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EOSDIS Core System Project

**Release B SDPS Data Processing
Subsystem Design Specification
for the ECS Project**

March 1996

Hughes Information Technology Systems
Upper Marlboro, MD

Release B SDPS Data Processing Subsystem Design Specification for the ECS Project

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SUBMITTED BY

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Preface

This document is one of eighteen comprising the detailed design specifications of the SDPS and CSMS subsystem for Release B of the ECS project. A complete list of the design specification documents is given below. Of particular interest are documents number 305-CD-020, which provides an overview of the subsystems and 305-CD-039, the Data Dictionary, for those reviewing the object models in detail.

The SDPS and CSMS subsystem design specification documents for Release B of the ECS Project include:

- 305-CD-020 Release B Overview of the SDPS and CSMS Segment System Design Specification
- 305-CD-021 Release B SDPS Client Subsystem Design Specification
- 305-CD-022 Release B SDPS Interoperability Subsystem Design Specification
- 305-CD-023 Release B SDPS Data Management Subsystem Design Specification
- 305-CD-024 Release B SDPS Data Server Subsystem Design Specification
- 305-CD-025 Release B SDPS Ingest Subsystem Design Specification
- 305-CD-026 Release B SDPS Planning Subsystem Design Specification
- 305-CD-027 Release B SDPS Data Processing Subsystem Design Specification
- 305-CD-028 Release B CSMS Segment Communications Subsystem Design Specification
- 305-CD-029 Release B CSMS Segment Systems Management Subsystem Design Specification
- 305-CD-030 Release B GSFC Distributed Active Archive Center Design Specification
- 305-CD-031 Release B LaRC Distributed Active Archive Center Design Specification
- 305-CD-033 Release B EDC Distributed Active Archive Center Design Specification
- 305-CD-034 Release B ASF Data Center Distributed Active Archive Center Design Specification
- 305-CD-035 Release B NSIDC Distributed Active Archive Center Design Specification
- 305-CD-036 Release B JPL Distributed Active Archive Center Design Specification
- 305-CD-037 Release B ORNL Distributed Active Archive Center Design Specification
- 305-CD-038 Release B System Monitoring and Coordination Center Design Specification
- 305-CD-039 Release B Data Dictionary for Subsystem Design Specification

Object models presented in this document have been exported directly from CASE or DBMS tools and in some cases contain too much detail to be easily readable within hard copy page constraints. The reader is encouraged to view these drawings on line using the Portable Document Format (PDF) electronic copy available via the ECS Data Handling System (EDHS) at:
URL <http://edhs1.gsfc.nasa.gov>.

This document is a formal contract deliverable with an approval code of 2; as such it requires Government review and approval prior to acceptance and use. This document is under ECS contractor configuration control. Once this document is approved, Contractor approved changes are handled in accordance with Class I and Class II change control requirements described in the EOS Configuration Management Plan, and changes to this document shall be made by document change notice (DCN) or by complete revision.

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Abstract

This document describes the Release B Detailed Design for the SDPS Data Processing Subsystem. It defines the Data Processing Subsystem computer software and hardware architectural design, as well as the subsystem design based on Level 4 requirements. The subsystem is divided into 3 CSCIs and 3 HWCI:

- a. Processing (PRONG) CSCI
- b. Science Data Processing Toolkit (SDPTK) CSCI
- c. Algorithm Integration and Test (AITTL) CSCI
- d. Science Processing (SPRHW) HWCI
- e. Algorithm Quality Assurance (AQAHW) HWCI
- f. Algorithm Integration and Test (AITHW) HWCI

Keywords: Processing, SDPS, PDPS, Release B, OMT, Scheduling, AI&T, AutoSys, AutoXpert

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Appendix A. Requirements Trace

Abbreviations and Acronyms

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