Action Items from April 2007 GSSC-LAT Meeting

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The following summarizes a meeting on April 18 & 19, 2007 between the GSSC and SLAC on a number of SAE issues motivated primarily by feedback from the GLAST Users Committee beta software test. A few additional data-operations topics were also discussed.

Participants: Seth Digel, Richard Dubois, Jim Chiang, Toby Burnett, Chris Shrader, Dave Davis, James Peachy, Eric Winter & Tom Stevens; the summary below was jointly prepared

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1. Configuration Control Board

In anticipation of a having a Configuration Control Board in place at launch + 5 months (for the first formal delivery of Science Tools to the GSSC), Richard and Chris will propose a plan for the membership and scope of the CCB by mid June 2007. At that time the CCB will start practicing monitoring changes, and the degree of CC rigor will increase as we approach launch. The SAE documentation will be handled in tandem, i.e., a programmer making a code change to particular tool is responsible for updating the primary "fhelp" file (or workbook page) for that tool.

2. Graphical User Interfaces

Regarding GUIs, we will continue a tool-by-tool approach with some enhancements to the GUIs for particular tools, e.g., scroll bars and restoration of some interactive plotting features. In particular, James will continue development of st_stream. The GSSC will work on ModelEditor with Eric leading the effort. It will continue to be in Python, but Eric will work with Jim on allowing it to map between obssim and likelihood models. The deadline for this is 'late summer', in advance of the next GUC beta test, but some incremental milestones may need to be established, along with more specific discussion about the functionality to be added to ModelEditor.

3. Model names in Likelihood

The model names in likelihood will be made the same as in Xspec wherever possible, although for backward compatibility all existing names will continue to be recognized. Jim will work on this - no date specified.

4. Tool and parameter names

The tool and parameter names (and prompting order) will be rationalized. Dave Davis will post a table summarizing the discussions, for any additional comment in the near future. The changes may depend on parallel developments such as James delivering "ape" (which has enhanced capabilities relative to the current parameter interface layer "PIL") to the HEADAS repository.

5. Likelihood analysis

Regarding likelihood, further studies are underway at SLAC, with participation from French colleagues, regarding known discrepancies between certain TS determinations. An additional goal is to gain a more complete understanding of TS distributions in binned vs. unbinned analyses.

6. GSSC orbit/attitude simulator

The GSSC orbit/attitude simulator will be in the June 19 release of the Science Tools, as a replacement for gtorbsim. Tom will communicate with Giuseppe about needed changes to the user interface based on discussions at this meeting.

7. Energy-dependent selection cones

DataSubselector (gtselect) will be extended to allow for energy-dependent cuts using the DSS keyword scheme that Yasushi Ikebe devised. Tom will do this. The motivation was the GUC beta-test feedback regarding data selection of pulsar analysis. The discussion regarding the DSS keywords was related to the question of how gtlikelihood might recognize if it is handed a file that has had an energy-dependent cut applied, and therefore cannot analyze.

Here is the link to Yasushi's page describing how to do it. http://glast.gsfc.nasa.gov/ssc/dev/fits_def/dss_keywords.html

8. DS9 selection regions

Chris will investigate the possibility of getting the Center for Astrophysics to implement GLAST-specific changes to DS9, in particular selections of ROIs with correct spherical geometry. This will be coordinated through Bill Pence who has regular interactions with the group that maintains DS9.

9. Contents of high-level data products

Chris will propose to Steve what high-level data files the GSSC will receive from the LAT team and make available to guest investigators. The discussions converged on 2 options:
a) Event database: all events with full Merit information (although possibly trimmed to just the variables that are actually used by any active classification scheme); Photon database: FT1 information for all events that pass whatever our loosest standard photon cuts are (like for GRBs).

b) Event database: Event database: all events that pass the loosest standard photon cuts, with specified Merit info; Photon database: FT1 information for events that pass the standard photon cuts (currently HANDOFF); anyone who wants processed data that is not in the Event database would be referred to the LAT team and would be bound by the same conditions the LAT collaborators face, including data formats, volumes and tools.

The choices have important implications for sizing the data server at Goddard, of course.

10. Data delivery during year 1 and LAT team use of GSSC server

Richard will propose to Steve that the LAT team start delivering the above data early during the first year, and the GSSC make the servers available (password protected) for the LAT team members to use. This would be at least an alternate data access method for the LAT team, would allow kinks in delivery and serving of the data to be worked out well in advance of year 2, and would avoid an end-of-year-1 rush.