Instrumentation Department
~~"Conventional"~~ Front-ends

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~~"Conventional"~~ Front-ends

- Backplane Architecture: VME
- SBC: Motorola 68K or PPC CPUs
- Operating System: VxWorks
- Communications: MOOC/ACNet
- Programming Language: C/C++

Front-end Catalog

- 3 - **F**ast **B**unch **I**ntegrator (2 TEV & MI)
- 2 - **DC C**urrent **T**ransformer (TEV & MI/RR)
- 2 - Analog **Mu**ltiple**x**er (BLT input)
- 6 - **Acc**umulator **B**eam **P**osition **M**onitor
- 7 - **R**ecycler **BPM**
- 3 - Main **I**njector **BPM** (A1, P1 & AL)
- 1? - **B**eam **L**ine **T**uner (Recycler & MI?)

We Rely Upon Controls for...

- Networking Infrastructure
- Timing I/O & Infrastructure (e.g., Tclk & xUCD)
- Accelerator Control Network Software
- Real-time Operating System
- Software Development Tools
- I/O Drivers (e.g., Echotek/Joerger drivers)
- Application Programs (e.g., R33-BPM diagnostics)

What Falls Short?

- Object Based Interface to ACNet
- MOOC/ACNet User Guide (read the code?!)
- Boot-time Download (slow & unreliable)
- Development Process & Tools (debugger)
- VxWorks Maintenance
- Data Quick-look / Engineering View

How We Get By

- Object Based Interface to ACNet:
- Not Yet Addressed
- MOOC/ACNet User Guide (read the code?!):
- Call 911! (Charlie/Dennis/Rich/Tim)
- Boot-time Download (slow & unreliable):
- Files & BBR (SLAM Replacement unreliable)
- Development Process & Tools (debugger):
- RFIES Tools (must debug with printf())
- VxWorks Maintenance:
- Not Addressed
- Data Quick-look / Engineering View:
- LabVIEW out-of-band connectivity