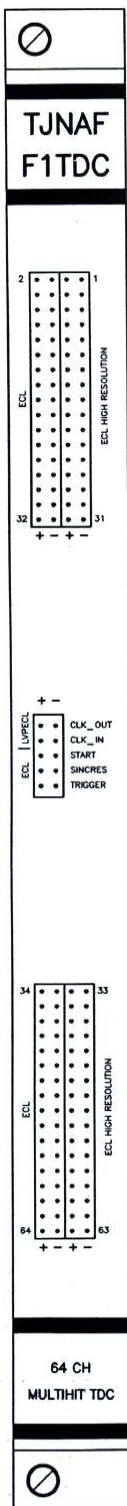


QWEAK DAQ

**Stephen Wood
Hall C
August 18, 2004**

Jlab Multihit TDC

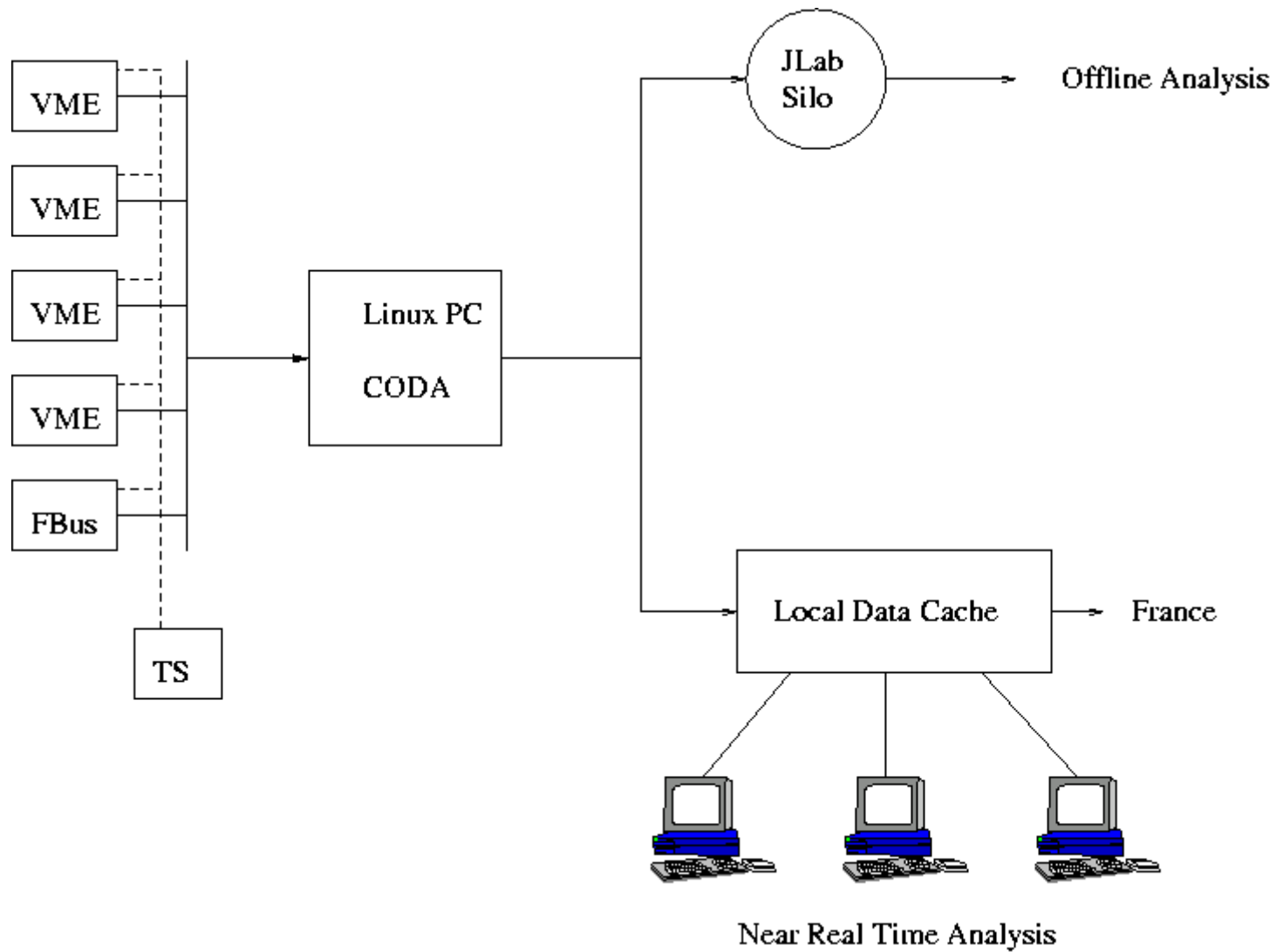


- Functionally like Fastbus 1877
- ECL inputs
 - 64 Channels @ 120ps LSB
 - 32 Channels @ 60ps LSB
- VME64X
- Hall C has 30 boards
- In process of procuring 25 more

DAQ Comments

- **>= 1 KhZ rate OK**
 - Well below limits of CODA
 - Modules need Latch (Event buffer depth = 1)
 - Scalers have latch or multi-event buffer
- **Recommend:**
 - Use only VME (no fastbus)
 - Separate DAQ systems for production and calibration
 - Little or no overlap in detectors?
 - 2 computers
 - 2 trigger supervisors

GO DAQ



Software

- **G0 used CODA ET system to supply data to real-time analysis**
 - **Feedback on helicity correlated beam properties**
- **Automated ROOT analysis**
 - **Nice GUIs showed backup and analysis status.**

Division of responsibilities

- **DAQ/Electronics coordinator**
 - **Producton DAQ**
 - **Bar electronics**
 - **Beam diagnostics DAQ**
 - **Trigger logic (30Hz or 1 KhZ)**
 - **Feedback software**
 - **Online analysis**
 - **Calibration DAQ**
 - **DAQ Coordinator**
 - **Analysis/Tracking software**