

To: **GOWG**  
Subject: **Meeting Minutes**  
Date: **May 13, 2004**  
Location: **GSFC Room N220, Bldg 12**  
**Dial in info:**  
Number: **866-836-1481**  
Passcode: **205535**

Next Meeting: May 20, 2004 at 2:00 pm

### **Agenda:**

- ITOS Requirements

- GBM
- LAT
  - SLAC doesn't know if entire 64 bit needs to be used in calculations or if that 64 bits can be broken down for calculations.
- Other?

Item 1: The new time types for the GBM and LAT times have been added to ITOS on our development branch, and will be included in the next full release. The table also should mention that the LAT requires time types with 4 bytes of fine time.

- Currently not required for MOC Build 1

Item 2: The level-0 processing work is in progress and nearly completed.

- Ready to be delivered to Omitron.

Item 3: The concepts for encapsulation of the science packets have not been well defined to the ITOS team. Information we were shown at recent meeting indicates that the scheme planned for this telemetry is not what we had been told last year. This needs to be definitively defined and communicated to the ITOS team as soon as possible. Work cannot begin on this item until we have complete requirements.

- Asking Mark to include additional information in the S/C to Ground ICD.

Item 4: Hazardous command handling was implemented for Swift and is present in the current ITOS. If this implementation meets GLAST requirements, this item can be closed; otherwise, we need complete requirements for GLAST.

- Hazardous command needs user prompt. Handled by latest DFCD format. Currently Swift has operator has to type in a string to send command. Astro RT will need to ingest the restricted field.

Item 5: ITOS already provides a program called "make\_load\_file" for converting binary files into ITOS-compatible load files. If this application meets the requirements, this item can be closed; otherwise, we need complete requirements for GLAST.

- Were able to generate a load at MSFC, although the instrument did not accept the load.
- GBM may need to pad the original file with zeros so that the data can be broken down into 64 bit packets.

Item 6: We need the cooperation of the FOT and GBM developers to arrive at a workable solution for the time rollover issue.

- All GBM data uses GBM clock. Will have splinter meeting to work this.

Item 7: ITOS currently permits users to define in the database mnemonics to hold derived values. It also provides the Configuration Monitor facility for computing derived values. If these facilities meet the requirements, this item can be closed; otherwise, we need complete requirements.

- Looking at data directive unpacking.
- Should become a requirement and will be worked through proper channels.

Also, some items are or may be missing from this list:

Item 8: The LAT instrument requires that the packet grouping flags be used when sending a load.

- ITOS will add this to the load commanding.
- LAT will provide a load. ITOS may break the load apart to be able to transmit it to the spacecraft. The LAT instrument will need to be able to reassemble the load.

Item 9: It has been suggested that the LAT may require ITOS to handle 64-bit integers, but we have not been able to confirm that this will be required.

- John Nagy to supply LAT CCSDS e-mail.

Item 10: There was discussion in the telecon on 10/15 that the LAT instrument may require derived time stamps of some sort, involving a 32-bit offset, but this has not been confirmed. If this is a requirement, we need details.

- Lori will investigate further.

Item 11: In looking quickly at the s/c to ground ICD, I noticed that the s/c is putting 9 bytes of fill at the end of the VCDU data field. This is not permitted by the CCSDS recommendation, and if it is true, will require ITOS modifications. This fill data either should be moved to the insert zone, or should be converted to 10 to 15 bytes of virtual fill and not transmitted. BAP Location and BAP "heartbeat" issue

- Being moved into the insert zone.
- BAP Location and BAP "heartbeat" issue –
  - Will be addressed in the GSSC-MOC WG.
  - Heartbeat issue refers to who needs to initiate the network connection to maintain secure network.
- Testing of delivery of science data products – tabled for next GOWG.
- Compressed Data (may want to defer until after the reviews/implementation issue)
  - Ground system level - Does anyone have any concerns if the MOC uses GZIP? FOT to look into the compression ratio for data transfer rates.
  - ABOVE IS AN ACTION TO ALL GOWG PARTICIPANTS!!!!!!!!!!!!!!!!!!!!!!
    - Rob Preece has concerns about the amount of time it takes to receive a 24 hours data set.
    - If FTP is used to transfer, any error will cause a resend of entire file. Fastcopy and DTS are capable of splitting files up to transfer.
  - LAT science?
- "Split" Events from LAT: need to define and what is their impact? (poll Richard Dubois)
  - JJ says that events can be split. A split event is an event in more than one packet.
  - LAT would recombine the event data when the LISOC receives the data.
- Where do we send Observatory FSW dumps? (We have interfaces defined for LAT and GBM dumps, but not the observatory?) - Put in Ops Data Products ICD.
- What documents do we need to have done by when in support of DDPRs and GS-SDR? Who is signing up to do them?

- Dennis working on his Document Table and will send out for review. The documents required for reviews will be noted.
- Begin planning for SDR (need a dry-run; template for charts; central logistics point; etc)
  - Ken is starting template.
- GBM experiences with the ITOS installation...
  - Everything went great.
- "Walk-ons"
  - Bit error rate will not support packet sizes larger than 4k.