



Track-Finder Test Plans

Approximate schedule

- Jan.'03: SP2002 prototype completed, initial tests begin
- Feb.'03: MPC→SP optical link tests
- Mar.'03: SP trigger logic tests
- Apr.'03: CSC system tests with cosmic rays
- May'03: beam tests with CSC chambers at CERN

Time is very tight, and still have a lot of firmware and software to write

- Software is being written using XDAQ, hopefully in a way that is relevant for future slice tests of muon system





People involved with software at UF

Song Ming Wang

- ➔ Post-doc, 50% time, XDAQ interfaces and communication

Holger Stoeck

- ➔ Post-doc, 50% time, VME test software, code manager

Bobby Scurlock

- ➔ Student, full-time, VME test software, simulation code

Alex Madorsky

- ➔ HW and SW engineer, author of some original SP code and our “technical consultant” for new development
- ➔ 100% time during testing period in 2003

Longer term:

- ➔ Barashko and Drozdetski available to help with interface to EMU FAST-DAQ software (starting ~ March 2003)





CVS Repository and Web Page

<http://www.phys.ufl.edu/~tfcvs>

UNIVERSITY OF FLORIDA

TF CVS Repository Home Page

General Information:
[Repository Access](#)

- SBS 617/620 VME busadapter

Module Information:
[VMEDriver](#)
[TrigDAQ](#)
[TrigData](#)
[ORCA](#)
[OLD RiceMPC](#)
[OLD LB](#)
[OLD TFtest](#)

Browse the Repository

FAST-DAQ Software

External Software Packages:
[HAL](#)
[XDAQ](#)

Other Links:
[EMU Slice Test Home Page](#)
[CVS online help](#)

Home

Please send comments to [Darin Acosta](#) or [Holger Stoeck](#)

Documentation

- [Description](#) of the LB module (TEXT format)
- [Manual](#) for CrateLoader (TEXT format)

Repository Tags

Module LB		
Tag	Date	Comments
LB_1_0	13.11.2002	Load and test routines for SectorProcessor2000 board DOES NOT work for SectorProcessor2002 board!
LB_1_1	13.11.2002	Empty directories didn't get tagged in LB_1_0. Fix in Makfile to check for missing directories.

NOTE: This module is no longer maintained !

TrigDAQ/TrackFinderCrate/test

Powered by **APACHE**
ViewCVS and CVS Help

Current directory: [\[tf_cvs\]](#) / [TrigDAQ](#) / [TrackFinderCrate](#) / test
Files shown: 6

File	Rev.	Age	Author	Last log entry
GNUmakefile	1.5	2 days	tfcvs	HS - Added link options to VMEDriver package
LoadLookupTable.cpp	1.3	2 days	tfcvs	HS - Update of LoadLookupTable
LoadLookupTable.env	1.1	2 weeks	tfcvs	HS - Submission before weekend ;-)
LoadLookupTable.h	1.3	2 days	tfcvs	HS - Update of LoadLookupTable
dummy_test.cpp	1.1	2 days	tfcvs	HS - Added test routine <dummy>
dummy_test.h	1.1	2 days	tfcvs	HS - Added test routine <dummy>

Show files using tag:

Repository administered by [Darin Acosta](#) and [Holger Stoeck](#)

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Old Test Software

This summer we resurrected the test software used in the Florida tests of 2000 and ported it to Linux


- ➔ **Verified that SP2000 prototype still works, so it can be used for tests with new software while we wait for 2002 prototype**

Original code has the following packages and sub-packages:

- ➔ **ORCA**

- A standalone version of the trigger simulation used in the test to validate the hardware results. This has been fully updated to the latest prototypes.**

- ➔ **LB**

- bedtest: National “SCANEASE” software ported to download Xilinx FPGAs using JTAG via Bit3 VME interface**
- jam: Same thing for Altera**
- LoadLookUps: Downloads SP LUTs**
- svf2evf, datToBin: utility routines to convert file formats**
- LoadChips→CrateLoader: JAVA GUI** 

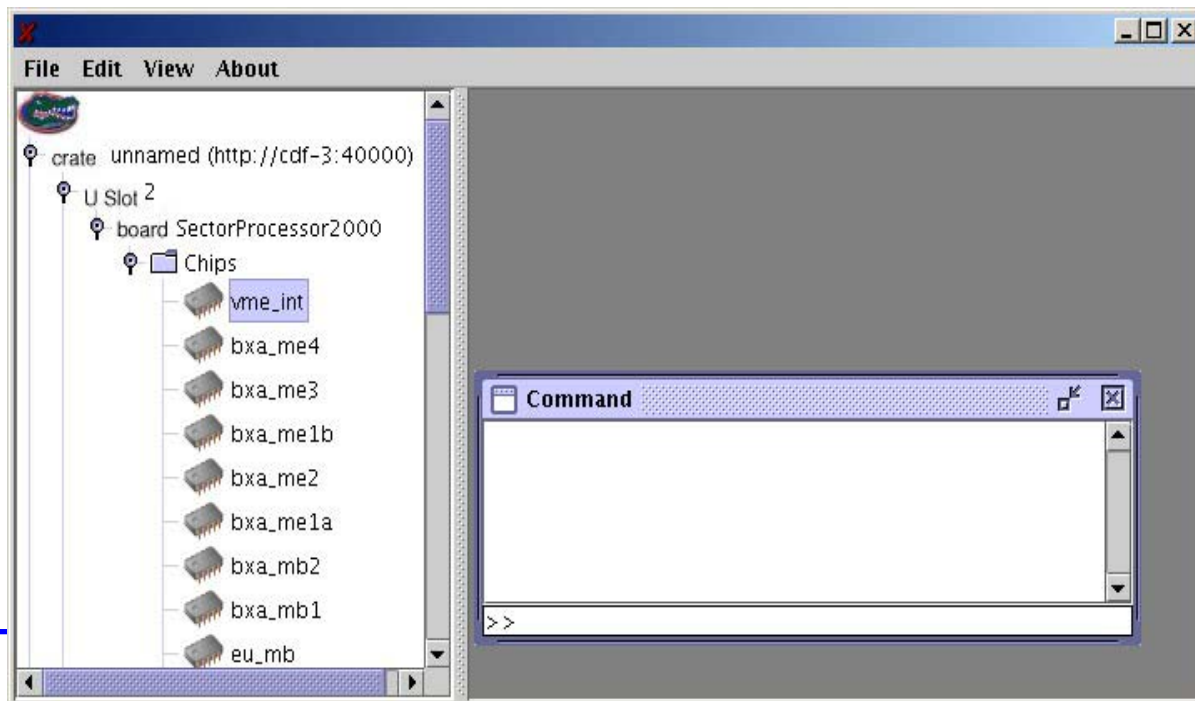




Crate Loader

A summer student from Ohio, Paul Pfeiffer, spent some time generalizing the Java GUI to load more than one card in a crate and more than one crate

- ➔ This is to prepare for a real chain test down the road, and to become compatible with XDAQ
- ➔ Keeps track of the FPGA and LUT **configuration files**, calls low-level downloading programs in LB package
- ➔ Want to update to read/write XML files used by XDAQ
- ➔ Possibly extend it to send SOAP messages to XDAQApplications





New Software and Test Plans

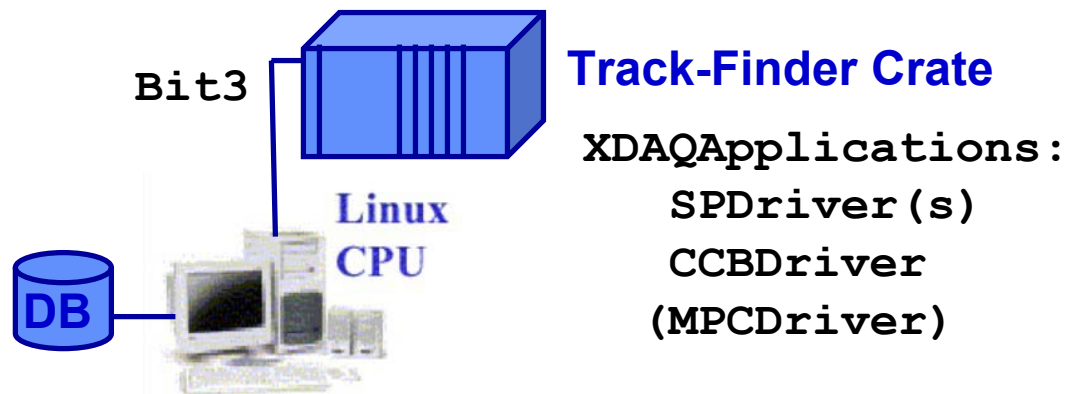
Implementing a XDAQ compliant set of software to run CSC trigger tests

VME control (using HAL library):

- ➔ Classes exist for VME configuration of TMB, MPC, CCB, and TTC from Rice University (Greg Pawloski)
- ➔ Developing similar SP classes with additional capability to download LUTs and FPGAs from external files
 - ❑ Integrating previous code from prototype tests in 2000

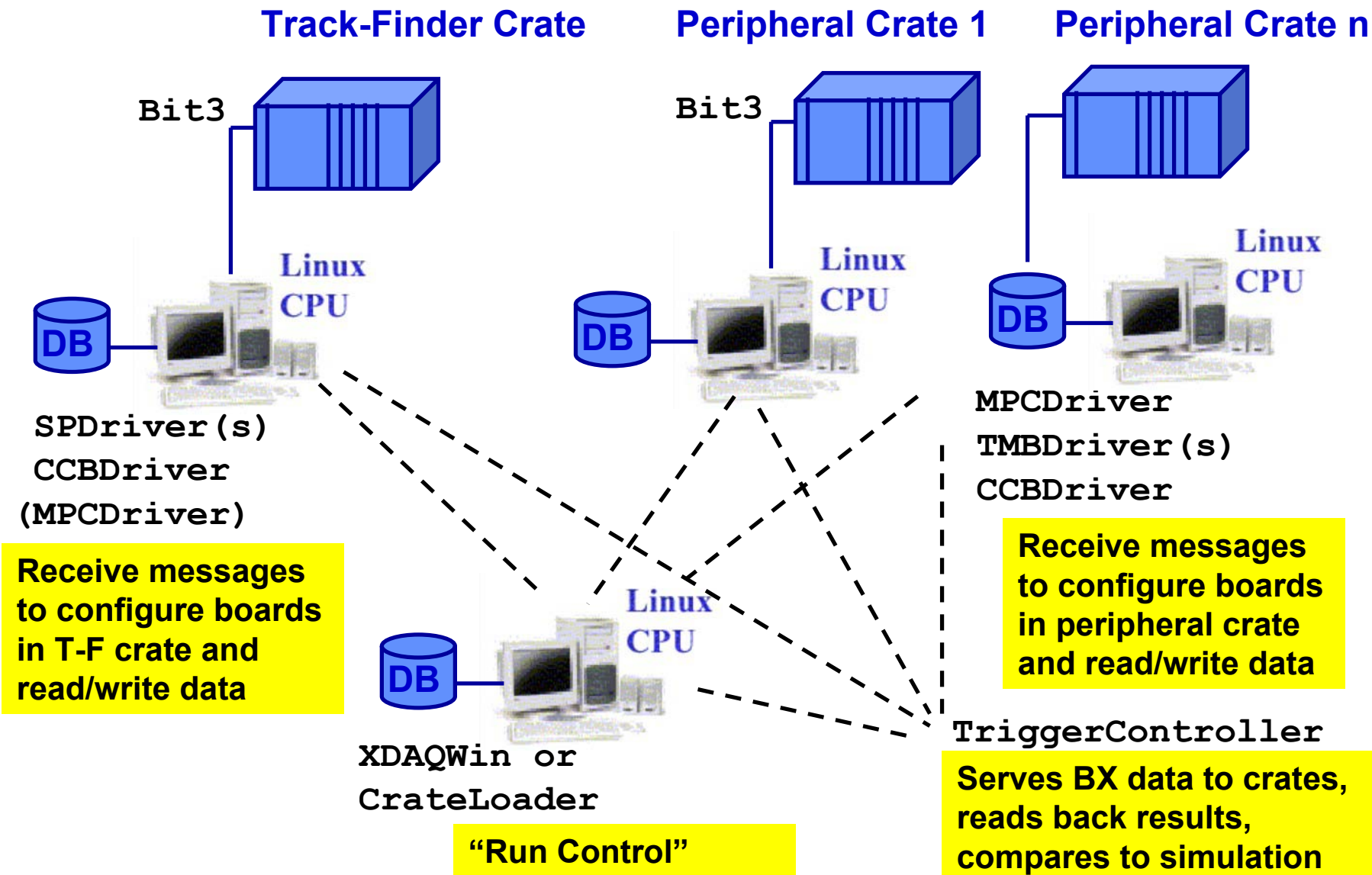
“Front-End Drivers” (XDAQApplications)

- ➔ Developing “Driver” classes that instantiate VME classes and execute XDAQWin configuration commands





CSC "TrigDAQ" Implementation





Package Organization

Presently organizing code in repository into packages that correspond to which XDAQ Executive application it is expected to run in:

→ TrackFinderCrate

- Here the SP classes based on HAL reside, and the XDAQApplication that wraps it and receives SOAP messages

→ PeripheralCrate

- Here the TMB, MPC, and CCB classes based on HAL reside, and the XDAQApplications that wrap them and receive SOAP messages

→ TriggerController

- This application talks to our standalone ORCA simulation to serve events, downloads data into boards (above applications), reads back results, and compares to simulation





Class Structure of SP Code

Some details...

