History Buffers

Author: Ralph Johnson
Panel Changes: None
Subsystem: All
Documents: None
User Impact: Some
Help File: No

The history buffer system, in addition to collecting data, monitors fluctuations in device values and provides an “RMS” error if these values are changing by more than an allowed tolerance. The RMS calculation is based on a running mean and is exponentially damped with a time constant of about 2 hours. It thus reflects the device behavior over the last 2 hours with the most recent values having the greatest effect. Currently a magnet’s RMS value is reset whenever its BDES changes. However, since for most magnets there is no way to know if they have been turned off, when turned back on the RMS value can show an error until the effects of step change from zero to the current value have damped out. To alleviate this problem, new logic has been added to the monitoring software to detect when magnets are turned off or on. If the difference between the current value and the running mean is greater than 5 times the RMS tolerance, it is assumed the magnet was turned on or off and the RMS calculation is reset.

As before, any time a device is out of tolerance relative to its BDES and also has an RMS error, the magnet displays will show an “out of tolerance” rather than a “RMS” error.

Summary Status Displays on XCOWs

Author: Ralph Johnson
Panel Changes: None
Subsystem: All
Documents: No
User Impact: Some
Help File: No

Selecting the SLC-PEP summary status from the SDS panel on an XCOW will cause the display to appear on the touchpanel screen. You may then use the mouse to select the list of devices “behind” each box. Until now one had to return to the SDS panel to select the state (red, new, acknowledged, etc.) used for determining which devices to list or have their states reset. New buttons have been added to the lower right hand corner of the display to allow using the mouse to select an item from the SDS list and to set it to a desired state. Similarly, there are new buttons at the lower left hand corner of the display to select the state used in displaying a list of devices “behind” a box. Thus one may now perform all necessary functions using the mouse on the summary status display without having to return to the SDS display.
Additionally, when the Summary Status display is selected, displays on the upper screens are halted to prevent the summary status display from appearing on them as well as the touchpanel screen.

**Improvements to BPM Code in Micros**

**Author:** Tony Gromme  **Subsystem:** BPM  **User Impact:** Little  **Help File:** None

**Panel Changes:** None  **Documents:** None

The BPM data acquisition code in the micros now allows multiple calibrations per readout buffer ring definition. This improvement was done for use by the new fast feedback code. Existing (old) fast feedback code in FB69, FB31, FB29, etc. has been made compatible with the new version of the BPM software. The SCP acquisition of BPM data is unaffected by these modifications.

**Automatic Display Selection at XCalf Startup**

**Author:** Michael Gaviano  **Subsystem:** SCP  **User Impact:** Small  **Help File:** None

**Panel Changes:** None  **Documents:** No

The requirement for specifying a display with the command

```
set display /create/node = node name
```

prior to running an XCalf has been relaxed. If you set host to SLC or MCC from a workstation (e.g. SLCW23,) and then run an XCalf, the SCP will automatically select your workstation as the default display. In addition, if you have logged in to SLC or MCC directly (e.g. from a Xplex terminal server,) the SCP will prompt you for the node name of an X device on which you would like the scp displays to appear. You need answer only the short workstation name of your choice, for example SLCU2, or SLCW23. As before, you still must set appropriate security privileges for a workstation to be used as the display node.

There is one known limitation to this default display selection. If you have already logged in to either MCC or SLC and then set host to MCC or SLC, the SCP would not be able to figure out a default display station. In this case you still need to set the display prior to running the SCP.

One may still select a display manually by entering the node name via the `set display` command. However this should normally not be necessary and we strongly recommend that people remove the `set display` command from their LOGIN.COM.COM file if it has been previously included there.

**PF Key Help**

**Author:** Lawrence Searcy  **Subsystem:** SCP  **User Impact:** none  **Help File:** Yes

**Panel Changes:** One  **Documents:** No

Have you ever tried to figure out how the PF keys are assigned on your SCP? Do you remember which PF keys are active on a CALF that are not active on a COW? Guess no more. There is now a help file that describes what each PF key does on a COW, CALF, or Amiga. The help file may be viewed by selecting the `HELP FOR PFKEYS` button located on the Special Displays panel.