“Embedded Linux Porting Workshop on Beagle”

+ ***Session 1: Introduction***
  - OSS & Free Software Fundamentals
  - Linux as Embedded OS
  - Getting Comfortable with Beagle Board

+ ***Session 2: Toolchain***
  - W's of Toolchain
  - Various Components
  - Setting up & Using the Toolchain
  - The Dependency Structure
  - Building a desired Toolchain

+ ***Session 3: Bootloader***
  - W's of Bootloader
  - Start up sequence & Bootloader phases on Beagle Board
  - Xloader & U-boot Porting

+ ***Session 4: Embedded Linux Kernel Overview***
  - Kernel Source Organization
  - Kernel Image & Kernel Arguments
  - Kernel Configuration & Building
  - Booting the Kernel
  - W's of Kernel Porting & LSP

+ ***Session 5: File System for Embedded Devices***
  - W's of a File System
  - Choosing a File System
  - Creating & Setting up a (Root) File System

+ ***Session 6: Embedded Applications***
  - What's special about Embedded Applications?
  - Various OSS Applications: busybox, ...
  - Porting the Applications on Beagle Board

+ ***Session 7: Wrap Up***
  - Conclusion
  - What Next?

Caution: All sessions are highly interactive & hands-on with Beagle Board.

Hands-On Details

+ *Getting Comfortable with Beagle Board*

- MMC/SD card setup
- Run the pre-built images

+ *Toolchain*

- Set up & Build the Toolchain for the Beagle Board
- Test the Toolchain

+ *Bootloader*

- Run a Bare metal code on Beagle Board
- Port Xloader and U-boot for the Beagle Board
- Configure the U-boot to boot from various interfaces
- Configure the GPIO Multiplexing

+ *Embedded Linux Kernel*

- Configure & Build the Kernel for the Beagle Board
- Use U-boot to Download a Kernel

+ *Root File System*

- Create a minimal Root File System for Beagle Board
- Add the Libraries & Applications to the Root File System
- Mount the Root File System from the various interfaces

+ *Application Programming*

- Set up the BusyBox and C Library for Beagle Board
- Set up the Distro for Beagle Board
- Set up the Application to run on Beagle Board