

Fedora/ARM

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Fedora/ARM
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Introduction



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Agenda

- Secondary architectures in general
- The Past
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Secondary arches in general

- 20+ architectures supported by Linux kernel
- primary vs. secondary arches in Fedora
 - existing user base
 - package not built for secondary doesn't block primary
 - everything except x86/x86_64 is secondary
- every secondary arch runs on it's own infrastructure
 - native build system
 - uses same source packages
 - provides installation media and repos



Fedora/ARM

- <http://fedoraproject.org/wiki/Architectures/ARM>
- targetted devices
 - multimedia/smartphones -> no
 - netbook/nettop/tablet
 - SOHO and enterprise servers
- subarchs : armv5te, armv7+hardfp (vfp3-d16)
- active versions : F-17 (and Rawhide)
- large scale of SoCs complicates lives for everybody
- #fedora-arm on irc.freenode.net



The Past

- originally team of Marvell employees
 - own build system with Marvell HW
 - own patched packages
 - F-10 - F-12 for armv5tel
- later comes a team from Seneca College, Toronto
 - build system with « commodity HW »
 - starts with F-13 for armv5tel only
 - originally a learning tool for release engineering courses



The Presence

- complete bootstrap of armhfp for F-15 in multiple steps
 - crosscompiled
 - rpmbuild
 - mock
 - koji
- F-14 for OLPC and Raspberry Pi
- F-15 not completed
- F-16 skipped
- F-17 and Rawhide in development



The Presence

- supported HW
 - Calxeda Highbank
 - Freescale iMX5 – Efika MX
Smarttop/Smartbook
 - Marvell Kirkwood – {Sheeva, Guru,...}Plug,
SOHO NAS
 - Marvell Armada – OLPC
 - NVidia Tegra – TrimSlice, AC100
 - TI Omap – {Beagle, Panda}Board
- 11k packages, <1k older or missing
- distributed as packaged rootfs



The Future

- transfer to primary arch
 - package build issues resolved
 - enterprise-class HW available
 - big discussions and flame wars
- bootstrap AArch64 aka armv8
 - recent autoconf & co doesn't know it!
- platform standardisation
 - UEFI, ACPI, device tree, KMS vs FB, ...
- upstream, upstream and upstream again :-)

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Questions / Answers



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Useful Links

- **Fedora Project**
 - <http://fedoraproject.org/>
- **Fedora Architectures**
 - <http://fedoraproject.org/wiki/Architectures>
- **Fedora on ARM**
 - <http://fedoraproject.org/wiki/Architectures/ARM>
- **Fedory for secondary arches archive**
 - <http://secondary.fedoraproject.org/pub/fedora-secondary/>
- **Fedora/ARM Koji**
 - <http://arm.koji.fedoraproject.org/koji>

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Thank you for your attention



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Fedora/ARM Demo

- Genesi Efika MX Smarttop – Fedora 13 + XFCE desktop

