The Linux Desktop: Arm’s Final Frontier

David Jordan
System76
Arm has Conquered
Mobile
Phones
Tablets
IoT
Arm is on Servers
What about the Desktop?

Chromebooks, Windows RT, etc.
What about the Desktop?

Workstations...
What System76 does

Laptops, Desktops, Servers
Ubuntu & Pop!_OS
What System76 does

The Linux Desktop is our bread and butter.
What System76 does
We begin offering the latest Ubuntu the day it comes out. LTS & current 6-month release
Pop!_OS 17.10
Pop Theme
Pop!_Shop (software center)
Alt+tab & workspaces behavior
Intel/AMD and NVIDIA ISOS
Pop!_OS 18.04

Out-of-the-box Full Disk Encryption support

Mixed HiDPI+LoDPI configuration

Power profiles + GPU Switching
The Open Desktop
System76 is bringing design and manufacturing in-house
Open hardware components
Desktops soon, laptops later.
What do System76 customers want?
Performance
Battery Life – Arm could help!
RAM – seriously, all the RAM
Desktop vs Mobile

Different life cycle, use cases, and replacement patterns.
Mobile

Two year cycle, One Device/User

Encourage users to buy new devices to get support for new OS
Desktop

Five+ year cycle, Multiple/User

Users expect older hardware to work with latest OS releases.

Customers buy next laptop long before their current laptop goes EOL.
Desktop

Continued hardware+OS support adds significant value to our products.
Graphics Card Blues

The Linux desktop is only as good as the graphics support. Historically the GPU driver situation has been pretty bad.
Upgrading to a new Linux kernel is painless in x86 land. Intel and NVIDIA keep drivers up-to-date even on old GPUs.
Graphics Card Blues

Historically the GPU driver situation on Arm SoCs has been pretty bad.

e.g. PowerVR (Intel Atom too)
The Way Forward

Selecting *only* vendors who provide consistent driver support
The Way Forward
First-party open source drivers
Make any proprietary drivers freely-redistributable
And maintain them!
The Way Forward

Track upstream kernel development
Test Ubuntu, etc. for regressions during development cycle
File bugs and fix regressions
Let’s make Linux “Just Work” together!
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