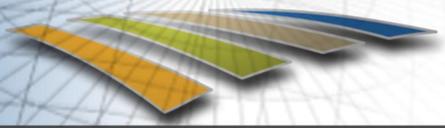


Landsat Data Continuity Mission (LDCM) USGS Project Status Report

June 12, 2007

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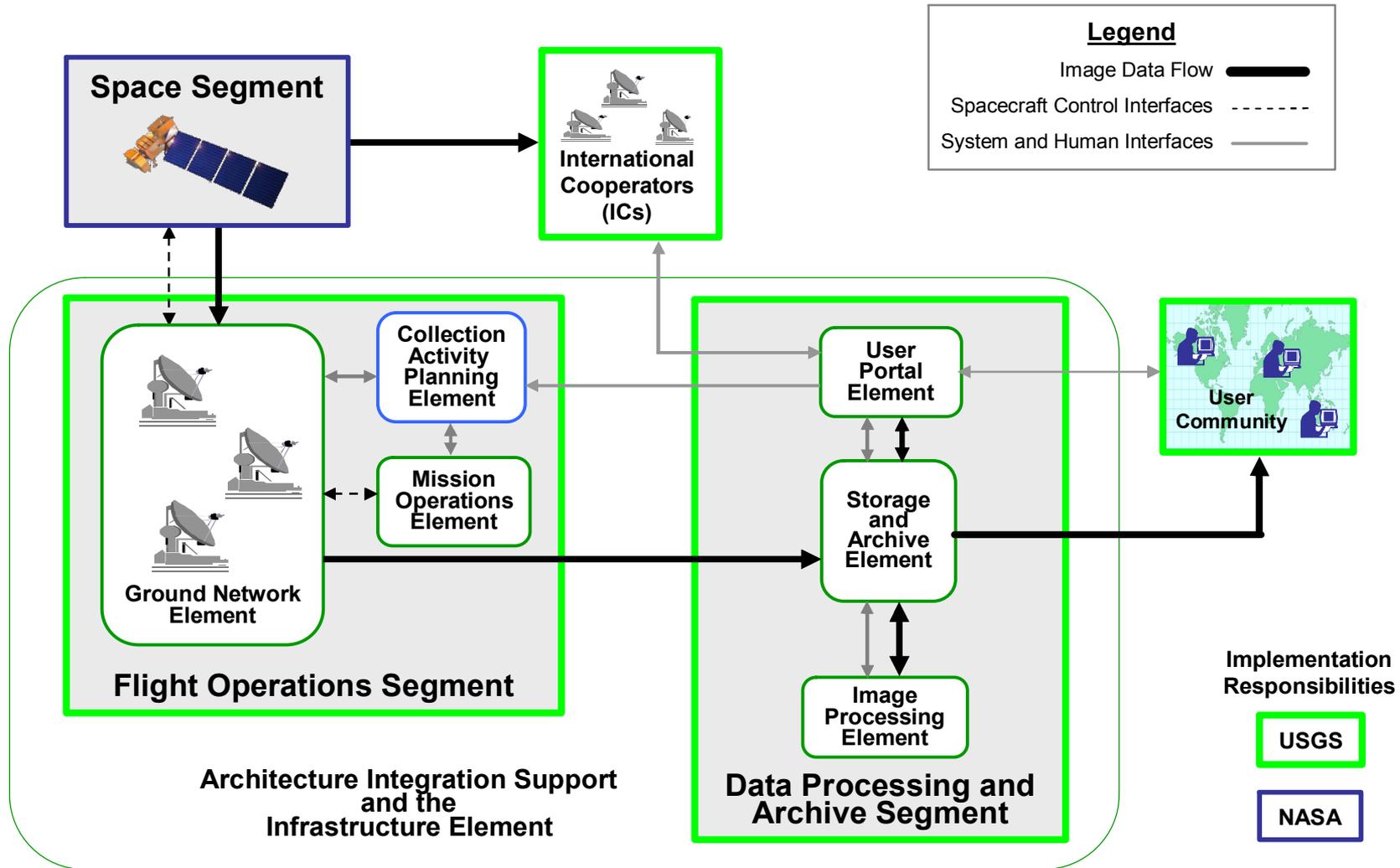
Topics

LDCM

- ◆ USGS acquisition strategy and procurement status
- ◆ System Concept Review (SCR) results
- ◆ System Requirements Review (SRR) plans

LDCM Mission Architecture

LDCM

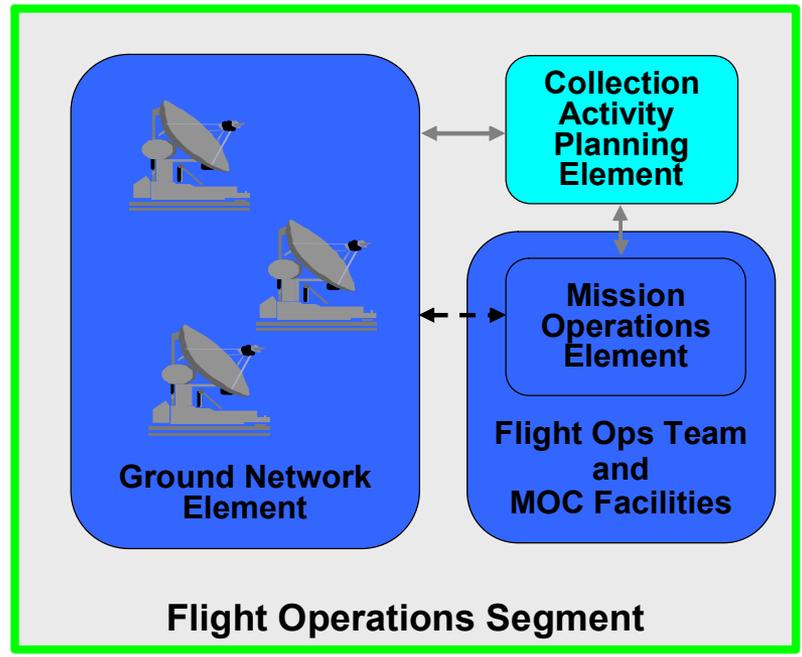


FOS Acquisition Strategy Summary

LDCM

- ◆ New Procurements
 - ◆ Ground Network Element
 - ◆ Mission Operations Element**
 - ◆ Flight Ops Team
 - ◆ MOC (EROS) Facility Modifications

- ◆ EROS TSSC Contract
 - ◆ Collection Activity Planning Element
 - ◆ Segment and element integration



Acquisition Approach

- New Procurements
- EROS TSSC Contract

** NASA procurement, USGS funded

DPAS Acquisition Strategy Summary

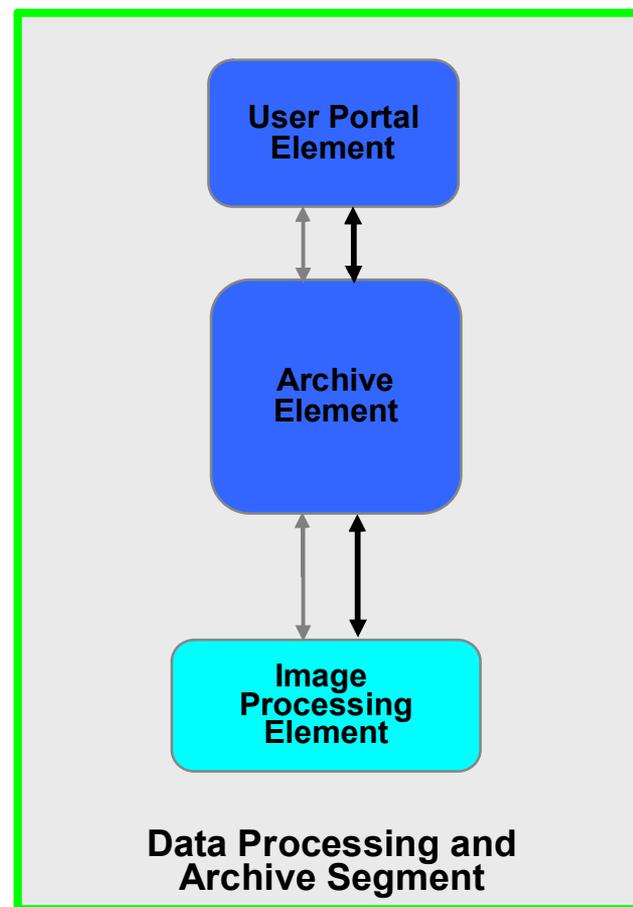
LDCM

- ◆ New Procurements
 - ◆ User Portal Element
 - ◆ Archive Element
- ◆ EROS TSSC Contract
 - ◆ Image Processing Element
 - ◆ Segment and element integration

Acquisition Approach

New Procurements 

EROS TSSC Contract 

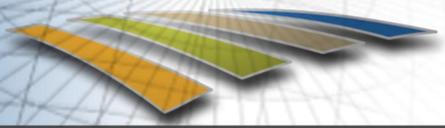




Architecture Integration Support and the Infrastructure Element Summary

- ◆ Aerospace FFRDC Contract
 - ◆ Independent architecture and integration support to USGS

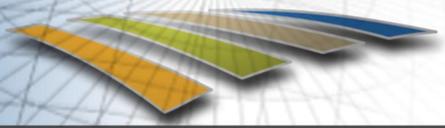
- ◆ EROS TSSC Contract
 - ◆ Infrastructure Element development
 - ◆ Ground system integration support to USGS



USGS LDCM Procurement Status

LDCM

- ◆ Ground Network Element: Trades in process, RFPs expected late 2008
- ◆ Flight Ops Team: RFI done; RFP summer 2007; Award early 2008
- ◆ MOC Facility (EROS): Location chosen and mods expected in 2008
- ◆ Archive and User Portal Elements: RFIs in 2007, RFPs in 2008
- ◆ Collection Planning (i.e. LTAP-8), Image Processing, and Infrastructure Elements developed through the EROS TSSC contract
- ◆ Updates posted at: <http://ldcm.usgs.gov/acquisitionStrategy.php>



System Concept Review (SCR)

LDCM

- ◆ Held February 21-22 at EROS (and the weather was great!)
- ◆ Reviewed ground system ops concepts
- ◆ Designed to gauge progress towards the Ground System (GS) System Requirements Review (SRR) in August 2007
- ◆ Captured 77 RIDs (i.e. action items) in two major groups:
 - ◆ Policy and L1 requirements issues needing USGS HQ clarification
 - ◆ Technical issues requiring engineering / science definition or clarification in the operations concept and segment requirements
- ◆ Next four slides outline major issues of interest

Updates to Product Requirements

LDCM

- ◆ LDCM will generate one standard data product
 - ◆ Precision and terrain corrected (L1T)
 - ◆ Pixel values will be at-sensor radiance or at-sensor reflectance
 - ◆ 4000 L1T products per day; 16-bit data in GIS-ready format
- ◆ LDCM will focus on electronic delivery of L1T products
 - ◆ Web-enabled access with no hard media
- ◆ L0 “standard” and user specified products not currently planned
 - ◆ User feedback will determine what others may be considered
- ◆ LDCM will support “bulk” data delivery
 - ◆ Bulk requirements not well understood; User feedback needed
 - ◆ Initially, bulk delivery on media is planned for “Archive” and L1T data
 - ◆ Will address requirements through a RFI / questionnaire

LDCM Standard L1T Parameters

LDCM

- ◆ Parameters based on:
 - ◆ Feedback from Landsat L1T Pilot
 - ◆ Current understanding of user community requirements
 - ◆ Need for consistency with heritage Landsat products

- ◆ Pixel size: 14.25m pan / 28.5m multispectral
- ◆ Media type: Download (no cost) – no hard media planned
- ◆ Product type: L1T
- ◆ Output format: GeoTIFF
- ◆ Map projection: UTM
- ◆ Datum: WGS84
- ◆ Orientation: North up
- ◆ Resampling: Cubic convolution
- ◆ Accuracy ~12m 90% (CE) global



Additional Product Related Issues

LDCM

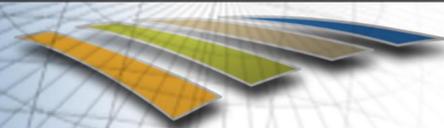
- ◆ LDCM will require user registration for L1T data download
 - ◆ Will strive to reduce impacts on users

- ◆ LDCM will follow COFUR guidelines
 - ◆ USGS HQ determined COFUR permits web-enabled L1T products
 - ◆ COFUR allows for applicable charges for user specified & bulk data
 - ◆ USGS HQ updating Landsat data policy for L1-7 and LDCM

Other Requirements Issues

LDCM

- ◆ LDCM will support priority acquisition and off-nadir requests
 - ◆ Will coordinate draft tasking criteria with LST Mission Ops Group
 - ◆ Criteria will preserve LTAP and be consistent with current missions
 - ◆ USGS HQ planning a policy statement based LST input
- ◆ LDCM will support International Cooperator (IC) community
 - ◆ At recent LTWG, ICs expressed strong interest in LDCM
 - ◆ Bulk delivery mechanism will also support data exchange with ICs
- ◆ LDCM will support a backup data archive
 - ◆ Off-site archive planned but with low cost approach
 - ◆ User feedback indicated costly “hot” backup was not necessary
 - ◆ Thanks to LST for your quick response to our questions!!



Ground System SRR Plans

LDCM

- ◆ System Requirements Review planned for Aug 28-29 at EROS
- ◆ SRR will assess readiness to begin Ground System (GS) design
 - ◆ Maturity of the FOS and DPAS segment level requirements
 - ◆ Allocation of segment requirements to the GS elements
 - ◆ Ability of the envisioned GS design to satisfy the requirements
- ◆ Detailed SRR overview planned on LST agenda this week
 - ◆ Will outline the SRR, the LST's role, and review requirements
 - ◆ LST feedback critical to helping us resolve requirements questions