From: STSCIC::FITCH 19-DEC-1991 09:45:10.19
To: BIELEFELD,FSW1::STNGTF512,BALZANO,CHANCE,HARTIG,KINNEY
CC: SCHWEIHS,FITCH
Subj: Change to GIMP items in SHP

At yesterdays Flight Software Operations Working Group meeting, we discussed the GIMP flags in the SHP and it was determined that the job of zeroing out the GIMP Error Flag would now go to Vicki's group. Further discussion centered on the fact that she would like to send a single word memory load for each observation which set both the Enable flag and the Error Flag. This can be accomplished by using word 169 bits 01:15 for the YFGIMPEN flag and word 169 bit 16:16 for YFGIMPER. At the beginning of each observation, the command would be sent to set the enable flag and clear the error flag such that in binary, the memory word load would be:

0000000000000010

A 1 in bit 15 = GIMP corrections enabled for this observation. A 0 in bit 15 = GIMP corrections disabled for this observation. A 0 in bit 16 = no error in FSW computations of this correction, A 1 in bit 16 = an error occured in the GIMP correction FSW.

The modification to the SHPF file in the PDB would then become:

```
YPCBTMP Y11T330A16516509:16PHOTOCATHODE B TEMP HEX                    HP 001220
YPCBTMP PHOTOCATHODE B TEMP                                           TI 001230
YPAMBTMPY11T331A16616609:16PRE-AMP ASSEMBLY B  HEX                    HP 001240
YPAMBTMPPre Amp Assy B Temp                                           TI 001250
YPMFBTMPY11T333A16716709:16PERMANENT MAGNET B  HEX                    HP 001260
 PMFBTMPPerm Mag B Focus Assy B Temp                                  TI 001270
ıXYDFTMPY03T334A16816809:16XY DEFLECTION FOCUS HEX                    HP 001280
YXYDFTMPXY Defl Foc DAC Temp                                          TI 001290
YFGIMPEN        16916901:15GIMP ENABLE FLAG
YFGIMPENGIMP Enable Flag
YFGIMPER        16916916:16GIMP ERROR FLAG
YFGIMPERGIMP Error Flag
ZSYSON1 Z03X501B26026009:09HRS Sys 1 On IndictrINT                    HP 001300
ZSYSON1                                                               TI 001310
ZMAJFR1 Z01Q503D26026010:12HRS Maj Frame # 1   INT                    HP 001320
ZMAJFR1                                                               TI 001330
ZPAGE1  Z01Q505D26026013:16HRS Page # 1        INT                    HP 001340
ZP  E1                                                                TI 001350
```

Please let me know if you have any questions. Thanks,

John

From: STSCIC::FSW1::STNGTF512 "Glenn Foley, GSFC/Code 512, (301)2
20-DEC-1991 14:40:41.54
To: SCIVAX::FITCH, SCIVAX::BALZANO, JOHN, STNJRLMOC, MICHELLE, GLENN
CC:
Subj: FOS SOI's and TLM Changes for GIMP, Overlite, and Autosafe

John/Vicki/John/Jeff/Michelle/Me -

The following are the proposed 4.0 TLM changes for autosafe removal/GIMP addition and proposed SOI's for new overlite check and GIMP. Please provide comments ASAP. John F.: I'll FAX you preliminary M&B markups by 12/24.

Please note: the SOI for the overlite "final exposure" table has been changed from the "YFNPFLG" originally proposed to "YFFEPFLG" to reflect the difference in usage discussed at the last FSWWG, if that's still OK with Vicki...

Also - I added the GIMP Tick counter to TLM - that still leaves 13 spares in NSSC-I TLM slots.

Thanks,
Glenn

telemetry
changes (FOS ED word 9, subcom 60)
****
mf 8, 68: YFASST (auto safe status) -> spare
mf 14, 74: spare -> YFXGIMPC (FOS calculated X GIMP Correction)
f 15, 75: spare -> YFYGIMPC (FOS calculated Y GIMP Correction)
mf 18, 78: YSFFLG (auto safe flag) -> spare -> YFGMPTIK (FOS GiMP TIcK counter)
mf 42, 102: spare -> YFGMPFCE (FOS GiMP FunCtion Enable ["high level enable"])
mf 47, 107: spare -> YFGMPCRE (FOS GiMP CoRrection Enable ["low level enable"])
mf 48, 108: spare -> YFGMPERR (FOS GiMP ERRor flag)

note: mf 42 was still defined in the M&B as reporting YMFECT, an item that was deleted from the flight software in 1985. We shall reassign it as part of the CCR.

SOI
****
YFGIMPCB - FOS GIMP Coefficient Buffer (hold new coefficient & "zero time")
(YFGIMPCB is a 9 word buffer)
YFGMPFCE - FOS GiMP FunCtion Enable ("high level enable" - compute corrections)
YFGMPCRE - FOS GiMP CoRrection Enable ("low level enable" - issue corrections)
YFGMPSTA - FOS GiMP STAtus (for SHP GIMP information, as described by John F.)
FFEPFLG - FOS Final Exposure in this Pointing FLaG (for overlite)

-- fin --

286-5809"

From: FSW1::STNGTF512 "Glenn Foley, GSFC/Code 512, (301)286-5809" 9-JAN-19
08:52:54.54
To: HSTFSW, GEIGER, STNJRLMOC, SCIVAX::FITCH, SCIVAX::BALZANO
CC:
Subj: Final FOS GIMP PDL Walkthrough

The final walkthrough of 4.0 FOS changes, including GIMP, new overlite, and safing from limit failures will be Friday, Jan 17 from 1 to 4PM in Bldg 3 Room 200. What you see is what you will get.

Jeff, Sam - we'll reschedule the QUEEN meeting.

John F., Vicki, Jeff - let me know if you plan on attending so we can get you a copy of the handout in advance.

- Glenn

From: FSW1::STNJEHCES "John Hueber - (301) 286-2481" 14-JAN-1992 19:08:20.28
To: SCIVAX::FITCH,STNJEHCES
CC:
Subj: PDL for GIMP review

ohn, following is a difference listing, numbered source listing and a PDL output listing for the review this friday. I thought this would be the best way to get it to you. Let me know if you need anything else.

John

STRICK::FSWI::STNJEHCES "John Hueber - (301) [illegible]"
18.23
SCIVAX::BALZANO,STNJEHCES

Subj: GIMP, Overlite redesign, etc Design review

Vicki, here's a copy of everything for you. the following mail messages will be differences, numbered source and PDL output listing for the PDL. Let me know if you have any questions or further needs!

John

To: Distribution
From: John E. Hueber/CES
Date: January 15, 1992
Subject: PDL Review for PTRs 1517, 1518 and 1532

The design review for PTRs STP-G 1517 (FOS Geomagnetically Induced Image Motion Problem), 1518 (FOS Change Overlite Error Response), and 1532 (Safe FOS After Two Consecutive Limit Violations) will be on Friday, Jan 17 from 1 to 4PM in Bldg 3 Room 200.

The changes for PTR 1517 (FOS Geomagnetically Induced Image Motion Problem) are as follows:

1. Add a GIMP subroutine which, when enabled, calculates detector deflection corrections (deltas), performs limit checking on the resulting corrections, and when allowed, builds serial magnitude commands including the corrections into FOS Unique Sequence 3, and requests activation of the sequence to send the corrections to the instrument.

2. Add data arrays and variables in the FOS general data area (YFDATA), the FOS software telemetry table (YFEWD9), the Current Value Table in the Standard Header Packet (MFCOMCVT), and the Housekeeping Processor data area (put in YFDATA).

3. Add definitions for FOS Unique Sequence 3 (YFUNRTCS and MFSCPDTA). The modifications to MFSCPDTA are not included in this review.

The changes for PTR 1518 (FOS Change Overlite Error Response) are as follows:

1. Modify the response to the first overlite error to activate FOS Unique sequence 3 containing a command to close the entrance aperture door.

2. Modify the response to no error following one or more overlite errors to post a status buffer message only if a "new pointing or final exposure in pointing" flag is set.

3. Add a definition for the "new pointing or final exposure in pointing" flag (YFDATA).

The changes for PTR 1532 (Safe FOS After Two Consecutive Limit Violations) are as follows:

1. Modify the limit