



Embedded Android

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Inmote's first-class software solutions are targeted at a wide range of embedded, industrial and commercial platforms and operating systems.

We work closely with your customers to capture both user and system requirements, in order to generate complete product solutions which deliver the optimal user experience.

Our experience spans porting of board support packages (BSP's) as well as implementation of user- and embedded applications on Android.

Inmote has the capability to develop custom, hardened Android ROM images and flash these ROM images on consumer phones like the Samsung Galaxy S2 and S3 (ARM-based CPU) and the Galaxy Tab 3 (Intel x86-based CPU).

A quick feature overview for these customized ROM's:

- Change of *iptables* to reroute TCP/IP-traffic via a gateway; allows inspection of mobile internet traffic on the device.
- Build of customized, hardened kernel and platform, Android 4.2.2 'JellyBean' and newer.
- Disabling of application binaries as Google Play, the camera, and various protocols as Wi-Fi or Bluetooth.
- Debugging on Panda and Beagle Boards.
- Replacement of SBL/uBoot using a JTAG RIFF-Box
- Dual boot: load stock kernel and platform if no SD-card is available, else load custom kernel and platform ROM from SD-card as usual.

The Android Open Source Project (AOSP) consists of an extensive project structure with source code from approximately 330 GIT repositories – over 4Gigabytes of source code. We have our own build system to optimize build duration and mock objects for unit testing. We are able to deliver regular releases to our customers, and to efficiently make changes to the Android source code.

Inmote can add additional security to Android, using its Smart card API, which is part of the Secure Element Evaluation Kit (SEEK) project. This includes partition switching between the public and private file system on the SD-card, and (re-)mounting the file system using a hybrid solution consisting of an ASSD-driver and an MSC-terminal. Encryption of all TCP/IP-traffic is also possible.

Over several years, Inmote has successfully contributed to the delivery and maintenance of a hardened Android ROM image solution for military use. Other markets for embedded Android can be:

- Automotive systems
- Infotainment systems
- Medical devices
- Custom handheld terminals

