
- dbus
- rpm
- kernel
Open Source
Open Working
Open Source

We've been on the outside

Open Working

It's hard
Open Source

Open Working

How?

• Internal Policies

• Eg: commits must have a suitable external bug reference
"When you as a Jolla employee are participating in open source projects, you are participating as yourself, not as Jolla."

**Open Source**

- Be transparent externally
- To respect open source community contribution

**Open Working**

- Respect other people’s work and expertise
- Respect customers and partners (especially OSS ones!)
- "doing it together"
- Be diplomatic
Open Source

- Mer
  - Core & some MW
  - Systems
  - Community

Open Working

Code is not enough
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Not covered:
• Many 'on-device' packages
• OBS/Build system
• SDKs and Tools
• Cross building
• Image building
• System updates
• Process Automation
• Test Automation
• Documentation
• Release Engineering
• Issue handling
• Open co-development
• Concurrent HA support
Unlike

Not that hard

80 people made this:
Unlike freenode: #mer #sailfishos

github/ mer-hybris

merproject.org

Not that hard

80 people made this: