Installing, programming and writing drivers

Industrial applications are more and more often performed using an embedded version of Linux. In addition, the very specific environment in which run these systems sometimes make it necessary to adapt the Linux installation to the hardware environment.

Ac6-trainingtrainings not only teach you how to build applications on embedded Linux, but also how to adapt the operating system to your hardware or environment when the need arises.

D0 - Linux user mode programming - 4 days - **Inquiry**

D1 - Embedded Linux with Buildroot and Yocto - Installing Linux on an embedded system is a common yet often difficult task. Many Open Source tools are supposed to make things easier, but must be properly controlled to obtain satisfactory results. This training presents you the most common of these tools, cross-toolchains, buildroot, Yocto and Embedded System Workbench for Linux and how to use them. The problems due to porting the u-boot bootloader and implementing a Linux BSP are also discussed as well as a porting methodology. 4 days - **Inquiry**

D2 - Embedded Linux with Ac6 System Workbench - Installing Linux on an embedded system is a common yet often difficult task. Ac6 System Workbench was designed to make things easier and to be easily extended. This training presents you the architecture and needs of an Embedded Linux platform and explains how to build it using Sysetra Workbench for Linux. The problems due to porting the u-boot bootloader and implementing a Linux BSP are also discussed as well as a porting methodology. 3 days - **Inquiry**

D3 - Embedded Linux with Yocto - Installing Linux on an embedded system is a common yet often difficult task. The Yocto project is meant to make things easier, but must be properly controlled to obtain satisfactory results. This training presents you the architecture and needs of an Embedded Linux platform and explains how to build it using Yocto. The problems due to porting the u-boot bootloader and implementing a Linux BSP are also discussed as well as a porting methodology. 3 days - **Inquiry**

D4 - Linux Drivers - This course details the Linux driver model (PCI, USB, x) drivers, but also management of hot-plug and auto-configuration of devices as well as the specific problems due to multi-core and embedded processors. 4 days - **Inquiry**

D5 - Real-time Linux - This course presents the various solutions for a real-time Linux and the tools to measure real-time performances. 4 days - **Inquiry**

D6 - Embedded GUI - 3 days - **Inquiry**

D7 - Power Management in Linux drivers - This course delves into the concepts of Linux drivers interaction with power management features of the Linux kernel. 2 days - **Inquiry**

D8 - Linux USB Drivers - This course details the Linux driver model, the USB protocol and power management architecture to write USB host client drivers as well as gadget drivers. 3 days - **Inquiry**

Q1 - Embedded GDB with Qt Development - Installing Linux on an embedded system is a common yet often difficult task. The Yocto project is meant to make things easier, but must be properly controlled to obtain satisfactory results. This training presents you the architecture of Yocto and how to parameterize it to fit your needs. 3 days - **Inquiry**

Y1 - Yocto Project Expert - This course expects you to already know how to build a Linux platform, being familiar with Yocto (see our Y1 - Yocto Project Development course). 2 days - **Inquiry**

Y2 - Comprehensive Yocto Project Usage - This course is the combination of the Y1 - Yocto Project Development course and Y2 - Yocto Project Expert course. It is intended for engineers that need to fully understand the Yocto build environment and be able to tailor it to their needs. 5 days - **Inquiry**

A1 - Eclipse - 3 days - **Inquiry**

A2 - Android Installation - Installing Android on a new platform is a complex process: you need to port first the Linux kernel, then install the Android platform. Even using an existing Android Open Source Platform, the process to create an usable image is quite complex. This course will explain all the required steps, from building the kernel and the platform from source code to tailoring the boot process and creating test applications. 3 days - **Inquiry**

A3 - Android Programming - Android was designed to allow quickly creating powerful and ergonomic interfaces for embedded, resource constrained systems. However, due to its limitations, the development of Android applications are totally different from standard applications. This course will explain how they are structured and how Android allows to compile portability, performance and applications requiring a deep understanding of the internals of the Android frameworks and the Hardware Abstraction Layer. This course explains how the frameworks are structured and can be adapted on a platform on which a basic Android port already exists. 5 days - **Inquiry**

A4 - Android Internals - Installing Android on a new platform is a complex process requiring a deep understanding of the internals of the Android frameworks and the Hardware Abstraction Layer. This course explains how the frameworks are structured and can be adapted on a platform on which a basic Android port already exists. 4 days - **Inquiry**

B0 - Ergonomic User Interfaces - Building industrial application developers to benefit from the tools developped for consumer electronics devices. 4 days - **Inquiry**

B1 - Anaqua with traditional GUI toolkits may be cumbersome and difficult. Android and Qt simplify these tasks allowing industrial application developers to benefit from the tools developped for consumer electronics devices. 4 days - **Inquiry**

B2 - Real-Time and Multi-Core programming - Real-time and embedded code, especially targeting multicore processors, cannot be effectively tested. It must be validated before coding. This training help you master pitfalls and real-time programming on multi-core processors, understanding how to effectively solve problems using the tools provided by the underlying Operating System. 5 days - **Inquiry**

D9 - Sysetra Workbench for Linux - Installing Linux on an embedded system is a common yet often difficult task. Ac6 System Workbench was designed to make things easier and to be easily extended. This training presents you the architecture of Ac6 System Workbench and how to parameterize it to fit your needs. 1 day - **Inquiry**