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<th>Time</th>
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<tr>
<td>8:30</td>
<td>Introduction</td>
<td>R. J. Thompson, EDSPO</td>
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<td>8:45</td>
<td>Global 1 km AVHRR Data Set</td>
<td>Thomas Holm, DSB</td>
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<td>Topography Data Sets</td>
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<td>Grant Mah, EDSPO</td>
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<td>Rob Leonard, EDSPO</td>
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<td>Synthetic Aperture Radar</td>
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<td>UNH SCF IMS</td>
<td>Dave Skole, UNH</td>
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<td>Bin Bin Ding, UNH</td>
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<td>Lunch</td>
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<td>1:30</td>
<td>System-Level Development</td>
<td>John Boyd, EDSPO</td>
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<td>2:00</td>
<td>Summary</td>
<td>R. J. Thompson, EDSPO</td>
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FY 1993 Proposal Process

- HQ Guidance: Early June
- LP DAAC Proposal Prepared/Submitted: Early July
- Proposal Reviewed/Negotiated: Mid August
- Statement of Work Approved / Returned to DAAC: Late September
EOSDIS Version 0
Global Land 1-KM AVHRR Data Set
Project Briefing
Land Processes DAAC Version 0 Program

• Land Processes DAAC Version 0 activities will emphasize:
  — enhancement of user access to existing land-related data needed for current global change and earth science studies and needed in the development of analysis procedures and standard product algorithms
  — development of initial PGS, DADS, and IMS systems and capabilities
  — development of science support programs and capabilities
Global Land 1-km AVHRR Data Set Project

Background

• 1-km AVHRR data are useful as pre-EOS surrogates to MODIS data and as a tool in many global change and earth science studies

• Requirements for global 1-km AVHRR data have been articulated by the IGBP, Commission of the European Communities, MODIS Land Science Team, and other groups and earth scientists

• Goals of the Global Land 1-km AVHRR Data Set Project are:
  — create and maintain a raw digital archive of full-resolution HRPT and LAC AVHRR daily coverage of all land surfaces worldwide
  — produce products optimized for earth science applications
  — distribute products on a non-discriminatory basis at the marginal cost of filling a specific user request

• The Global Land 1-km AVHRR Data Set will consist of:
  — 5-channel, 10-bit, raw AVHRR data
  — 1.1-km spatial resolution (at nadir)
  — collected daily for 18 consecutive months beginning April 1, 1992
Global Land 1 km AVHRR Data Set

**Phased Implementation Approach**

- **Phase 1.** To acquire, archive, and manage a global land 1 km AVHRR data set (product preparation and generation).

- **Phase 2.** To process prototype, as well as operational data products, from the global land 1 km AVHRR data set (product preparation and generation).

- **Phase 3.** To continue, if appropriate, the acquisition, archiving, management, and product processing/distribution of the global land 1 km AVHRR data set.
Global Land 1-km AVHRR Data Set Project

PHASE 1—Data Acquisition, Archiving, and Management

- Major participants are NOAA, ESA, and NASA/USGS, including key Australian HRPT stations (CSIRO coordinated)

- Highest priority activities of Phase 1 include:
  - establish institutional agreements with major participants and HRPT stations
  - identify formats and mechanisms for transfer of all data to USGS/EDC
  - develop capabilities to accept different data formats and to ingest and archive raw AVHRR data (scene by scene data holdings)
  - provide geographic identification, browse image generation, and entry of data into LPDAAC IMS
  - establish data copy and distribution mechanisms
HRPT Ground Station Network

Status

European Space Agency Network (as of April 1, 1992)
Terranova Bay, Antarctica (seasonal Nov.-Feb.)
Oberpfaffenhofen, Germany
La Reunion (France)
Niamey, ‘Niger
Tromso, Norway
Maspalomas, Canary Islands (Spain)

ESA Stations Under Consideration (Summer 1992)
Fortaleza, Brazil
Cachoeira Paulista, Brazil
Kuala Lumpur, Malaysia
Nairobi, Kenya
Cairo, Egypt
Manila, Philippines

NOAA/USGS Network (As of April 1, 1992)
Fairbanks, Alaska
Wallops Island, Virginia

NOAA LAC Recorded Data (As of April 1, 1992)
Northeast Asia
Northern South America
Portion of Eastern Europe and Western Asia
Central Africa

USGS/EDC Network (As of April 1, 1992)
Buenos Aires, Argentina (U. of Miami)
Darwin, Australia
Hobart, Australia (CSIRO)
Perth, Australia
Townsville, Australia
Casey, Antarctica (Australia)
Prince Albert, Canada (CCRS)
Beijing, China
Urumqi, China
University of Tokyo, Japan
Guangzhou, China
Dahahran, Saudi Arabia (U. Air Force)
Hartebeesthoek, South Africa
Baton Rouge, Louisiana
Sioux Falls, South Dakota (EDC)

USGS/EDC Stations Under Consideration (Summer 1992)
McMurdo Station, Antarctica
Palmer Station, Antarctica
Yukutsk, CIS
Uh Snug Harbor, USA (Hawaii)
Ulan Bator, Mongolia
Riyadh, Saudi Arabia
Global Land 1km AVHRR Data Set Project
HRPT Ground Station Network (as of April 1, 1992)
and Acquisition Areas for LAC Recorded Data
Global Land 1-km AVHRR Data Set

Project Coordination Meeting

On February 13, 1992, NASA and the USGS met with representatives from:

- University of Tokyo, Tokyo, Japan
- Saudi Center for Remote Sensing, Riyadh, Saudi Arabia
- Satellite Meteorologic Administration, Beijing, China
- Satellite Applications Center, South Africa, Hartebeesthoek, South Africa.

On February 14, 1992, NOAA and IGBP hosted the First Meeting of the HRPT Station Operators supporting the global 1-km project.

Attendance:

- NASA
- USGS
- ESA
- JRC/CEC
- Australia (CSIRO & Perth)
- Peoples Republic of China
- SCRIPPS (Antarctic)
- Univ. Tokyo
- South Africa
- NSIDC
- Saudi Arabia
- EPA
- LSU, University of Miami, Hawaii AND CCRS

(Unable to attend: LSU, University of Miami, Hawaii AND CCRS)
Global Land 1-km AVHRR Data Set

HRPT Station Status

Saudi Center for Remote Sensing, Riyadh, Saudi Arabia

Dr. Abdulkader Al-Sari is the point of contact.

The Saudi Center for Remote Sensing operational acquires AVHRR data on a daily basis (8-bit rather than 10-bit data). We discussed options for upgrading their system to 10-bit and were asked by Dr. Al-Sari to investigate the feasibility of sending a software/engineer expert to Riyadh to evaluate and define the necessary augmentations to their system. Given the criticality for data using the Saudi station, we agreed to consider his request pending available staff and resources.

We cannot plan on 10-bit data to be available through the Saudi Center for Remote Sensing starting April 1, therefore, we will ask NOAA to schedule LAC coverage and arrange for temporary acquisition through the U.S. Air Force at Dahahran, Saudi Arabia.
Global Land 1-km AVHRR Data Set

HRPT Station Status

People's Republic of China

Mr. Liu Cheng is the point of contact.

The People's Republic of China, through the State Meteorologic Administration, has three operational HRPT ground stations located in Beijing (N40 E116), Guangzhou (N23 E113), and Urumqi (N44 E87) and will begin acquisition April 1 and transfer Level 1B data on 3480 cartridges to EDC monthly.

Mr. Cheng asked for a scientific/technical exchange on remote sensing data processing methodology. We informed Mr. Cheng that such an exchange would be of mutual interest; however, a formal invitation needs to be sent to PRC, Satellite Meteorological Administration and coordinated through the National Bureau of Surveying and Mapping, PRC. Invitation was sent March 19, 1992. The exchange meeting is planned for July/August, 1992.
Global Land 1-km AVHRR Data Set

HRPT Station Status

Satellite Application Center, Hartebeesthoek, South Africa

Mr. Timothy Boyle is the point of contact.

South Africa operationally acquires AVHRR data on a daily basis. The current system only supports 6250 bpi 1/2-inch tape output and cannot be augmented with an 8mm drive. Therefore, until alternatives are identified, South Africa will send the 1/2-inch tapes to EDC.

Again, given the criticality of the South African station, we agreed to pursue options for upgrading their hardware. We are coordinating this effort with Chris Justice, NASA, and Chris Elvidge, EPA, who have agreed to send a data acquisition processing system upgrade to South Africa. An EDC software/engineer will travel to South Africa to assist in the hardware specification.
Global Land 1-km AVHRR Data Set

HRPT Station Status

University of Tokyo, Tokyo, Japan

Mr. Mikio Takagi is the point contact.

University of Tokyo will begin data acquisition for the project April 1, 1992 and will transfer raw HRPT data to EDC on a monthly basis on Exabyte cassettes.

CSIRO of Australia

Mr. Jeff Kingwell is the point of contact.

CSIRO will be coordinating the acquisition (starting April 1) and transfer of data to EDC from Darwin, Hobart, Perth, and Townsville, Australia; and Casey, Antarctica. (Transfer media Exabyte).

CCRS

Mr. Leon Bronstein is the point of contact.

CCRS will be providing data from their Prince Albert Station starting April 1 using Exabyte cassettes.
Global Land 1-km AVHRR Data Set

HRPT Station Status

Baton Rouge, Louisiana (Louisiana State University)

Mr. Oscar Huh is the point of contact.

Louisiana State University will be providing data to the project via internet transfer (4mm-DAT as backup) starting April 1.

Argentina (University of Miami)

Mr. Bob Evans is the point of contact.

University of Miami will be coordinating the acquisition and transfer of data to the EDC for coverage of Argentina. Data will be transferred to EDC via NASA's DAAC-to-DAAC network.
There are two contacts at SCRIPPS, Mr. Bob Whritner and Mr. Jim Simpson. To date, SCRIPPS has not responded favorably. Therefore, ESA will pursue data from O’Higgins and Terranova Bay. We plan to continue to pursue data through SCRIPPS for the McMurdo and Palmer Stations. At this time, coverage for the Antarctic may be seasonal.
Global Land 1-km AVHRR Data Set

European Space Agency, Frascati, Italy

Mr. Luigi Fusco is the point of contact

- Stations ready to contribute April 1, 1992:
  - Maspalomas, Canary Islands
  - Tromso, Norway
  - Oberpfaffenhofen, Germany
  - Niamey, Niger
  - La Reunion, (France)
  - Terranova Bay, Antarctica (campaign Nov.-Feb)

- Other stations ready to contribute in the Summer 1992:
  - Nairobi, Kenya
  - Cachoeira Paulista, Brazil
  - Fortaleza, Brazil
  - Cairo, Egypt
  - Manila, Phillipines
  - Kuala Lumpur, Malaysia

- ESA will consolidate HRPT station input and transfer the data to EDC monthly using Exabyte cassettes.
Global Land 1 km AVHRR Data Set Project

NOAA LAC Recorder Status

• Specific acquisition requests, in support of the 1-KM project, have been submitted to NOAA for Northeast Asia, Northern South America, and a portion of the Middle East. All of these areas have been given a Priority 3.

• Other acquisition requests being handled by NOAA that directly support data needs for the 1-KM project include Central Africa, Eastern Europe, and Western Asia. These are Priority 3.

• All of the aforementioned areas are getting covered on a near daily basis. And, NOAA has scheduled 9 to 11 minute acquisitions for these areas which will greatly facilitate Phase 2 derivative product processing.
Summary

• As of April 1, 1992, 19 HRPT stations, plus EDC, Fairbanks, and Wallops Island stations, will be operationally acquiring daily 1-KM AVHRR data, as defined in the 1-KM Project Plan.

• NOAA LAC recorded data acquisitions have been scheduled for all areas, not covered by HRPT stations, with the exception of the Antarctic.

• Therefore, all land masses worldwide, except the Antarctic, will be covered on a daily basis starting April 1, 1992.

• Data transfers to EDC and copies to ESA/NOAA will begin in May/June.

• Alternatives for Antarctic coverage continue to be pursued.
NOAA LAC Recorded Data

83 scenes per week average
HRPT Data received by EROS, Fairbanks, and Wallops Island

63 scenes per week average
HRPT Data Transfers to EDC
as of May 20, 1992

• Network Transfer - Louisiana State University
  — 24 Scenes received
  — 91 Mb per image average
  — 120 Minutes average transfer time
  — 13 Kb per second average transfer rate (at 6:00 PM)

• Network Transfer - Univ. of Miami (Argentina)
  — 9 Scenes received
  — 65 Mb per image average
  — 41 Minutes average transfer time
  — 27 Kb per second average transfer rate
    (35 Kb/sec. at 4:00 AM, 14 Kb/sec. at 3:00 PM)

• Magnetic Media Transfer
  — 36 Scenes - University of Tokyo (1 8mm tape)
  — 12 Scenes - Dahahran, Saudi Arabia (3 4mm tapes)
  — 70 Scenes - Hartebeesthoek, South Africa (shipped/not received)
Global Land 1 km AVHRR Data Set

PHASE 1—Technical Issues/Risks and Uncertainties

- Obtaining NOAA LAC recorded 1-km AVHRR data over land areas not covered by HRPT stations.

- Obtaining agreements to acquire and exchange data from all HRPT stations.

- Acquiring data for all land areas may be jeopardized by inability to cooperate by selected HRPT stations and problem with LAC recorder time.

- Having adequate budget to acquire HRPT data and systems needed to manage and process global land products.

- Continuing operation of an “afternoon” TIROS series satellite throughout the 18-month acquisition period.

- Converting data to a common data format.
Global Land 1-km AVHRR Data Set Project

PHASE 2—Product Preparation and Generation: Goals

- Focus will be on the generation and distribution of prototype and operational products useful in scientific applications

- Highest priority activities of Phase 2 include:
  - identify requirements for higher-level prototype and operational products
  - provide capabilities to produce such products
  - enter higher-level products into the IMS and provide for their distribution to the science community
Global Land 1-km AVHRR Data Set Project

PHASE 2—Product Preparation and Generation: Objectives

- Identify and define requirements for higher level prototype, as well as operational, land products (regional, continental, global).

- Provide capabilities* and staffing support to assemble the raw scene by scene data holdings, collected and compiled under Phase 1, into raw orbital pass units (along track scene to scene mosaicking).

- Enter metadata reference to orbital pass units in IMS and provide for the distribution of the data at the marginal cost of filling the specific user request.

- Provide capabilities* and staffing support for the processing, per the identified and defined requirements, of higher level land products.

* System and software development, integration, and data processing methodology.
Global Land 1-km AVHRR Data Set Project

PHASE 2—Product Preparation and Generation: Objectives (cont.)

• Provide for the porting of investigator algorithms for the processing of higher level land products.

• Produce precursor global land products for the land science community.

• Enter metadata reference to land products in IMS and provide for the distribution at the marginal cost of filling the specific user request.
Phase I

Raw Data
Scene by Scene Data Holdings
- 18 month dataset
- 42,000 scenes
- 3.5 Terabytes
- Approx. 80 scenes per day are acquired
- IMS reference, browse and distribution

Raw Data
Orbital Pass Units (Along Track Mosaic)
- 18 month dataset
- 7,630 units
- 2.5 Terabytes
- 14 orbital pass units per day
- IMS reference, browse and distribution

Radiometric Calibration
- Rayleigh scattering
- Ozone
- Water vapor
- Aerosols

Atmospheric Correction
- Projection
- Resampling

Geometric Correction

Compositing

Product Generation

IMS reference, browse generation, (if appropriate) and product distribution

Vegetation Index  Albedo  Temperature  Snow

Phase II

Process
Product
PHASE 3—Project Continuation

- Pending assessment of Project success and availability of funds, Phase 1 and Phase 2 activities may be continued beyond FY 1993
  - Renegotiate agreements with the principal agencies and the HRPT stations.
  - Provide capabilities to extend Phase 1 and 2 data acquisition, archive management, and product generation activities for 3 additional years beyond September 1993 (into FY 1994, FY 1995, and FY 1996).
# Milestone Schedule

## Global Land 1-km AVHRR Data Set Project

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<th>TASKS</th>
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| PHASE I TASKS                      |       |       |       |       |       |
| Agreements                         |       |       |       |       |       |
| Formats/Data Transfer Mech         |       |       |       |       |       |
| Software/Reformat                  |       |       |       |       |       |
| Data Ingest, Calibration, and Archive |       |       |       |       |       |
| Entry into LPDAAC IMS              |       |       |       |       |       |
| Data Copy/Transfer                 |       |       |       |       |       |
| Scene to Scene Stitching           |       |       |       |       |       |

| PHASE II TASKS                     |       |       |       |       |       |
| Reqts Land Products                |       |       |       |       |       |
| IMS, Data Distribution             |       |       |       |       |       |
| Algorithm Porting, Prototype Products |       |       |       |       |       |
| Product Generation                 |       |       |       |       |       |

| PHASE III TASKS                    |       |       |       |       |       |
| Continuation of Phase I & II       |       |       |       |       |       |

DSB 4-1-92 MILESTONE
Land Process DAAC
Version 0 Data Access

- Most data and products discussed will be archived by the Land Processes DAAC at EDC

- By 1994, available data and products will be accessible through the Version 0 IMS

- Prior to 1994, available data and products will be accessible through GLIS or a prototype Version 0 IMS

- Within existing legislative constraints, Version 0 and Pathfinder data and products will be priced in accordance with U.S. Data Management for Global Change Research Policy, which states:

  “Data should be provided at the lowest possible cost to global change researchers in the interest of full and open access to data. This cost should, as a first principal, be no more than the marginal cost of filling a specific user request.”
EOSDIS VERSION 0
TOPOGRAPHY DATA SETS
DEFENSE MAPPING AGENCY (DMA) DATA

- Digital Terrain Elevation Data (DTED)

  - November 1991 written request from USGS to DMA
  - February 1992 written response from DMA
  - April 1992 meeting at EROS Data Center to clarify requirements, concerns, information exchange, and plan
  - June 1992 DTED study completed by TRIFID for DMA
  - FY 1993 DMA specifications defined for Geodata, a Digital Chart of the World follow-on
DEFENSE MAPPING AGENCY DATA (cont.)

• Digital Chart of the World (DCW)
  - September 1991 DCW comparison data sets completed for United Kingdom study area
  - March 1992 request from DMA to investigate DCW alternatives for DMA and global change requirements
  - July 1992 DCW available for distribution by USGS on CDROM
  - Summer 1992 DCW interpolations will be done for the four TRIFID DTED study areas
  - FY 1993 potential DMA/USGS/CEOS project for interpolation of all DCW data

EDC use of ARC/INFO and ANUDEM to produce a Cape Verde, Africa DEM
VERSION 0 TOPOGRAPHIC PROGRAM

TOPOGRAPHIC DATA SETS CURRENTLY SUPPORTED IN GLOBAL LAND INFORMATION SYSTEM (GLIS)

- 1-Degree USGS Digital Elevation Models
- 30 Arc Second Digital Elevation Model Data Set
- 5-Minute Gridded Earth Topography Data (ETOPO5)
- 1:100,000-Scale Digital Line Graphs

TOPOGRAPHIC DATA SETS UNDER CONSIDERATION FOR INCLUSION IN GLIS

- 3 Arc Second Digital Topographic Data
- Digital Chart of the World
- 7.5- and 15-Minute Digital Line Graph
- 7.5-Minute Digital Elevation Model

REMOTE LINKS FROM GLIS TO OTHER INVENTORY SYSTEMS

- Global Change Master Directory
- Canada Centre for Remote Sensing
- Pilot Land Data System
- European Space Agency
- Japanese NASA/EOC On-Line Inventory System
VERSION 0 TOPOGRAPHIC PROGRAM

Ongoing Effort to Identify, Acquire, and Distribute Topographic Data

Contacted:

- Dave Eckhardt, Bureau of Reclamation
  Digital Elevation Models of Brazil
- Michael Wolf, Mullard Space Science Laboratory
  Topographic Data Information Exchange
- M. F. Hutchinson
  Status of Australian DEM Distribution Policies
- Dr. Howard Zebker, Jet Propulsion Laboratory
  Topographic Synthetic Aperture Radar Information
- Canada Centre Mapping
  Status and Ordering Policies of 1:250,000 Vector Data
- Nancy K. Soderberg, Woods Hole
  Receiving Multibeam Swath Bathymetry maps of Exclusive Economic Zone
- Ron Keller, Eastern Mapping Division
  Status of Joint Agreement Between USGS and Chinese National Bureau of Mapping (China to digitize all of their 1:1,000,000-scale maps)
Ongoing Effort to Identify, Acquire, and Distribute Topographic Data (cont.)

To be Contacted:

- Eric Fielding and Bryan Isacks, Cornell
Status of Availability of Digital Terrain Elevation Data Data Over China and South America (sent copy of the EROS Data Center topographic product information catalog)
EVALUATION OF SPOT DIGITAL ELEVATION DATA

• Acquire Stereo Imagery Over Drum Mountains, Utah
• Digital Elevation Model (DEM) Data Generated by Private Firm
• SPOT Data Compared to USGS 1:24,000-Scale Quad and USGS 7.5-Minute DEM
• Results

JERS-1 PROPOSAL

• Primary Objective
  - Assess JERS-1 data for geologic mapping
• Secondary Objective
  - Produce and assess the quality of digital elevation data derived from JERS-1 imagery
SUPPORT FOR EOSDIS RESEARCH APPLICATIONS - LIMITED DIGITAL ELEVATION GENERATION

- Digital Photogrammetric Workstation
  - Funds requested to purchase Vitec 50 to complete the workstation configuration
  - Negotiations to acquire workstation software from General Dynamics are underway
EOSDIS VERSION 0
AIRCRAFT DATA SETS
AIRCRAFT DATA SETS
FY 1992 STATUS

- **TIMS/NS-001**
  - TIMS and NS-001 Metadata and Browse Defined
  - Archive Format Defined
  - Transcription System Design/Development Proceeding
  - Transcription System Hardware Ordered - July Delivery
  - Transcribe TIMS End of FY 1992,
    NS-001 First Part of FY 1993
  - EDC Production Database Being Prepared to Accept Data

- **AVIRIS**
  - Working with JPL to Define Transition Plan
  - MOU in Final Review/Signature Process
  - FY 1992 Planning Activities Only
AIRCRAFT DATA SETS
FY 1993 PLANS

- TIMS/NS-001
  - Transcription Process Becomes Part of ARC Decommission Procedure
  - Load IMS From Production Database
  - First Products to be "Raw" Data
  - Procure PGS Hardware
  - Develop PGS and Operational Procedures for QA/QC
  - Define/Implement New Product Algorithms - Aspect Ratio Corrected Data, Radiance Conversions
  - Continue to Archive Current Season Data

- AVIRIS
  - Implement Transcription System
  - Transcribe Historical Archive
  - Procure Host Hardware for PGS
  - Define and Implement PGS and Operation Procedures for QA/QC
  - First Products Same as JPL Products
AIRCRAFT DATA SETS

ISSUES

- Stennis Space Center TIMS Data (and others)
  - Land Science Operations Shut Down
  - TIMS Sensor Transfer to ARC?
  - Status and Final Disposition of SSC TIMS Data Unknown
  - DAAC Could Accept Data if Appropriate Documentation Exists
  - ARC Can Decomm SSC Data and Process to DAAC Format
  - Disposition of Other SSC Data Sets (CAMS, etc.)?
  - NASA Headquarters has Action to Setup Meeting

- MODIS Airborne Simulator Data
  - EDC Will Receive Data Through Current ARC Protocol
  - Priority for Inclusion in DAAC Archive?
  - Development of PGS, Definition of Browse and Metadata?

- Other Ames Data Sets (TMS/AOCI/etc.)
  - ARC Will Transcribe to DAAC Format as Part of ARC Archive
    Management Activity
  - Will Use TIMS/NS-001 Browse and Metadata Definitions
  - All ARC Data Transfers Will Eventually be in DAAC Format
Aircraft Data Sets
TIMS/NS–001 DAAC Archive Data Format

Mission Header
Table of Contents
Image Data

Flight Line 1
Flight Line 2
Flight Line n

Ancillary Data

Scan Line 1
Scan Line 2
Scan Line n

Ancillary Data

Band 1
Band 2
Band n

Nav Data (Band n+1)

Image Data

-- Optional Fields
Housekeeping Header
Pixel 1/2
Pixel n−1/n

Image Data
Image Data
Image Data

Aircraft Data Sets
ARC TIMS/NS-001 Transcription System

- Read Nav Data
- Format & Extract
- Extract Metadata
- Format Metadata
- Write to 3480
- Write to 8 mm
- Load to RAM
- D-Stretch For Browse
- Accumulate Browse Images
- Write to 8 mm

- Read Single Scan Line
- Format & Merge
- Write to 3480
- 3480
- 8 mm

- Image Data Tape (6250/HDT) <Flight Line>
- Local HD Work Space
- Extract Metadata
- Local HD Work Space
- Accumulate Metadata

- Nav Data Tape (6250) <Entire Mission>
- Local HD Work Space
- Record Header
- Local HD Work Space
- Write to 8 mm

- 4:1 Subsample
- Load to RAM
- Accumulate Browse Images
- Write to 8 mm
EOSDIS VERSION 0
SYNTHETIC APERTURE RADAR DATA SETS
SAR DATA SETS
FY 1992 STATUS

- Defined Area for Product Generation
  - Tanana River Basin

- EDC Alaska Field Office is Preparing the DEMs
  - 1 x 3 Degree DEM Over Most of the Area
  - 15 Minute DEM Around Fairbanks

- Working with Alaska SAR Facility for ERS-1 Data
  - Data for Finished Code
  - Checking Results
  - Future Larger Area Mosaics environments

- Modified Seasat Model to ERS-1 Model (1-day)
  - Systematic Corrected ERS-1 Image Over Tanana Area
  - Received ERS-1 Header Reader from ASF

- Curlander Visited in April to Discuss SIR, Version 0 Work
  - Return Visit Scheduled for June 1 - 5
EDC Activities Proposed in Curlander Briefing to NASA Headquarters

- **FY 1993:** Possible Implementation of SAR Data Catalog System (SDCS) access from Version 0 IMS

- **FY 1995:** Transfer SDCS from JPL to EDC
  - Inventory and Ship all Existing Archived Aircraft, SIR-B and SEASAT SAR Data to EDC
  - SIR-C and Current Aircraft SAR Would Remain at JPL
  - SEASAT and SIR-B System Updates Performed by JPL

- **FY 1997:** Ship JPL System 1 to EDC with SEASAT, SIR-B, and SIR-C Data Archive Tapes and SIR-C Portion of SDCS
  - EDC Assumes Responsibility for all Archive SAR Data Processing Including A/C and Receives Capability to Generate Multisensor Data Products and SAR Derived DEMs

- **FY 1998:** Ship JPL System 4 & Prototype EOS SAR S/W to EDC
SAR DATA SETS
FY 1993+ PLANS

• JERS-1 Product Generation
  - Geocode
  - Terrain Correct
  - Mosaic
  - Co-register to ERS-1

• SIR-C Product Generation
  - Geocode
  - Terrain Correct
  - Co-registration with Other Sensors

• Registration Procedures
  - DEM Error/Resolution Effects
  - Control Points
  - State Vector Correction Methods
EOSDIS VERSION 0
INFORMATION MANAGEMENT SYSTEM
DEVELOPMENT
EOSDIS VERSION 0
FY 1992 IMS STATUS AND PLANS

- Successful IMS Prototype Demonstration in February
  - Inventory Query Only
  - Four DAACs Participating (EDC, GSFC, JPL, NSIDC)
  - Demonstrated Level-3 Inventory Interoperability

- Ongoing Prototype Development
  - Extend Inventory Interoperability to 7 DAACs
  - Expand Prototype Functionality:
    Directory
    Visual Browse
    Ordering
  - Graphical User Interface (GUI) Prototype:
    X-Windows/Motif/UNIX
    Geographic Coordinate Selection
    Geographic Coverage Map (EDC
    Integrated Browse Image Display (MSFC and EDC)
Continued

- Prototype Data Set Browse
  - Local Browse:
    Request Browse Product Through IMS
    DAACs Stage Browse Data for FTP Pickup
    Browse Data in HDF Format
    Local Display via User-Supplied Software
  - Integrated Browse:
    Integrated with IMS GUI Prototype
    Four Data Sets in FY 1992 Prototype
    MSFC: SSM/I
    EDC: AVHRR, MSS, TM

- Other Activities
  - Data Dictionary
  - IMS Development Lexicon
  - Usage Statistics
FY 93 Plans

- Complete the port of the common IMS search and order layer to the DAACs.
- Begin the integration of the DAAC-unique interfaces.
- Extend the browse capabilities of the FY 92 prototyping effort.
- Prototype interoperability with selected ADCs.
- Plan the port of the common search and order functions to the users' workstations.
FY 94 Plans

- Complete the integration of the common IMS and DAAC unique interfaces.

- Integrate Science Processing Library component into the IMS.

- Extend ADC interoperability.

- Implement and beta test IMS components on users' workstations, including browse.

- Beta test browse functions at all DAACs.

- Document IMS "lessons learned" for the ECS contractor.
EOSDIS VERSION 0
SYSTEM LEVEL DEVELOPMENT