

Embedded Linux Conference

George Grey CEO, Linaro



The Way We Were



ARM SoC Linux Software – "A Waddle of Penguins?"

- 1+ Linux per vendor
 - Clock drivers
 - I²C drivers
 - PinMux drivers
 - Power Management
 - Kernel Memory Management
 - Graphics & Multimedia framework
 - more non-value adding differentiation

Fragmentation of core software = multiple patch sets + little upstreaming +
high maintenance costs + wasted resources +
delays to products



Linaro

- Formed in 2010
 - Place for ARM vendors to colloborate
 - Open Source Software Engineering Organization
 - Delivery through upstreaming
 - Work together on core software, enable differentiation & innovation
- A Work in Progress
 - Dramatic improvements to ARM Linux kernel & contributions
 - ARM-SoC tree, Devicetree, UMM (dmabuf & CMA), single zImage
 - Linaro is now a major contributor to the Linux kernel
- Together the ARM community is a very strong force
 - 8.7Bn ARM chips shipped in 2012
 - Low power and energy efficiency is ARM's 'DNA'
 - ARM's business model drives rapid innovation



Data Growth

Wireless Server DataCenter Photos IoT

Iow-power M2M 4G LTE HyperScalar Video

MicroServer Netflix Data YouTube

Facebook Storage Mobile Energy SoC

Low-power HDTV multicore Exabytes

- Industry Disruption is here
 - Internet of Things, Mobile, TV, Network, Server
 - SoCs and Open Source are agents of change



Linaro Enterprise Group

- Formed in November 2012
- Working on core open-source software for ARM servers
- Reduces costs, eliminates fragmentation, accelerates time to market
- Enables vendors to focus on innovation and differentiated value-add



Group Founders

http://www.linaro.org/engineering/leg



Announcing the Linaro Networking Group

- Working on core open-source software for networking equipment
- Leverages Linaro's shared engineering model
- Deliver Linux software for the next generation of low-power hardware
 - Real Time Support
 - Virtualization for networking equipment
 - Multi-core SoC Power management
 - Data Plane interfaces & frameworks
 - Mixed-endian legacy code support



Group Founders

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Working Together to Accelerate Linux Development







Open Source Software for multiple vendor's SoCs Shared development of core Linux software