

CERES Systems Engineering Committee

Members: Tammy Ayers, SAIC
Vertley Hopson, DAAC
Sandy Nolan, SAIC
Sue Sorlie, DAAC

Charter: Serve as a forum for resolving issues which affect more than one working group. Report to CERES Data Management Team.

September 25, 2001 1:30 pm

Erika Geier, John Robbins, Walt Miller, Kathy Bush, Nicole Cepaitis, Ricky Brown, Sunny Sun-Mack and Pete Spence joined the SE committee for this meeting.

The main purpose of this meeting was to develop rules and procedures for single PGE CM deliveries and delta CM deliveries. The committee and other attendees discussed a recent CM delivery where a single PGE was delivered along with updated scripts that were associated with additional PGEs. The changes to the scripts had not been recorded in the SCCR or the delivery memo. Tammy and Nicole explained that this caused a problem because the Test Plan only called for testing the single PGE and the CCode for the other PGEs would not have been incremented to reflect the other software changes. It was decided that a second SCCR describing the updated scripts needs to be created and a new CM delta delivery containing the modified scripts should be submitted.

After much discussion, the following CM delivery rules were approved:

1. There are three types of CM deliveries:
 - A. Full subsystem delivery - all subsystem software and data are delivered
 - B. Full PGE delivery - all software and data associated with a PGE are delivered (If input data files have not changed since the last delivery, then they do not need to be delivered.)
 - C. Delta delivery - only scripts and/or data files are delivered
2. Full PGE and Delta CM deliveries must be made separately and described in separate SCCRs.
3. More than one open SCCR will be allowed per subsystem, but subsystems should contact CM before opening more than one SCCR.
4. Any scripts or ancillary data that are included in a Full PGE delivery and are also used by additional PGEs must be identified and instructions for testing the additional PGEs must be included in the Test Plan.
5. During SSI&T for Full PGE deliveries, subsystem directories and their former contents will not be removed before new delivery tar files are untarred. If any files formerly delivered need to be removed before compilation or SSI&T begins, then the Test Plan must contain instructions for removing those files.
6. ASDC has the option of requesting subsystem personnel be present at the 'DAAC' during operational testing.
7. Each change listed in an SCCR must include the names of all PGEs that are affected by the change.
8. Subsystems must check the tar file listing to be sure that no executable files are being delivered to CM. CM will also check the listings for executable files before untarring the delivered tar files.

Pete Spence joined the committee to discuss the naming of MODIS subset files. Pete had provided the Goddard DAAC with code to subset MODIS data. Until that code was operational, ASDC had been subsetting the MODIS data labeled version 003 and had also named the subsetted files version 003. When the Goddard DAAC began delivering the subsetted version of 003 data, the subsetted files were

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labeled version 001. There was an additional difference in the file names, where ASDC had used a .S extension and the files from the Goddard DAAC used a .A. Pete discovered that the code that he had provided to the Goddard DAAC was creating the file names and 001 reflected the PGE version and not the data version. Pete will modify the code to create the subset file names using the input data version from the input core metadata. Until the new code is delivered and operational, Sue will check to see if the MODIS subset files can be renamed from 001 with .A extension to 003 with .S extension at ingest.

Meeting adjourned at 3:20 pm. skn

September 26, 2001 10:45 am

Erika Geier, John Robbins, and Bruce Barkstrom joined the SE committee for this meeting.

The committee met with Bruce Barkstrom to discuss his Scheduling and Hardware Spreadsheet. The following questions had been provided to all attendees before the meeting. The information that Bruce provided in response to the questions is provided in italics below each question.

1. What are the specific parameters that will need to be routinely updated and how frequently should they be updated? (We would then need to link requirements to a source, i.e. who can provide the information required to update the entry?)

The spreadsheet includes computer time and people time. One of the major inputs that would have to be kept up to date would be the number of CPU hours required to process a month of data for each CERES subsystem. These hours are then adjusted by a system efficiency factor and a system availability factor.

These number would be determined by examining statistics collected at ASDC during CERES production runs. The spreadsheet would probably only need to be updated every six months.

2. Would reports need to be kept up to date or be generated only when requested?

The spreadsheet would be used as a tool for annual planning and providing information for CERES Science Working Group Meetings. It would probably be updated in April and October of each year.

3. The processing times in the spreadsheet may have changed. They were not highlighted. Can they be changed? Who would change them?

Bruce explained that there is another version of the spreadsheet that allows the subsystem processing times to be updated. The Terra and Aqua CPU hours estimates currently in the spreadsheet were scaled from TRMM entries and will need to be replaced with empirical data.

4. The product/data set list does not match actual product/data set. Again, can they be changed? Who would change them?

The number of editions of data that are scheduled for processing is what is important. The data set version or configuration ID should not effect the number of granules in a data set edition. The processing that is done for data sets that have a smaller number of granules than a complete edition will have also to be included somewhere in the processing requirements.

5. Where does the time required to stage and archive the data fit into the spreadsheet/schedule?

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This is included under people time. I/O bounds to include staging and archival times will be needed for total in and total out figures. There will also need to be a exploration of where the bottlenecks exist in data production flow.

Bruce suggested that the SEC meet with him in the November 1-20 time frame for a 5-6 hour tutorial on maintaining the spreadsheet.

Meeting adjourned at 11:45 am. skn