



Linaro
connect
Vancouver 2018

Status product codeline



Goals

- Improve the power consumption / throughput / latency
- Take full advantage of the big Little system
- Reduce the gap with the upstream Linux kernel
- Use AOSP as a testing platform as an antechamber for upstream
- Spot AOSP regression as soon as possible



Improve power consumption / etc .

- Based on the reference platform hikey960
 - Idle states properties fixed in the DT
 - Cluster idle state selected more often
 - Thermal driver reworked for better performances
 - Lot of fixes and improvement of the code
- Idle loop reordering
 - Fixes a well known issue when selecting a shallow state
- Asymmetric idle state support for cpuidle
 - Replaces hackish cpuidle driver and consolidates the code



Take advantage of big Little system

- Investigating task placement with Jankbench
- Spurious wakeup of big CPUs
- Idle CPU selection optimized



Reduce the gap with the upstream

- Idle loop reordering + fixes
- Idle states for the hi3660's DT
- Removal of the legacy hisi thermal driver
- Removal of the legacy hisi cpuidle driver
- Task utilization



AOSP a testing platform

- Workloads and real use cases
- Tools to investigate the behavior
- Support for the reference platform
- Android-4.14 is the target because closer to mainline
- Feature tested on AOSP then submitted upstream and then backported to ACK



Spot regressions

- CI loop functional
 - Compilation, boot, power measurement, ...
 - See demo Friday
- CI loop helped to spot a regression in AOSP recently



Next ...

- Compare 4.9 and 4.14
- Prediction mechanism to be tested
- Per cluster next event
- Reduce target residency breaks
- Misplaced wakeup
- Continue syncing upstream



Collaboration

- How to submit bugs to track them ?
 - <https://issuetracker.google.com> ?
- Share power farm with Google ?
 - Submitting jobs ?

