

## “Weekend Workshop on Creating USB Devices” by Anil Pugalia

### Day 1

#### + **Session 1: USB Framework Refresher**

- Types of USB Device Drivers
- USB Subsystem & Verticals
- USB Protocol & Device Layout

#### + **Session 2: Linux USB Gadget & Host Drivers**

- USB Gadget Driver Mechanism
- USB Host Driver Mechanism
- USB Core & Hot Plug n Play
- USB Transfer Functions
- Integration with a Vertical

### Day 2

#### + **Session 3: BBB as a USB I/O Device**

- First take at a USB Gadget Driver
- Getting down to the hardware of BBB
- Controlling using custom USB Host Driver & App

#### + **Session 4: BBB as standard USB Devices**

- Creating as standard USB storage device
- Creating as standard USB network device

#### + **Wrap Up**

- Conclusion
- What Next?

**Caution: All sessions are highly interactive & hands-on with hardware**

## Hands-On Details

### + **BBB as a USB Device**

- Creation of a USB device
- Detection of a USB device
- Auto-probing of a USB device

### + **BBB as a USB I/O Device**

- Control operations for LEDs & I/O of BBB
- I/O Extensions to the PC

### + **BBB as a USB Memory Device**

- Mapping BBB's storage as a USB storage device

### + **BBB as a USB Network Device**

- Creating a network interface over the USB cable