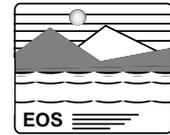


ECS SDPS/CSMS Release B CDR Objectives and Expectations

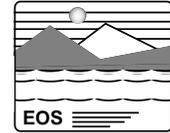
**Curt Schroeder
Associate Chief, ESDIS Development
ECS COTR**

April 23, 1996

**Earth Science Data Information System
(ESDIS) Project
NASA/Goddard Space Flight Center**

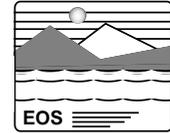


- Based on Detailed Design of Release B, determine if SDPS and CSMS are ready to proceed with implementation and acquisition of COTS hardware and software for Release B**



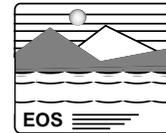
All Release A Functionality Plus:

- Ingest, processing, archiving, management, and user access for data products from ASTER, CERES, MISR, MODIS, MOPITT, SAGE III, Seawinds, MR and DFA instruments
- Integration and testing of science software for processing data from above instruments
- Archiving, management and user access for products from the Landsat ETM+ instrument
- Archiving, management and user access for data sets migrated from V0
- Access/Distribution for SAR Products from ERS-1 and 2, JERS-1, RADARSAT. Interoperability with ASTER GDS
- Support of end-to-end testing of ESDIS Ground Systems

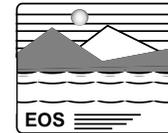


Release B Sites

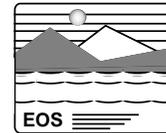
- **Release A Operational Sites Extended to Support Release B Missions**
 - **GSFC, LaRC, SMC**
- **New Release B DAACs**
 - **EDC, ASF, JPL, NSIDC, ORNL, SEDAC**
- **EOC Operational**



- **SDPS and CSMS Release B – detailed design based on baselined requirements**
- **Any potential changes in ECS requirements based on Federation concepts are outside the scope of this review**

EOSDIS**CDR Review Board**

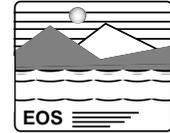
Panel Members	ESDIS Role(s)	DAAC/Center Association
Moshe Pniel, Co-Chair	ASTER IT, AHWGP, DWG	JPL
Bill Mack, Co-Chair	Office of Flight Assurance	GSFC
Bruce Barkstrom	CERES PI, EOS Advisory Panel, AHWGP, DWG, IWG	LaRC
David Glover	EOS Advisory Panel, Tirekicker, IWG	JPL/UWG
Skip Reber	EOS Deputy Sr. Scientist	GSFC
Art Gaylord	Independent, Network Expertise	U. of Mass.
Chris Lynnes	DAAC Engineer, M&O, DWG	GSFC
Bill Emery	EOS Advisory Panel, DWG, AHWGC, Tirekicker	U. of Colo.
Lyn Oleson	DAAC Manager, M&O	EDC
John Wolfgang	Independent, Engineering Directorate	GSFC
Dan Baldwin	Tirekicker, DWG	U. of Colo.
Vanessa Griffin	Program Management	NASA Hqs
Greg Hunolt	DAAC Systems/Science Ops	GSFC
Barbara Putney	MODIS Instrument Team	GSFC
Dave Emmitt	EOS Advisory Panel, Tirekicker, IWG	U. of VA
Paul Brusil	Independent, Systems Management	



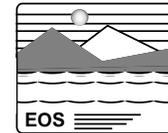
Based on feedback and recommendations from Release A CDR Review Board and others, we adopted a different approach to CDR:

- **Detailed Design Reviews (4/15-19):**
 - Review of detailed design by small teams of experts
 - Each team co-chaired by a Review Board Member and the ESDIS Technical manager
 - Team members selected by co-chairs based on their expertise/in-depth knowledge of the subsystem's domain and ECS requirements
 - Provided greater technical insight and interaction between reviewers and designers, resulting in more thorough review
- **Plenary Session (4/23-25):**
 - System-Level Design Overview
 - Overview of each design session, followed by a summary report of Review Team's findings and recommendations
 - System Topics

Success Criteria Employed by Review Teams



- Does the design reflect a clear understanding of the Release B requirements?
- Are interfaces defined?
- Is the design complete and sufficiently detailed to initiate coding?
- What is the quality of the design, including:
 - Attribute/operation definition
 - Event traces for key scenarios
 - Scalability of design
 - Error handling/failure recovery strategies
- Have prototypes/trades been completed?
- Have appropriate COTS selections been made?

**Client*****Co-Chairs:***

Dan Baldwin/U. of Colo.
Ken McDonald/ESDIS

Team Members:

Nazmi El Saleous/U. of Md
Nigel Hinds/U. of Mich.
Robin Pfister/ESDIS
Helen Conover/U. of Alabama

Interoperability/Advertiser***Co-Chairs:***

Dave Emmitt/U. of VA
Ken McDonald/ESDIS

Team Members:

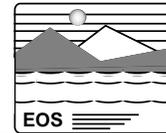
Lola Olson/GCMD
Rob Mairs/NOAA
Wanda Ferrell/DOE
Martin Krynitz/

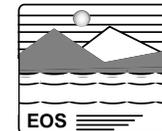
Data Management***Co-Chairs:***

Lyn Oleson/EDC DAAC
Ken McDonald/ESDIS

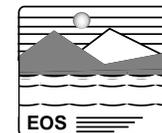
Team Members:

Jim Frew/UCSB
Yonsook Enloe/ESDIS
Mike Moore/ESDIS
Dick Muntz/UCLA

**Data Engineering*****Co-Chairs:*****Bill Emery/U. of Colo.****Ted Meyer/ESDIS*****Team Members:*****Elaine Dobinson/JPL DAAC****Dan Baldwin/U. of Colo.****Fred Patt/MODIS****Randy Davis/LASP****Infrastructure/CSS*****Co-Chairs:*****Art Gaylord/U. of Mass.****Mike Moore/ESDIS*****Team Members:*****Russ Heinselmann/DEC****Joe Pato/HP****Ron Monzillo/OSF****Rob Groff/MITRE****Systems Management*****Co-Chairs:*****Paul Brusil/SMD****Mike Moore/ESDIS*****Team Members:*****Sol Broder/ESDIS****Michele Holm/NSIDC DAAC****Mike Benson/EDC DAAC****Art Gaylord/U. of Mass.**



Ingest	
<p><i>Co-Chairs:</i> Chris Lynnes/GSFC DAAC Ben Kobler/ESDIS</p>	<p><i>Team Members:</i> Mike Benson/EDC DAAC Gary Alcott/EDOS Vince Troisi/NSIDC DAAC Joy Henegar/Landsat</p>
Data Server	
<p><i>Co-Chairs:</i> Chris Lyness/GSFC DAAC Ben Kobler/ESDIS</p>	<p><i>Team Members:</i> Lyn Oleson/EDC DAAC Ruth Duerr/ASF DAAC Chris Harris/LaRC DAAC Gary Geller/ASTER IT</p>
Planning	
<p><i>Co-Chairs:</i> Moshe Pniel/ASTER IT Steve Kempler/ESDIS</p>	<p><i>Team Members:</i> Bruce Barkstrom/CERES IT Barbara Putney/MODIS IT Bob Vargo/MISR IT Tom Kalvelage/EDC DAAC</p>

**Processing*****Co-Chairs:***

**Moshe Pniel/ASTER IT
Steve Kemppler/ESDIS**

Team Members:

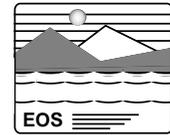
**Bruce Barkstrom/CERES IT
Chris Lyness/GSFC DAAC
Bob Vargo/MISR IT
Tom Kalvelage/EDC DAAC
Barbara Putney/MODIS IT**

Hardware Sizing/Modeling***Co-Chairs:***

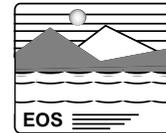
**Moshe Pniel/ASTER IT
Chris Daly/ESDIS**

Team Members:

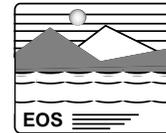
**Bruce Barkstrom/CERES IT
Barbara Putney/MODIS IT
Chris Lynnes/GSFC DAAC
Lyn Oleson/EDC DAAC**



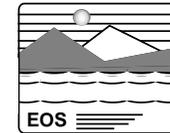
- **Try to hold questions until end of presentation sections – in many cases, the question will be addressed in a subsequent slide**
- **Four methods for capturing issues:**
 - **RIDs – Anyone can write a RID against CDR material – submit via a board member**
 - Note: RIDs were collected during detailed subsystem reviews**
 - **Questions – To get help on where something is found in documentation, how something works, etc.**
 - **Action Items – assigned by the review board**
- **End of each day – the board meets for wrap-up, issue review and RID categorization**
- **Thursday afternoon– Review board will analyze, prioritize issues, and present a summary to NASA and ECS management**



- **RID Resolution Process**
 - **RIDs entered into RID database**
 - **Actionee responsible for response, internal review and approval**
 - **Internally approved responses entered into RID database by Actionee**
 - **Sponsor reviews, accepts/rejects**
 - » **If accepted, sponsor presents to RID Review Team for closure**
 - » **If rejected, mitigation continues between actionee(s) and sponsor**
 - **RID Review Team reviews and approves/rejects RID's responses**
 - **If accepted, RID is marked Closed in RID Database**
 - **If rejected, mitigation continues**
- **To facilitate RID processing please limit each RID to a single topic**



- **May 2**
 - All RIDs against presentations are due
 - Submission via email is preferable, FAX okay (addresses and FAX number on RID forms)
 - All Issue RIDs and RIDs against presentations will be entered by RID team into Master RID Database
 - Comments to documents are due to Document Manager, Daphne Rodriguez (daphne.rodriguez@ccmail.gsfc.nasa.gov)
 - RID forms not appropriate
- **June 7**
 - Initial Priority 1 RID responses completed
 - Responses available in RID database for review/closure/rework



Data Server Consists of 4 CSCIs	Status
<p>Storage Management (STMGT): Manages all storage resources - the archive itself, including disk, tape robots, etc.</p>	<p>Design complete - presented at CDR</p>
<p>Data Distribution (DDIST): Manages the network and hard media distribution of data products acquired by end-users and data processing</p>	<p>Design complete - presented at CDR</p>
<p>Science Data Server (SDSRV): Performs searches; manages request queues (e.g., for inserts, searches, and data acquisitions or orders); includes Earth Science Data Types (ESDTs), the object instantiation of each of the products and its associated services</p>	<p>Public interface design complete and presented at CDR; internal design in progress</p>
<p>Document Data Server(DDSRV): Performs search and retrieval of documentation related to ECS products and services.</p>	<p>Public interface design complete and presented at CDR; internal design in progress</p>

- Delta Detailed Design Review of Science Data Server and Document Data Server scheduled for June 6, 1996
- Schedule impact contained by parallelizing implementation; no impact to CSR or float