NTU - Athens

BROOKHAVEN NATIONAL LABORATORY

SDC - Scalable Detector Control

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What About SDC ?

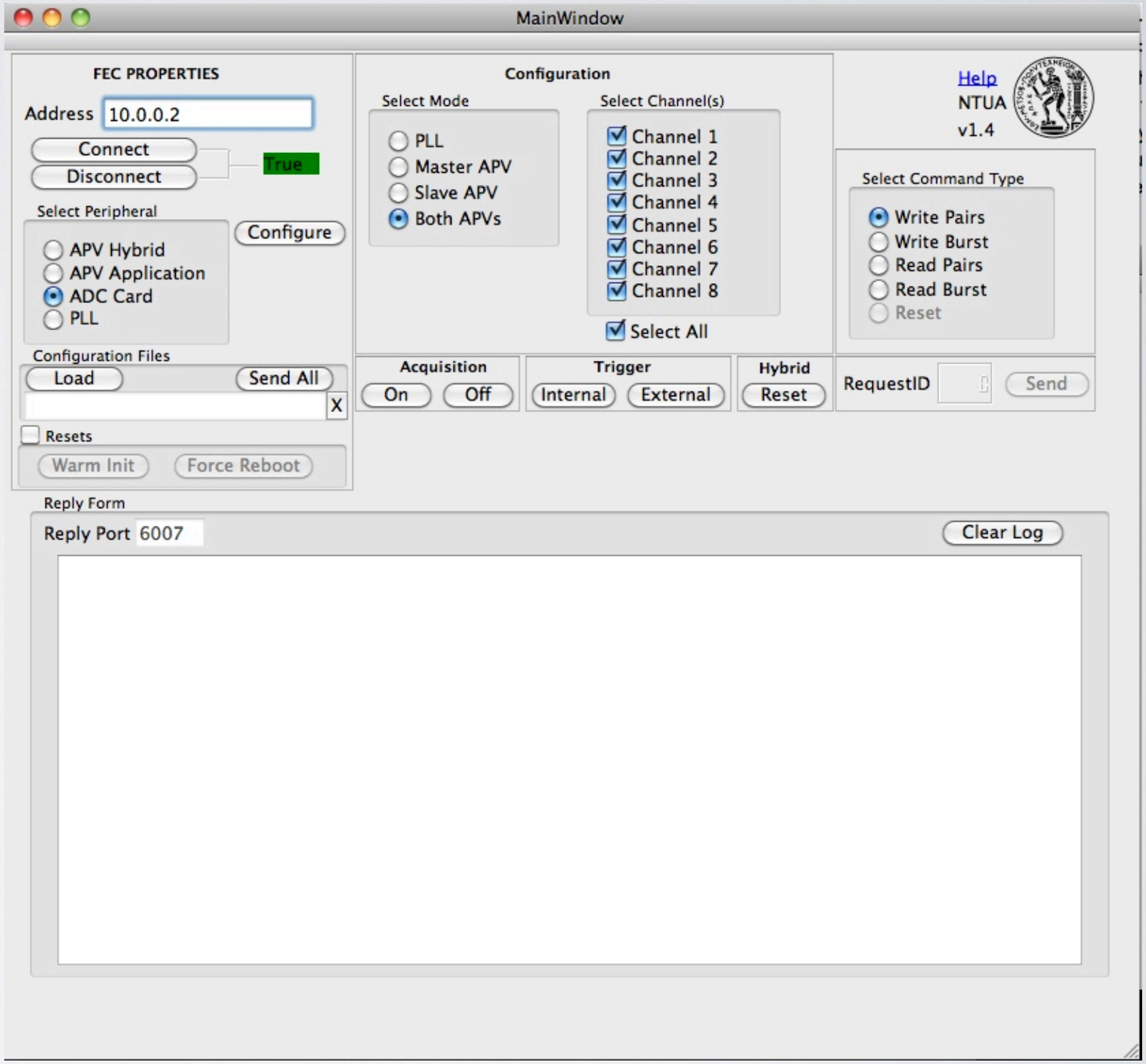
- SDC is replacing the existing readout electronics control done until now through USB interfaces.
- Get rid of USB restriction which was a bottleneck for ATLAS Micromegas installation.
- Developed within Qt and C++ frameworks
- Same functionalities
- Cross platform application (Mac OS X, SLC5 & Ubuntu already fully tested, Windows ?)
- Easily scaled up for new chips and large Applications

Communication

- Ethernet communication - green light for real installations
- Based on UDP Packets
- Existing way of Error handling - Very Important
- Based on Request - Reply format
- Recipe Files for different configurations - New (create, correction, full initialisation, load configuration)
- Port association to Peripheral gives large flexibility on design

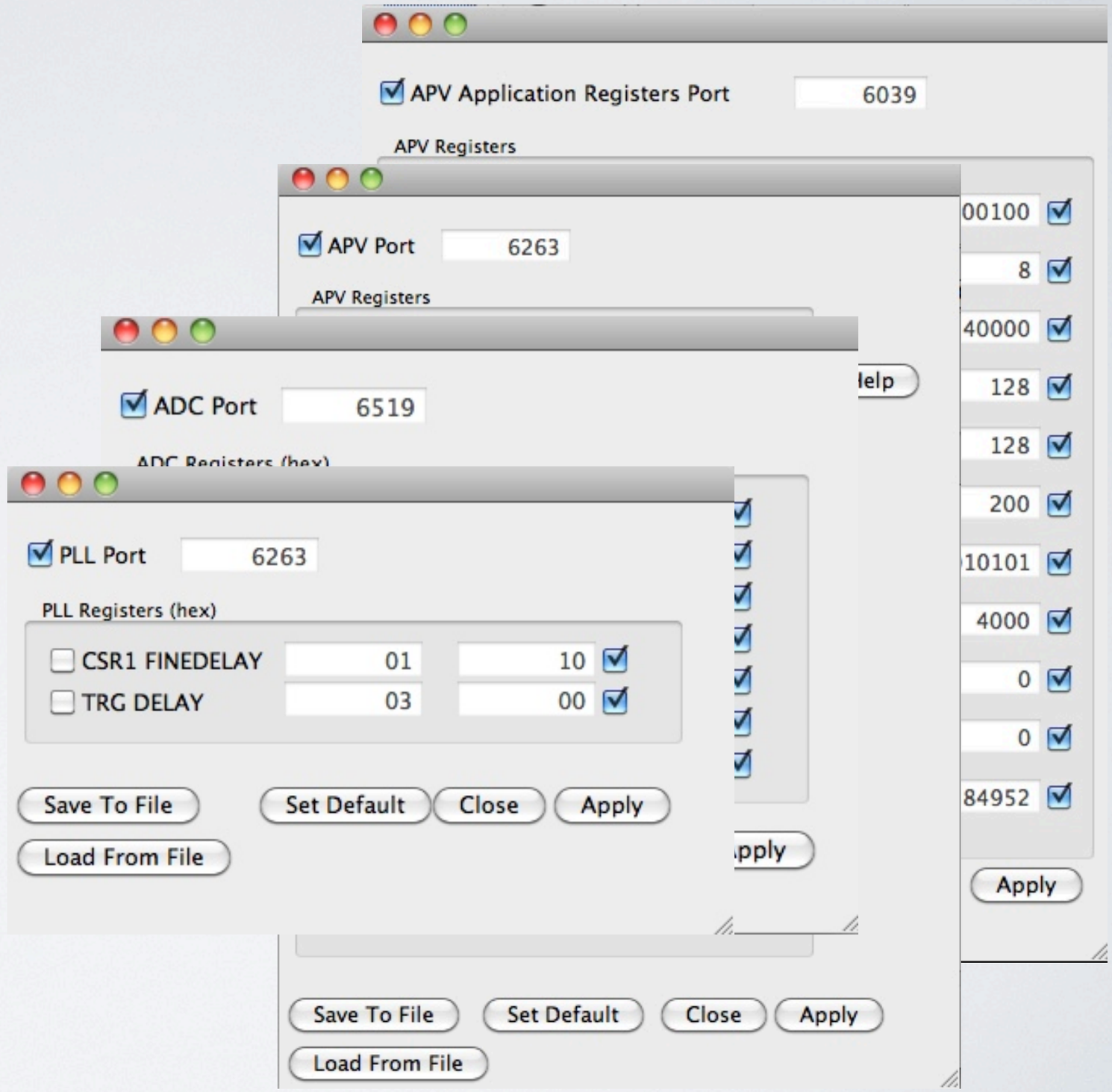
Preview v1.4

- Divided in a way of constructing packets.
- APV, PLL, ADC support until now.
- Recipe files can easily constructed.
- Flexible
- Read / Write Commands
- Reset Commands implemented for warm initialisation and reboot of the FEC itself.
- Reply form for Error handling
- Online help Integrated



Peripheral Configuration

- Option to send all or some of them
- Apply -> Send
- Default Values
- Load / Save configuration file
- Easily expandable as separate widgets



Status and Plans

- Version **1.4.1** Ready and Stable
- Implemented Log files on Request
- Broadcast mode
- IP Range Initialisation
- Implement forthcoming chips eg BNL chip
- Error handling mechanism improvement
- Redesign layout for large application - dynamically expandable

More info: https://twiki.cern.ch/twiki/bin/view/AtlasPublic/SDC