



Technical Seminar:

November, 26th 2007

Microsoft Technology Center
148, Rue de l'Université - Paris

Introduction to Embedded Development
With Microsoft® Windows® Embedded CE 6.0 and
Digi Embedded JumpStart Kits™

Digi and Microsoft complementary solutions:

- ✓ Digi modules and Windows Embedded CE are well matched for
 - Getting to market fastest
 - Concentrating on what you do best
 - Ensuring your product is supported for the duration of its product life
 - Building a high-security, reliable platform with great tools

Technical Seminar- AGENDA:

1. Overview and Introductions – (9: 00 – 9:15)

- Introduction
 - Goals
 - Contacts
 - Microsoft region contacts
 - Digi region contacts
 - Distributor contacts

- Overview (9: 15 – 10:15)
 - Advantages of Windows CE and Digi Embedded modules
 - Time to market
 - Focused development effort (add your value instead of creating everything)
 - Great development tools
 - Source code availability
 - Rich ecosystem
 - Shared success
 - Identification
 - Long availability and support
 - Security
 - 10000 meter view of Windows Embedded CE 6.0
 - Visual Studio
 - Platform Builder
 - BSP
 - SDK
 - Managed code options
 - Unmanaged code options
 - Boot loader
 - CETK
 - Manufacturing tools
 - Licensing model
 - 10000 meter view of Digi Embedded JumpStart kits and modules
 - Modules
 - Features and interfaces
 - Variations and build-to-order
 - Wireless
 -
 - Development kit
 - Module
 - Development board
 - LCD add-on kit
 - Touch
 - Schematics

2. Installation (sections 2 through 8 are hands-on) (10:15 – 10:45)

- Requirements
- Installing the Windows Embedded CE 6.0 Environment
- Installing the BSP for the Digi JumpStart kit
- Installing the SDK for the Digi JumpStart kit
- Connecting the hardware
- Overview of embedded development process

----- *Coffee Break* ----- (10:45 – 11:15)

3. Windows Embedded CE 6.0 Components (11:15 – 11:45)

- Terminology
- Run-time image
- Overview of Steps to create a simple OS design
- Build steps overview
 - Sysgen build
 - Post-sysgen build
 - Build release directory
 - Make run-time image
- Platform Builder
 - Overview screen shot
 - Major menu options

4. Getting started (11:45 – 12:15)

- Configuring the target device
- Booting the default image
- Exploring the image
 - Telnet
 - Web UI
 - FTP

----- *Lunch Break* ----- (12:15 – 13:15)

5. Developing a first application (13:15 – 13:45)

- Managed code
 - Managed code / .NET CF overview
 - Creating the form
 - Editing the code
 - Building the application
 - Uploading the image to the target
 - Debugging the application
 - Deploying and debugging
 - Using breakpoints
 - Stepping through code
 - Using watches
 - Modifying variables
 - View and edit memory
- Unmanaged code
 - MFC
 - Win32

- 6. **Creating an OS design (13:45 – 14:15)**
 - o BSP
 - o Templates
 - o Catalog
 - o Properties
 - o Environment variables
 - o Registry entries
 - o Setting startup processes/applications
 - o Building a run-time image
- 7. **Testing and debugging the run-time image (14:15 – 14:45)**
 - o Debug windows in Visual Studio
 - o Remote tools
 - Remote zoom
 - Remote file viewer
 - Remote system information
 - Remote spy
 - Remote perf mon
 - Remote kernel tracker
 - o Program launch options
- 8. **Building on the Digi module interfaces (14:45 – 15:15)**
 - o TCP/IP socket example
 - Blocking
 - Async
 - o Wi-Fi example
 - Configuring for security / certificates
 - o GPIO
 - Polling example
 - Interrupts example
 - o Timers
 - Polling example
 - Interrupts example
 - o Serial / UART
 - Sending and receiving example
 - Blocking
 - Async
 - o Video
 - Displaying bitmaps
 - o I2C example
 - o SPI example
 - o USB Host example
 - o USB device example
 - o RTC example
 - o NAND flash example
 - o Touch screen example

9. Boot loader and flash overview (15:15 – 15:45)

10. Review (15:45 – 16:15)

11. Next steps / on-your-own (if time permits – 15 minutes)

- Extending the BSP
- Customizing the boot loader
- Writing device drivers
- Testing with the CETK

For further information, do not hesitate to contact us:

Digi International – Web: www.digi.fr
info@digieurope.com – Tel: 01.55.61.98.98

WHEN
RELIABILITY
MATTERS™