IT-μDTC developers meeting
BDAQ53 to μDTC firmware integration for RD53A Chip Readout

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Available resources:
- **Power Supply**: Low + High Voltage
- **Detector**: 2CBC2
- **FMC**: FMC for CBC2, RD53A FMC Adapter Card (thnx to Louismi)
- **FPGA**: FC7 R2
- **FPGA test card**: µTCA Test Card V2.0
- **Misc**: USB Ethernet Adapter
- **PC**: Remote Server

Waiting list:
- **FMC**: RD53A FMC adapter card with 4 lanes
- **Chip**: RD53A without sensor
- **Crate**: Power Module

Development and operational experience:
- 2CBC2 chip readout with Ph2 API Framework (middleware)
- Downloading firmware to FC7 through IPBus
- Generating µDTC firmware bitstreams remotely in Openstack server
- Reading and writing registers in FC7 firmware
RD53A chip readout with FC7

Questions about the test setup:
- RD53A chip or emulator?
- BDAQ and uDTC have different headers!
- Will there be S-Link instead of IPBus?
- Tx gigabit transcievers are missing in RD53A FMC Adapter Card on LEMO outputs
RD53A Emulator

- RD53A Chip Emulator has already developed!
- It would be useful after the firmware porting is ready and before the chip arrives.
- A simple behavioral model would be enough.

Future development objectives

- Port BDAQ to μDTC firmware
- Review of Laurent’s modified BDAQ firmware which contains IPBus
- Porting Louismi’s RD53 FMC Adapter Card to FC7 (FC7 schematic is in progress)
- RD53A chip testing (the chip is on its way...)