

## “Weekend Workshop on Embedded Linux Porting Hacks” by Pradeep Tewani

### Day 1

#### + **Session 1: Demystifying Boot Up Sequence**

- Getting Started w/ Beagle board
- Embedded Linux System boot up stages
- Beagle board boot up stages
- W's of Bootloaders – X-loader and U-Boot

#### + **Session 2: Recovering Beagle Bone Black**

- Decoding U-Boot environmental variables & Kernel bootargs
- Recovering the bricked BBB
- Partitioning the SD Card
- Populating the boot partition
- Populating the RootFS
- Recovering with back up partition

### Day 2

#### + **Session 3: Miscellaneous Hacks**

- Saving the U-Boot Environment in SD Card
- Adding a custom U-Boot Command
- Integrating Initramfs into Kernel
- Booting up the kernel with NFS RootFS
- Adding Platform Features into a pre-built Kernel

#### + **Session 4: Optimizing the Boot up time**

- Measuring & Analyzing the boot up time
- Optimization at Bootloader
- Optimization at Kernel space
- Optimization at User space

#### + **Wrap Up**

- Conclusion
- What Next?

**Caution: All sessions are highly interactive & hands-on with Beagle Bone Black.**

## Hands-On Details

### + **Setting up the Embedded Linux System**

- Preparing the setup
- Configuring & Compiling various images
- Preparing the Ramdisk

### + **Recovering Beagle Bone Black**

- Recovering the bricked BBB
- Partitioning the SD Card
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- Populating the RootFS
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### + **Miscellaneous Hacks**

- Saving the U-Boot Environment in SD Card
- Adding a custom U-Boot Command
- Integrating Initramfs into Kernel
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### + **Optimizing the Boot up time**

- Measuring & Analyzing the boot up time
- Optimization at Bootloader
- Optimization at Kernel space
- Optimization at User space