IT-μDTC firmware development

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IT-μDTC Firmware Development Update

- Running development tasks
  - Porting TLU / DIO5: I have already ported these blocks in my local repository...
    - BUT for programming the DIO5 a new i2c master is necessary
  - Porting AMC13 / TTC Decoder: To do...
    - firmware blocks can be ported but I do not have a hardware and I do not know how to test it

New i2c master

- Basic concepts
  - it will be able to communicate with all i2c slaves on CERN, KANSAS and DIO5 FMCs
  - it will be driven by IPBus but PLL will be programmable through the firmware as well
  - new registers need to be implemented

- Working on
  - setting up simulation environment for testing the behavior of the i2c master driven by IPBus to speed up the design process (based on Mykyta’s general simulation)
  - next step will be to program the PLL with an FSM which is bypassable
  - after that the DIO5’s i2c master will be replaced as well to assign threshold values to the DAQ