

-- JeanPierreCachemiche - 27 Sep 2007

For all the operations below, you must first log on the CERN gateway (**lbgw.cern.ch** if you are outside from CERN or **gw01.cern.ch** if you are at CERN), and from there on the local master (**tmudaq01**) using Pierre-Yves Duval account (see him for user name and password).

By default the FPGAs are programmed with the operational version of the code. The SPYD test requires a special configuration.

So first, **load the FPGAs with the SPYD test configuration**. For this, launch the TOOLBOX utility available through PVSS to be able to program the FPGAs of a crate through the ECS.

Processing boards programming:

- Select the crate by ticking the appropriate crate case at the top of the screen;
- Select the processing boards by ticking the cases 0 to 11;
- Click on the *Command list* button at the bottom of the screen;
- Double click on *PB\_Spyd\_Test\_Load\_Ram* : the command is displayed in the caption at the bottom of the page;
- Click on the *Send Parallel CMD* button to launch the command in parallel on all the processing boards;
- At this time the a yellow led is highlighted in front of each board during the whole duration of the programming (approximately 5 minutes);
- When the programming is over, the yellow led turns to blue for each board : at this time all the processing boards are programmed.

Controller board programming:

- Unselect all the processing boards by clicking the *CLR* button under the selected crate;
- Select the controller board by ticking the case 15;
- Click on the *Command list* button at the bottom of the screen;
- Double click on *CB\_Spyd\_Test\_Load\_Ram* : the command is displayed in the caption at the bottom of the page;
- Click on the *Send Parallel CMD* button to launch the command on the controller board;
- At this time the a yellow led is highlighted in front of the board Nr 15 during the whole duration of the programming (approximately 2 minutes);
- When the programming is over, the yellow led turns to blue for each board : at this time the controller board is programmed.

Then **Launch the SPYD test**.

- Launch the *Launch\_Spyd\_Test* bash file on the login directory or launch the program using its full path *WORKSHOP\_V3/BOARDS\_MODULES/SPYD\_TEST/PROGRAMS/HardwareTest.py*;
- In the window that opens click on the *Modify* button;
- Choose a directory to contain the test results in typing its full path in the *Directory for test files* caption;
- Choose a subdirectory to contain the current test results in typing its relative path in the *Identification name for the test* caption;
- Choose *Backplane* in the *Type of test* scrolling list;
- Choose *Manual selection* in the *Target* scrolling list;
- Click on Q1, Q2, Q3 or Q4 to select the crate on which you want to run the test;
- Check that the corresponding boards are well selected by clicking on the *Config* button (Remind that the boards number correspondence is the following : Q1 = TMUTB0xx, Q2 = TMUTB1xx, Q3 = TMUTB2xx, Q4 = TMUTB3xx); at this step you can change manually the configuration if cards have

been inverted or changed for maintenance reasons for example);

- Choose the duration of the test in typing its value in the *Duration in seconds* caption;
  - Click on the *Apply* button to validate the configuration;
  - Click on the *START TEST* button to launch the test;
  - When the test is over, results are displayed in the green window;
  - More information can be obtained by clicking on the *VIEW ERROR* or *ALL RESULTS* buttons : an openoffice log file opens with all the details.
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