Summary Displays

Author: Ralph Johnson  Subsystem: All  User Impact: Some
Panel Changes: No  Documents: No  Help File: Yes

Introduction

The summary displays have been upgraded to provide additional and more real time information. This includes the overhead console summary displays as well as individual SCP summaries which are selected by touchpanel buttons.

- Currently whenever a fault occurs, the corresponding summary remains red for several minutes to give operators an opportunity to notice the fault. This works well, but could produce a misleading picture of the current state of the machine. Changes have been made so that the current state of the summaries is always shown, while at the same time providing an indication of recent faults.

- In the present Summary and SDS displays, the color of a box, a value, or a line depends on the severity of the devices as determined from the database. However, unlike other SCP displays, the status of the corresponding micro is not considered in setting the color. With the release of the current software, the severity used to color summary (and other dcxp) displays will now incorporate the micro status.

- Currently when there is a camac error, all affected devices generate separate error messages. Now camac errors will be summarized in single error messages for the micro in which they occur.

Summary and MPS Box Colors

The box colors and line types reflect the following states for the overhead SDS and MPS displays.

- solid red outline with red bar - error (faulted in past 2 min.)
- solid red outline - error
- solid white outline - micro off
- dashed yellow outline - acknowledged
- dashed cyan outline - deferred
- solid blue outline - offline device
- solid yellow outline with red bar - warning (faulted in past 2 min.)
- solid yellow outline - warning
- solid green outline with red bar - ok (faulted in past 2 min.)
- solid green outline - ok (faulted in past 7 min.)
- dotted green outline - ok
- dotted white outline - no severity

The above list indicates the order of "severities". For each summary box, the outline color reflects the worst state of the set of devices in that box.

The number shown in a summary box is the number of items having the severity indicated by the box color. For example, if the outline is red with a red bar, the number shown is the number of faulted devices (not the number of recent faults). Summaries of no severity or "ok" will not have a number shown.

Recent Faults

When there is a new fault a solid red bar appears in the upper 1/3 of the box as before and remains for 2 minutes so that it can be noticed by operators. If the state of the box changes to "ok" during this time, the red bar will remain but the box will change to a solid green outline. After the red bar disappears, if the summary is "ok" the box will continue to be solid green for an additional 5 minutes to provide time for "operators" to notice that there has been a recent change. After the 5 minute period the box will then go to a dotted green outline. Thus if a device quickly returns to "ok", a solid green outline will indicate that it had recently faulted and then returned to the "ok" state.

Box Colors for SCP Summary Displays

The box colors and line types reflect the following states for the summaries selected by touchpanel buttons. These colors are the same as the SDS and MPS displays but do not contain any recent history information.

- solid red outline - error
- solid white outline - micro off
- solid blue outline - offline device
- solid yellow outline - warning
- dotted green outline - ok
- dotted white outline - no severity
**Micro Off Status**

Periodically the micros are checked to see if they are active. The processing of SDS device lists have been changed so that if the device micro is off (inactive) the line will be displayed in white. Whenever a micro goes off, a single message for that micro will be generated. No messages will be generated for any device contained in an offline micro unless its severity has changed.

**Camac Errors**

When there is a new camac error associated with one or more devices, no messages will be generated for the individual devices. Rather, a single message will be generated for the micro and will include the number of devices having new camac errors.

**Disabled Devices**

In a future release of the summary software, a mechanism will be provided to disable devices to prevent fault messages from being generated during accesses.

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**Feedback + Feedforward Documentation**

<table>
<thead>
<tr>
<th>Author: Tom Himel</th>
<th>Subsystem: Feedback</th>
<th>User Impact: Small</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Changes: No</td>
<td>Documents: Yes</td>
<td>Help File: Yes</td>
</tr>
</tbody>
</table>

A user's guide for fast feedforward and the scavenger energy fast feedback loop has now been written. It describes how each of them works and how they interact. It also includes a block diagram of the feedforward hardware. It has been distributed to all of the operators. Extra copies are available from Dennice, the Software Engineering secretary on the second floor of MCC.

The above user's guide has been included as a chapter of the Fast Feedback User's Guide. This document now consists of an updated version of the original 7 page index panel article describing fast feedback, the new chapter on the scavenger energy loop, and a glossary. Copies of this are also available from Dennice.

There is now extensive online help available for the fast feedforward system. Select any of the feedforward panels (off of the FEEDBACK SYSTEM INDEX) and have a look.

Finally, there are two new button macros on the FEED FORWRD EP01 panel which can be used to smoothly turn feedforward off or on. These show up on buttons and have help which explain what they do.

We hope that this documentation, the new scavenger energy summary display, and the new FEED FORWRD HEADRM button will make this complicated system understandable and usable. Comments are welcome. Address them to Ian Hsu, Keith Jobe, or Tom Himel.
Control Software Updates

Author: Software Engineering  Subsystem: All  User Impact: None
Panel Changes: No  Documents: No  Help File: No

Following is a brief description and reminder of the procedures that are routinely used to update the control software.

The SLC control system typically maintains two versions of the online software for operating the machine: the so called “old” and the “new” versions. The “old” version consists of the software that at some point has been designated as the official production code, while the “new” version includes all the software that has been released since the “old” designation. This is intended to allow for quick and easy access to the latest releases of the control software, while providing a safety net for going back to previous versions of the software should the need arise.

When a member of the Software Engineering group has tested a modification to code, first on the SLC machine, then on MCC, the new software containing the modification is often immediately moved into production on the MCC VAX. This is especially true if the modification is urgently needed. The modified code then becomes part of the “new” software and is immediately available for use upon restarting a SCP. If a SCP is not restarted, the old code is still in use on that SCP.

Every Monday morning (with some exceptions) through a process called the software sweep, all the “new” versions of the software become “old”. Thereafter, any and all new releases will be part of the “new” software.

To switch between the “old” and the “new” versions of the control software, one may issue the commands oldsoft or newsoft respectively before starting a SCP. If oldsoft is issued, then the previous week’s version of the software is used, with NO updates from the intervening week. Entering newsoft will provide a list of what software has been recently released as well as allowing the latest software to be used. It should be noted that newsoft is the default setting for all accounts on MCC, i.e. if you login and start a SCP without typing oldsoft or newsoft, you automatically get the “new” versions of the control software.

There is only one version of the Micro software and most micros run the same code; some notable exceptions are: FB69, FB31, FB30, PL01, and PT01. Testing is done by selecting a test version of the micro code in a user’s directory. Please note that micro code changes do not take effect until the micro in question is re-IPLed. There are also no oldsoft or newsoft commands for micros. To reach an earlier image, someone knowledgeable must rename a previous version.

In summary, to use particular VAX code, issue the oldsoft or newsoft command at the VMS prompt and restart the SCP; to use new Micro code, re-IPL the micro.

New Channel for Software Questions:

The CATER system has been developed for reporting errors requiring either an immediate or scheduled response. Often questions arise concerning the correct or intended use of some system. The software group has established a mailing list for this purpose. If you need information and no software person is available, send mail to SOFTWARE_QUESTION. This will go to all the software people who deal with CATERs and will be responded to in a timely fashion.