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Embedded Development Kit 2 (EDK2): Platforms Overview

Spring 2018 UEFI Seminar and Plugfest

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Presented by Leif Lindholm (Linaro)

OpenPlatformPkg is Dead; Long Live EDK2-Platforms



- Existing platform support migrated from OpenPlatformPkg is now disbanded
- Platform support now adopted by TianoCore
 - <https://git.linaro.org/uefi/OpenPlatformPkg.git>
 - edk2-platforms
 - edk2-non-osi
- Remaining hardware platform support in EDK2 scheduled for migration
 - EDK2 to retain virtual platforms, industry standard drivers (e.g. *HCI) and de-facto standards (for example Arm PrimeCells).

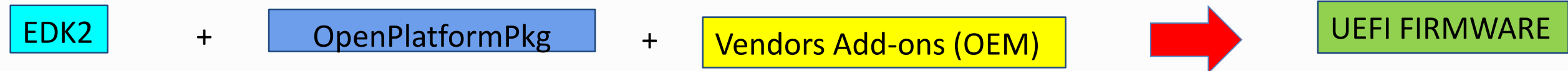
EDK2 Platform Support Evolution



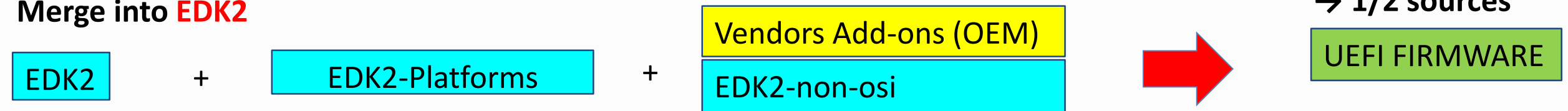
Before **OpenPlatformPkg** (< 2015)



With **OPP** (2015-2017)



Merge into **EDK2**



Same development model & community
Separate codebase for platform support

**Other optional non-public drivers can be added too, raising the total number of different sources*



EDK2-Platforms

- Official Tianocore repository to hold only open source components
 - <https://github.com/tianocore/edk2-platforms>
- `master` branch holds all platforms actively tracking `edk2 master`
- `devel` branches hold ports in the process of upstreaming (where this is expected to be a slow task)
- `stable` branches track specific UDK releases
- Also holds any new open source device drivers



EDK2-non-osi

- OpenPlatformPkg permits inclusion of binary only components EDK2-platforms does not
 - <https://github.com/tianocore/edk2-non-osi>
- All binary-only (or dubiously licensed source code) modules confined to EDK2-non-osi
- No default license - each subtree needs to specify its own

Practical Changes



- No prefix in configuration files like for OpenPlatformPkg
 - `PACKAGES_PATH` used to instruct `build` command of locations to scan
 - No submodules, so changes to release management required. Perhaps `mr` (<https://myrepos.branchable.com/>) or `repo` (<https://source.android.com/source/downloading>)
- Platform/driver patches to be sent to edk2-devel@lists.01.org
 - linaro-uefi@lists.linaro.org will keep existing for the foreseeable future
 - Tagged as being for edk2-platforms: `--subject-prefix="PATCH edk2-platforms"`
 - ... or edk2-non-osi: `--subject-prefix="PATCH edk2-non-osi"`
- Full (hardware) platform created through combined build across multiple repositories
 - `Chips -> Silicon, Platforms -> Platform, Drivers -> Silicon`

Platforms Already Included



AMD Seattle

- Overdrive, Overdrive 1000,
- Cello

Arm

- Juno, Versatile Express

Hisilicon

- D02, D03, D05
- HiKey*, HiKey960*

Marvell

- Armada 70x0

Socionext

- SynQuacer (EVB + 96boards platform)

Device drivers:

ChaosKey (USB RNG)



Upcoming Platforms

- Existing EDK2 hardware platforms moved across
 - BeagleBoard, Vlv2, Quark
- Marvell Armada 80x0 (MacchiatoBin)
- Minnowboard 3

Device drivers:

- 96boards mezzanine support



Linaro UEFI-Tools

- <https://git.linaro.org/uefi/uefi-tools.git> updated to support new structure
 - But to avoid flag-day type changeover, the new build structure is supported by a new front-end script - `edk2-build.sh` - and a new default configuration file - `edk2-platforms.config`.
 - More flexibility with build environment, but also requires explicitly pointing out `edk2` (`-e`), `edk2-platforms` (`-p`) and `edk2-non-osi` (`-n`) directories if not present in working directory.
- `edk2-build.sh -e ../edk2 -p ../edk2-platforms -n ../edk2-non-osi juno`
- `edk2-build.sh` supports specifying target architecture as part of the build target: `chaoskey:ARM chaoskey:AARCH64`



The Short-Short Version

- `git clone https://github.com/tianocore/edk2`
- `git clone https://github.com/tianocore/edk2-platforms`
- `git clone https://github.com/tianocore/edk2-non-os`
- `git clone https://git.linaro.org/uefi/uefi-tools.git`
- `./uefi-tools/edk2-build.sh -b DEBUG -b RELEASE all`

TianoCore Contribution Agreement



- Updated from version 1.0 to 1.1
 - All new submissions should use 1.1
- Only real change is the explicit treatment of documentation contributions
 - Must be FreeBSD Documentation License
- The truly diligent may need to revisit existing internal approvals

UEFI Support in U-Boot



- Rob Clarke and Alex Graf (and others) keep adding features to upstream U-Boot
- Can now run UEFI Shell from EDK2/ShellBinPkg
- *Nearly* have sufficient support for running UEFI SCT (FAT filesystem write support missing)



Questions?

Thanks for attending the Spring 2018 UEFI Plugfest

For more information on the UEFI Forum and
UEFI Specifications, visit <http://www.uefi.org>

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