Single Android Image

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Board specific images

- Build time definition
- One image per BOM
What’s missing?

- Kernel modules
- Dynamic HAL selection
- HW specific binaries selection
- Properties
- Permissions
- Misc configuration files
IRDA autodetection

- Hardware is described by the firmware
  - Not by BoardConfig makefiles
- Standalone daemon
- Trigger actions based on kernel uevents
- Actions described by autodetection records
IRDA autodetection

- libkmod for loading kernel modules
- libhardware to use the autodetection IPC
- Bind mount HW specific binaries
- FUSE for configuration and permission files
# Bosch BMC150 Magnetometer HAL record

[global]
module_name = sensors
library_name = iio-sensors-hal.so

[device]
bus = acpi
desc = BSBM0150

[properties]
ro.iio.magn.name = BMC150 Magnetometer
ro.iio.magn.vendor = Bosch Sensortec
ro.iio.magn.max_range = 2500
ro.iio.magn.resolution = 0.3
ro.iio.magn.power = 2
ro.iio.magn.quirks = noisy
ro.iio.magn.min_freq = 15
ro.iio.magn.cal_steps = 3

[fuse]
src_name = android.hardware.sensor.compass.xml
mount_type = permissions
[global]  
module_name = wifi  
mount_source = lnp  

[device]  
bus = sdio  
vid = 0089  
did = 5501  

[fuse]  
src_name = wpa_supplicant-start-iwlwifi  
dst_name = wpa_supplicant-start
Android Improvements

- Better reference HALs
- Built-in kernel module support
- Resources should not describe HW features
- Layered Android