

Porting, tailoring and programming Google's Android OS

The Android operating system, developed by Google and based on the Linux kernel, is used more and more frequently not only on smartphones but also for dedicated embedded devices, notably in the "Machine to Machine" market.

ac6-training proposes trainings on the porting of the operating system on your board and its tailoring to your specific needs, as well as creating embedded applications running on the Android system. **D3 Linux Drivers**. This course covers the various techniques needed to write Linux (2.6 and 3.x) drivers, bus management (PCI, I2C, SPI) and auto-configuration of devices as well as the specific problems due to multi-core and advanced processor and power management features of the Linux kernel. **2 days**. This course dives into the concepts of Linux drivers, interaction with drivers, modes, the USB host and power management architecture to write USB host (client) drivers as well as gadget drivers. **3 days**. **Chassis and Hardware** is a course for a new platform. A complete dev board is needed to port the Linux kernel, then install the Android platform. Even if using an existing Android Open Source Platform kernel and the platformable device code to tailor the board process, this course also contains applied steps from building the Android platform. Android was designed to allow quickly creating power and ergonomic interfaces for embedded resource constrained systems. However, due to an emulation of the underlying hardware, Android apps are not fully portable and performant. This course will explain how they are structured and how Android allows to compile portable and performant GUI applications. **3 days**. **Building Industrial Smart GUIs** Installing Android on a new platform is a complex process, requiring a wide understanding of the internals of the Android framework and the OS. While a basic Android port already exists, the frameworks are structured and can be adapted to a platform systems need sophisticated and ergonomic user interfaces. Building these with traditional GUI tools may be cumbersome and difficult and may require these days, allowing industrial application developers to benefit from the tools developed for consumer electronics devices. **4 days**