Embedded Linux Conference

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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

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

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Data Growth

Wireless Server DataCenter Photos IoT

low-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

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

and 3 more (not yet public)

Group Founders

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

Working Together to Accelerate Linux Development

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