Daq stack Term 3

Implementation

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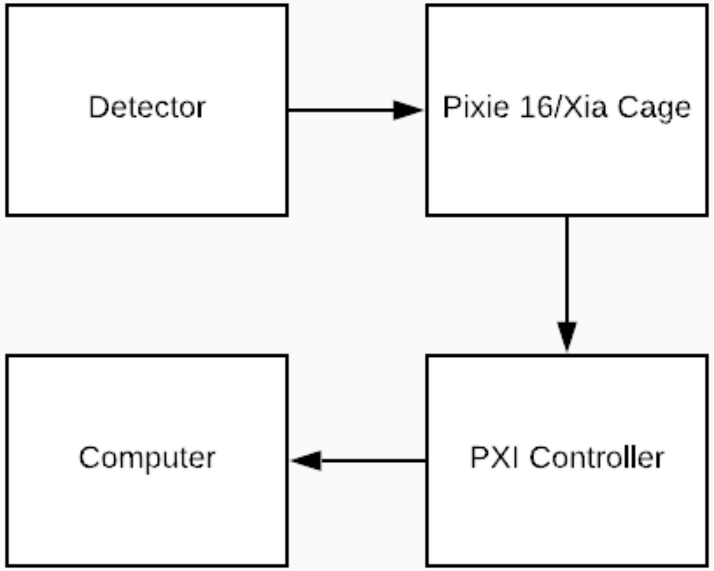
What is DAQ Stack

http://wits-hep.blogspot.com/2014/12/visiting-ithemba-labs-in-cape-town.html



Frameworks and Tools

Frontend

- React framework
- Material ui
- Moment
- Plotly.js
- Axios
- react -dropzone
- React-router
- Written in typescript

Frameworks and Tools

Backend

- Express
- Busboy
- Body-parser
- Child_process
- Utils
- Fs
- Moment
- Written in TypeScript

Implementation

Processor Code

- CSV data output
- Time analysis processor

Implementation

Frontend

3 pages have been created

- Process
- History
- Details

Implementation

Backend

- Creating an experiment
- Storing experiment files
- Execute PAASS-LC
- Store and host experiment data

Testing Processor

- Time Difference Processor
- Simulating Detectors Signals

Testing

UI

UI

- All Cases tested manually
- Large file upload.
- Missing data in DB
- Navigation
- All api endpoints

References

[1] http://wits-hep.blogspot.com/2014/12/visiting-ithemba-labs-in-cape-town.html

[2] S. V. Paulauskas, M. Madurga, R. Grzywacz, D. Miller, S. Padgett and H. Tan, "A digital data acquisition framework for the Versatile Array of NeutronDetectors at Low Energy (VANDLE)," Nuclear Instruments and Methods inPhysics Research Section A: Accelerators, Spectrometers, Detectors and associated Equipment, p. 25, 2013.

[3] K. Panda and T. Gregor, "Measuring the time spectrum," Schuler Labor, 2013.