Status of the Anode Front-end Electronics

EMU Meeting, University of Florida

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Outline

1. AFEB Status from FAST Site Tests
2. AFEB−ALCT Cable Status
3. Work on LVDB for VME Crates
4. EMU Database Improvements
5. New ROOT Software for Analyzing FAST Site Results

I. FAST Site Tests of Anode Front-End Boards (AFEB)

New results since last EMU meeting in October 2003.

FAST Site	#Chambers	#AFEB's	#Bad AFEB's	Reason
Florida	11	264	2	threshold offset low threshold
UCLA	10	240	0	–
PNPI	15	618	1	crosstalk
IHEP	5	120	0	–

AFEB failure rate $\approx 0.3\%$.

No problems with 1242 AFEB$-$ALCT cables.

II. AFEB−ALCT Cables

- 10,596 cables finished and shipped to FAST sites.
- The total includes cables for 38 ME4/1 chambers.
- Need new cables for extra spare chambers: 2 ME2/1, 2 ME3/1, 2 ME4/1, 1 ME1/2, 1 ME1/3.
- Need new cables for ME1/2 and ME4/1 prototype chambers at Florida.
- Thus, will produce 324 more cables − should be finished in 2 months.
- Also will make 42 non-halogen-free cables for long-term ALCT stability test at UCLA.

III. Work on LVDB for VME Crates

- A. Golyash designing low-voltage distribution board for trigger/DAQ VME crates in cooperation with S. Lusin and A. Madorsky.

- A total of about 50 LVDB's will be produced.

- Schematic design is done, now working on layout.

- A small prototype (for 3 regulators from a total of 35) will be produced and tested in January-February 2004 to investigate large currents and mechanical issues.

IV. EMU Database Improvements

- I. Vorobiev transferred all EMU databases to the new Physics Applications database server (Oracle9i).

- Along with CERN DB group, he helped solve an intermittent problem for this new server when connecting from outside CERN.

- He set up an extensive database for this year's Testbeam run. Used intensively during data analysis.

- He began the CMS EMDB (Equipment Management Database), which holds information on all parts of the detector – chambers, electronics, cables, racks, crates, etc.

- EMDB fulfills the requirements of French law to keep track of all irradiated pieces.

- It includes the location and movement history of all items, their position in the detector, their connections and also the history of replacement of any damaged parts.

- I. Vorobiev wrote a prototype module in May for the EMU cables. Now the table of cables has been extended to include more information and other tables have been created. (See next page for sample of update window.)

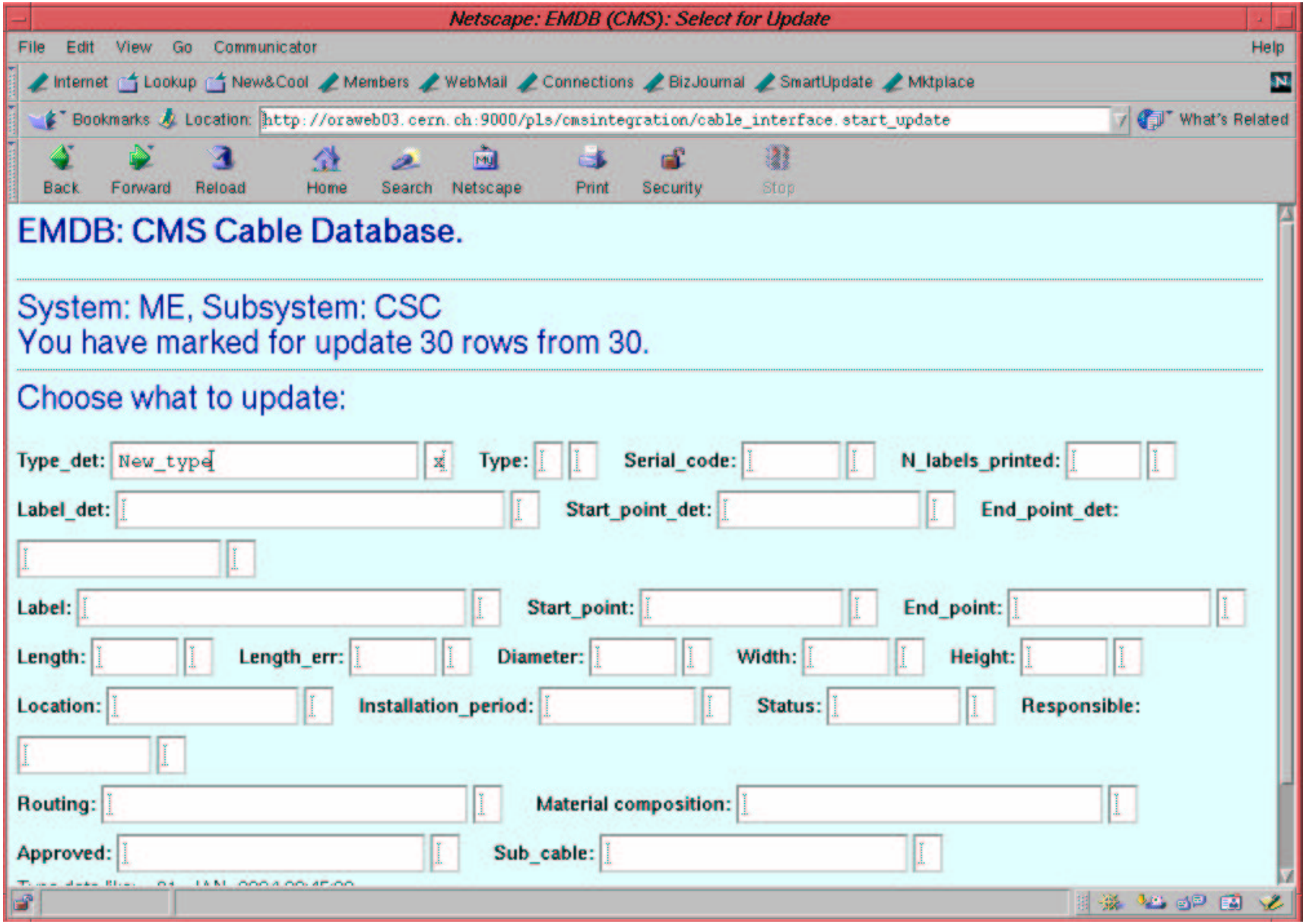
- EMDB now contains information about 50,000 CMS cables, all the racks and all the installed CSC chambers.

V. New ROOT Software for Analyzing FAST Site Results

- N. Terentiev has written a software package in ROOT for comparing results from the FAST sites and ISR tests of all chambers and electronics.

- Software is based on the analysis package he developed earlier for analyzing the testbeam data.

- He will present the first results during his talk in the chamber session.


Netscape: EMDB (CMS): Select for Update
File Edit View Go Communicator Help
Internet Lookup New&Cool Members WebMail Connections BizJournal SmartUpdate Mktplace
Bookmarks Location: http://oraweb03.cern.ch:9000/pls/cmsintegration/cable_interface.start_update
What's Related
Back Forward Reload Home Search Netscape Print Security Stop
EMDB: CMS Cable Database.
System: ME, Subsystem: CSC
You have marked for update 30 rows from 30.
Choose what to update:
Type_det: New_type
Type:
Serial_code:
N_labels_printed:
Label_det:
Start_point_det:
End_point_det:
Label:
Start_point:
End_point:
Length:
Length_err:
Diameter:
Width:
Height:
Location:
Installation_period:
Status:
Responsible:
Routing:
Material composition:
Approved:
Sub_cable: