

“Online Training on Linux I²C Driver” by Pradeep Tewani

- + **Session 1: BBB Setup & Building the Kernel**
 - Readyng BBB for I²C driver
 - Setting up the host environment
 - Patching & building the kernel

- + **Session 2: Introduction to I²C driver**
 - I²C Protocol overview
 - Understanding the I²C registers for target platform
 - Writing a framework independent I²C controller driver

- + **Session 3: Enhancing the I²C driver**
 - Sending the multiple bytes over the I²C bus
 - Interfacing with on-board EEPROM

- + **Session 4: Linux Device Model**
 - W's of Linux Device Model
 - Support for non enumerable devices
 - Adding device specific nodes in the device tree

- + **Session 5: Linux I²C Framework**
 - I²C framework components
 - Registering I²C client & adapter driver
 - Understanding the probing mechanism

- + **Session 6: Integrating low level driver with framework**
 - Integrating the platform specific controller driver
 - Integrating the EEPROM client driver

- + **Session 7: Understanding the complete flow**
 - Understanding the data & registration flow
 - Registering the top & bottom halves

- + **Session 8: Wrap Up**
 - Conclusion
 - What Next?

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

Hands-On Details

- + **Session 1: BBB Set up & Introduction to Linux Driver**
 - Building the Linux kernel
 - BBB Setup & booting up the board

- + **Session 2: Introduction to I²C driver**
 - Writing a low level I²C driver

- + **Session 3: Enhancing the I²C driver**
 - Sending multiple bytes on I²C bus
 - Interacting with on-board EEPROM

- + **Session 4: Linux Device Model**
 - Adding the entries in the device tree

- + **Session 5: Linux I²C Framework**
 - Writing a dummy adapter & client driver

- + **Session 6: Integrating low level driver with framework**
 - Making suitable entries in DTB for adapter & client driver
 - Testing the driver

- + **Session 7: Understanding the complete flow**
 - Enhancing the driver to use the interrupts