

# 4. Requirements

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## 4.1 Introduction

### 4.1.1 Document Generation Methodology

This document has been generated from the RTM (Requirements & Traceability Management) tool. The database from which it was generated consisted of a snapshot of the RTM MAIN database taken on March 1st, 1996.

Section 4 and Appendices B and J of the document have been created directly from tables that were extracted from the RELB\_CDR\_030196 RTM database. They present the text attributes for both the Level 4 requirements and the Level 3 and IRD RbRs (Requirements by Release). This will facilitate review and analysis of the coverage and traceability of the Level 4s. The applicability of a Level 4 requirement to specific releases can be determined by looking at the applicability of its parent RbRs. The “#A”, “#Ir1” or “#B” following the RbR identifier can be used for this purpose. If a L4 requirement has a parent RbR with applicability to a given release, then so does the L4 that traces to it. It must be borne in mind that this is the L4 requirements specification and hence, any references to appendices that are made within the L3 RbR texts refer to the F&PRS document and not to this document.

The main body of the document contains the L4 requirements for Releases Ir1, A and B. Release C look-ahead requirements are in Appendix J. Appendix B does not include any Release C RbRs for the sake of consistency.

All CCRs applied to the RTM MAIN database prior to March 1st, 1996 are in this document.

However, the following CCRs that had been prepared for inclusion in RTM MAIN as of the issue of this document are not incorporated in this document. These are shown in Table 4.1-1 below. The status is as of April 5th, 1996.

The CCRs listed are expected to be present in either the RTM baseline of 041296 or the next baseline after that.

**Table 4.1-1. Pending and Approved CCRs not in this Requirements Baseline**

CCR number	Title	Status
CCR 96-0303	Load SDP Toolkit Requirements into RTM database	Approved
CCR 96-0304	Release A DESKT (CLS) Requirements Update	Approved
CCR 96-0305	SMC Scheduling Requirements	Approved
CCR 96-0306	PLS Requirements Changes based on General Review	Approved
CCR 96-0307	MSS Requirements Changes based on General Review	Pending approval
CCR 96-0308	DPS Requirements Changes based on General Review	Approved
CCR 96-0309	CLS, IOS and DMS Requirements Changes based on General Review	Pending approval
CCR 96-0310	DSS and INS Requirements Changes based on General Review	Pending approval
CCR 96-0316	Incorporate NSI IRD Level 3, RbR and Level 4 Requirements into RTM Database	Approved
CCR 96-0335	Update Release B CSS Level 4 Requirements in RTM MAIN to reflect support for Process Framework, Subscription Services, and Universal References Services and Delete support for Transaction Process, Security Web and X.400 eMail Services.	Pending approval
CCR 96-0338	Incorporate Mode Management requirements into RTM MAIN for SCDO subsystems (MSS requirements not included).	Approved
CCR 96-0131	Level 4 Requirements for IRD Parent Requirements Without Descendant L4s	Pending approval

#### 4.1.2 Requirement Table Notation

All requirements tables, i.e., 4.2 to 4.11, have been generated (with the exception of the introductory text) automatically from the RTM tool. The requirements appear as a series of statements, requirement identifier, requirement release, requirement text and requirement type, sequenced in numerical order. The Release attribute refers to the release where the requirement was first specified

All explanatory text is presented at the start of each subsystem section. The introductory section for each subsystem includes a brief interface summary to allow the reader to understand the context of the subsystem and its interfaces and a brief introduction to each of the subsystem's configuration items.

Please note that where requirements refer to appendices in the current Release A version of 304, these references are intended to be to this version of the document as it covers both Releases A and B.

## 4.2 CLS - Client Subsystem

### 4.2.1 Introduction

The SDPS Client subsystem has three main objectives:

- o provide earth science users with an interface via which they can access ECS services and data
- o offer an environment into which science users can integrate their own tools
- o give science programs access to the ECS services, as well as direct access to ECS data.

The Client subsystem software, therefore, consists of graphic user interface (GUI) programs, tools for displaying the various kinds of ECS data (e.g., images, documents, tables), and libraries representing the client API of ECS services. Modern user interfaces are based on an object paradigm. The SDPS Client subsystem is no exception; the graphic user interface programs will follow an object oriented design. The design will be built around a core set of 'root' objects from which all other GUI software will inherit its behavior. This will help lead to a consistent look and feel and reduce the amount of software that needs to be developed. This core set is called the Desktop. The remainder of the software is collectively called the Workbench.

The Client subsystem is being developed on the incremental track; therefore, the Level 4 requirements for this subsystem are draft requirements. The incremental track utilizes user feedback in the development of software components which are integrated into the formal releases. A part of this incremental track process is the refinement of these draft requirements. Final as-built requirements will be available after the increments are complete.

### 4.2.2 CLS Subsystem Summary

#### 4.2.2.1 Subsystem Interfaces

The Client Subsystem context is described in this paragraph. It describes the relationships between the Client Subsystem and the other ECS subsystems. Refer to 305-CD-021-002 for a context diagram and the flows between the subsystems.

- o the subsystem accepts requests from users for the full range of ECS data and services, and returns to users the resulting responses to the requests made. These requests include registration and accounting information requests, search and access requests, subscriptions, and requests for software and documents.
- o the subsystem accepts advertisements, subscription notifications, software, and documents from the Interoperability subsystem and sends advertisements, search requests, subscriptions, advertisements, software, and documents.
- o the subsystem sends requests to the Data Management Subsystem for Data Management Subsystem Data and Services. These requests are for valid lists and dependent valids, search services and access requests, subscriptions, and session management. Results returned are valids lists and dependent valids, search results, responses to access requests, notifications in response to subscriptions, and session management information.

- o the subsystem sends search and access requests, subscriptions, and session management requests to the Data Server Subsystem and accepts the resulting responses from the requests made.
- o the subsystem sends user information requests and user information to the Management Subsystem and receives updated user information.
- o user authentication requests are directed by the subsystem to the Communications Subsystem. The Client also utilizes Communication Subsystem common facilities, which include mail services and file transfer capabilities, and legacy services.

#### **4.2.2.2 CSCI Overview**

##### **4.2.2.2.1 DESKT - Desktop CSCI**

The Desktop CSCI provides capabilities for organizing and presenting the various application objects (data and programs) with which a user interfaces. The Desktop CSCI provides the following basic classes of desktop objects:

- o *General Desktop Objects*—this is the root class for all desktop objects
- o *Desktop Container Objects* —this is a subclass which provides for "containment" actions in general.
- o *Desktop Document Objects*—this is a subclass which provides for the handling of document-like objects.
- o *Desktop Application Objects*—this is a subclass which provides default behavior for objects which represent executable programs.

The Desktop CSCI also does the following:

- o Supports the definition of new types of objects as subtypes of the basic desktop object classes.
- o Provides for the installation of the software implementing the new object types into the desktop.
- o Executes the software associated with an object in response to user input actions.
- o Provides a framework for installing object format translators.

The ECS Desktop will also provide additional predefined desktop object classes (e.g., folders) as subtypes of the basic classes, in order to facilitate the organization of the desktop.

##### **4.2.2.2.2 WKBCH- Workbench CSCI**

The Workbench CSCI provides tools for helping users to access, analyze, and disseminate data to colleagues throughout the scientific community. The Workbench CSCI provides software objects that are subtypes of the basic objects classes provided by the Desktop. The Workbench objects offer an environment for accessing and managing a user's view into the EOSDIS data and services and consist of the following:

- o A collection of GUI-based tools for viewing, creating and editing ECS data objects.
- o API libraries to build science applications or prepare and manipulate data.

- o A collection of software objects providing the GUI interface to the ECS services, ECS data objects, and Web interface functions.
- o ECS client support software objects which assist in the interaction between the Client Subsystem and the ECS services.

### **4.2.3 Requirements Table**

The following table lists all CLS L4 requirements for Release A & B in numerical order together with their RbR parent requirements.

**Client Subsystem L4 to RbR traceability (1 of 145)**

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00010	A	The DESKT CI shall provide a GUI interface with a multiple window display.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00020	A	The DESKT CI shall provide a GUI interface with buttons and pull down menus.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00030	A	The DESKT CI shall provide a GUI interface with consistent use of non-standard keys.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00040	A	The DESKT CI shall provide a GUI interface with minimal use of non-standard keys.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00050	A	The DESKT CI shall provide a GUI interface with standardized use of commands and terminology across screens.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00080	A	The DESKT CI shall provide a GUI interface with self-explanatory error messages.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00090	A	The DESKT CI shall provide a GUI interface with random movement of a cursor through the screen.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00100	A	The DESKT CI shall provide a GUI interface with context-sensitive help.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00110	A	The help information made available to a user shall include a general introductory description of EOSDIS and its services.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00120	A	The DESKT CI shall provide for a common default color scheme for the user interface which may be customized by the user.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-1380#B	The IMS shall provide the capability to integrate the element toolkits with a common user interface.
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-1380#A	The IMS shall provide the capability to integrate the element toolkits with a common user interface.
S-CLS-00130	A	The DESKT CI shall provide for a standard ordering of menu items for the user interface.	IMS-1380#B	The IMS shall provide the capability to integrate the element toolkits with a common user interface.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1380#A	The IMS shall provide the capability to integrate the element toolkits with a common user interface.
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00140	A	The DESKT CI shall provide a standard widget set for building a user interface.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-1380#B	The IMS shall provide the capability to integrate the element toolkits with a common user interface.
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-1380#A	The IMS shall provide the capability to integrate the element toolkits with a common user interface.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00150	B	The DESKT CI shall provide container desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00160	B	The DESKT CI shall provide document desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00170	B	The DESKT CI shall provide application desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00180	B	The DESKT CI shall provide users the capability to execute software associated with a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00190	B	The DESKT CI shall provide users the capability to create desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00200	B	The DESKT CI shall provide users the capability to destroy desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00210	B	The DESKT CI shall provide users the capability to open desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00220	B	The DESKT CI shall provide users the capability to copy the reference to objects for a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00230	B	The DESKT CI shall provide users the capability to copy a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00240	B	The DESKT CI shall provide users the capability to deep copy a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00250	B	The DESKT CI shall provide users the capability to move desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00260	B	The DESKT CI shall provide users the capability to obtain desktop object data associated with desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00270	B	The DESKT CI shall provide users the capability to update desktop object data associated with desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00280	B	The DESKT CI shall provide users the capability to list the available services associated with any desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00290	B	The DESKT CI shall provide users the capability to bind a service to a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-00295	B	The DESKT CI shall provide users the capability to unbind a service from a desktop object.	EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00300	B	The DESKT CI shall provide users the capability to invoke any service bound to a desktop object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-00310	B	The DESKT CI shall provide users the capability to generate an exchangeable (i.e., file based) form for desktop objects.	EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00320	B	The DESKT CI shall provide users the capability to generate a desktop object from an externalized (i.e., file-based) format.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-00330	B	The DESKT CI shall provide users the capability to add desktop objects to container objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00340	B	The DESKT CI shall provide users the capability to remove desktop objects from container objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0190#B	<p>The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.</p>
S-CLS-00350	B	The DESKT CI shall provide users the capability to iteratively apply operations to each of the objects in a desktop container.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040#B	<p>ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00360	B	The DESKT CI shall provide users the capability to search container objects for objects which satisfy a user specified Search Criteria.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-00370	B	The DESKT CI shall provide users the capability to browse the objects contained in container objects.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-00380	B	The DESKT CI shall provide users the capability to display on a continuous basis the objects contained in container objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00390	B	The DESKT CI shall provide the capability to iconically represent desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00400	B	The DESKT CI shall provide the capability to textually represent desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00410	B	The DESKT CI shall provide the users the capability to list object types supported by a specific application or service class.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00420	B	The DESKT CI shall provide the users the capability to list applications or service classes supported by a specific object type.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00430	B	The DESKT CI shall provide the users the capability to add applications or services supported by a specific object type.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00440	B	The DESKT CI shall provide the users the capability to remove applications or services supported by a specific object type.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-00450	B	The DESKT CI shall provide users the capability to install an application interface (i.e., an application and its parameterized interface description).	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5010# B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			EOSD5030# B	ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			EOSD5060# B	ECS shall enable interoperability with equivalent International systems, e.g. European and Japanese systems, to support the following: a). Browse services b). Data retrieval services.
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-00460	B	The DESKT CI shall provide users the capability to remove an application interface.	EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00470	B	The DESKT CI shall provide users the capability to obtain the attributes associated with an application interface.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-00490	B	The DESKT CI shall provide users the capability to modify the attributes associated with an application interface.	EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-00640	B	The DESKT CI shall provide users the capability to obtain a description of the interaction between the Workbench and specified tools.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
			IMS-1380#B	The IMS shall provide the capability to integrate the element toolkits with a common user interface.
S-CLS-00790	B	The DESKT CI shall provide users the capability to transition from the user session currently active on the desktop to another user session, by means of a single mouse click.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-01280	A	The WKBCH CI shall provide a GUI interface to data dictionary associations between attributes (e.g., between instruments and geophysical parameters).	IMS-0120#A	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-01360	B	The DESKT CI shall provide users the capability to mail desktop objects	IMS-1600#B	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>
S-CLS-01450	B	Desktop objects shall utilize a <TBD> external format.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-01460	B	Desktop object references shall be in <TBD> format.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-01480	A	The DESKT CI shall utilize an X-windows windowing interface for the GUI.	IMS-0150#B	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
			EOSD5030# A	ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5030#B	ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW.
S-CLS-01490	A	<p>The DESKT CI executables shall run on the following hosts:</p> <ul style="list-style-type: none"> <li>a. SGI IRIX 5.3</li> <li>b. HP UX 9.05</li> <li>c. SUN Solaris 2.4</li> <li>d. IBM RS/6000 AIX 3.2.5</li> </ul>	IMS-1510#B	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
			IMS-1510#A	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
S-CLS-01492	B	<p>The DESKT CI executables shall run on the following hosts:</p> <ul style="list-style-type: none"> <li>a. DEC Digital Unix 4.0</li> <li>b. HP UX 10.01</li> <li>c. SGI IRIX 6.2 (64 bit)</li> <li>d. IBM RS/6000 AIX 4.1</li> </ul>	IMS-1510#B	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-01500	B	The DESKT CI user interface shall conform to the guidelines in Version 4.0 of the ECS User Interface Style Guide (June 1, 1994).	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0150#B	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
S-CLS-01510	A	The WKBCH CI interface to access communications networks shall conform to the ECS style guidelines.	IMS-0100#B	<p>The IMS shall support, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Interactive sessions</li> <li>b. Non-interactive remote sessions</li> <li>c. Client-server interface</li> <li>d. Simulated sessions for training purposes</li> </ul>
			IMS-0150#B	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
			IMS-0100#A	<p>The IMS shall support, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Interactive sessions</li> <li>b. Non-interactive remote sessions</li> <li>c. Client-server interface</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0150#A	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories
S-CLS-01520	A	The WKBCH CI interface access to data bases that may be geographically dispersed shall conform to the ECS style guidelines.	IMS-0150#B	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories
			IMS-0150#A	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories
S-CLS-01530	A	The WKBCH CI interface to access to multi-disciplined directories and inventories shall conform to the ECS style guidelines.	IMS-0150#A	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories
			IMS-0150#B	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories
S-CLS-01540	A	The WKBCH CI interface to heterogeneous data sets shall conform to the ECS style guidelines.	IMS-0150#B	The IMS shall supply a uniform user interface for access to the following at a minimum: a. Heterogeneous data sets b. Communications networks c. Data bases that are geographically dispersed d. Multi-disciplined directories and inventories

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0150#A	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
S-CLS-01550	B	The DESKT CI shall provide the user the capability to copy ECS services onto his desktop, iconize them, and save them as desktop objects.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040# B	<p>ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-01555	B	The DESKT CI shall have capability to prompt user for confirmation when a user attempts addition, modification or deletion of an object.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-01560	B	The DESKT CI shall provide the user the capability to access a service via the previously saved desktop object representing that service.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			EOSD5040# B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-01570	A	Users shall be able to enter User Comments in a comments window directly accessible from any open window on the users desktop.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-01600	A	The DESKT CI shall provide users the capability to resize windows.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-01605	A	The DESKT CI shall provide users the capability to select different default screen font sizes.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-01610	A	The DESKT CI shall provider users with the ability to change the default icon size.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-01620	A	The DESKT CI shall provide users the ability to change the spacing of icons.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-01630	A	The DESKT CI shall provide a GUI to allow SCFs to request a QA metadata update with update data.	PGS-1130#B	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions
			PGS-1130#A	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-01640	A	The DESKT CI shall provide QA metadata updates to the SDSRV CI.	PGS-1130#B	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions
			PGS-1130#A	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions
S-CLS-10010	B	The WKBCH CI shall provide the capability for users to compose Search Requests based on product specific and core metadata attributes.	IMS-0340#B	The metadata maintained by the IMS shall contain content-based summary information, including statistical summaries and granule features, for all ECS standard and special products.
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0560#B	The IMS shall decompose complex data base search requests into executable data base queries in a manner which is transparent to the user.
S-CLS-10015	A	The WKBCH CI shall provide the capability for users to compose Directory Searches based on core metadata attributes.	IMS-0390#A	The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS search and order service.
S-CLS-10020	A	The WKBCH CI shall provide users the capability to refine and resubmit a Search Request with additional, deleted, or changed Search Criteria.	IMS-0570#B	The IMS shall provide an incremental search capability.
			IMS-0570#A	The IMS shall provide an incremental search capability.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10030	A	The WKBCH CI shall provide graphical aids to assist users in formulating Search Requests.	IMS-0630#B	The IMS shall provide the capability to select metadata for retrieval by: a. Boolean operators b. Relational operators c. Attribute values d. Search strings e. Combinations thereof
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0630#A	The IMS shall provide the capability to select metadata for retrieval by: a. Boolean operators b. Relational operators c. Attribute values d. Search strings e. Combinations thereof
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
S-CLS-10040	A	The WKBCH CI shall support a Geographic Reference criteria for query of geographic Metadata.	IMS-0630#B	The IMS shall provide the capability to select metadata for retrieval by: a. Boolean operators b. Relational operators c. Attribute values d. Search strings e. Combinations thereof

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0640#A	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10050	A	The WKBCH CI shall support query of geographic Metadata by data element content criteria specified in Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-1470#B	<p>The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
			IMS-0640#A	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
S-CLS-10060	A	The WKBCH CI shall support a minimum bounding rectangle criteria for query of geographic Metadata by text and graphical input.	IMS-0580#B	<p>The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0640#A	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10070	B	The WKBCH CI shall support point-and-radius criteria for query of geographic Metadata by text and graphical input.	IMS-0580#B	<p>The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10075	B	The WKBCH CI shall support point criteria for query of geographic Metadata by text and graphical input.	IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10080	B	The WKBCH CI shall support polygonal coordinate criteria for query of geographic Metadata by graphical input.	IMS-0580#B	<p>The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.</p>
			IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10090	B	The WKBCH CI shall support query of geographic Metadata by geographic name by text input.	IMS-0580#B	<p>The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.</p>
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
S-CLS-10100	A	The WKBCH CI shall support phrase matching criteria for query of alphanumeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#A	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10110	A	The WKBCH CI shall support an exact word matching criteria for query of alpha-numeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
			IMS-1470#B	<p>The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Combinations thereof</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#A	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10120	A	The WKBCH CI shall support character set (string) matching criteria for query of alpha-numeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
			IMS-0630#A	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#A	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10130	B	The WKBCH CI shall provide users the capability to use boolean operators to relate query parameters for geographic and non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10140	B	The WKBCH CI shall support wildcard construct (prefix, embedded, suffix) matching criteria for query of alpha-numeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10150	B	The WKBCH CI shall support character range matching criteria for query of alpha-numeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10160	B	The WKBCH CI shall support logical and boolean operators matching criteria for query of alpha-numeric non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-1470#B	<p>The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Combinations thereof</li> </ul>
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10170	B	The WKBCH CI shall support min/max range Search Criteria for query of numerical non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10175	B	The WKBCH CI shall support SQL syntax for queries on Advertising.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10180	B	The WKBCH CI shall support any combination of exact word match, exact phrase match, character set, wildcard, character range, logical and boolean operator, and min/max range Search Criteria for query of non-geographic Metadata.	IMS-0630#B	<p>The IMS shall provide the capability to select metadata for retrieval by:</p> <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
S-CLS-10190	B	The WKBCH CI shall provide the capability for users to compose searches across multiple data sets for coincident occurrences of data in space, time, or any other searchable Metadata attribute(s).	IMS-0575#B	The IMS shall provide the capability to search across multiple data sets for coincident occurrences of data in space and/or time and any other attribute(s) of metadata.
			IMS-0650#B	<p>The IMS shall query non-geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
			IMS-0610#B	The IMS shall provide the capability to search the data inventory which describes each granule of EOSDIS data.
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10200	B	The WKBCH CI shall provide users the capability to search and view a products processing history.	IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-0545#B	The IMS shall provide the capability to search a products processing history.
S-CLS-10210	B	The WKBCH CI shall provide users the capability to search for Science Processing Library holdings	IMS-0270#B	IMS shall maintain information on the science processing library holdings and provide the capability for users to search for and order science processing library software.
			IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
			EOSD5040#B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
S-CLS-10220	B	The WKBCH CI shall allow users to formulate a Data Request based on the results of searching the inventory core metadata attributes and inventory product specific metadata attributes.	IMS-0340#B	The metadata maintained by the IMS shall contain content-based summary information, including statistical summaries and granule features, for all ECS standard and special products.
			IMS-0900#B	The IMS shall provide an interface to the IPs for ordering data to be delivered directly to the user or to a DADS.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0910#B	he IMS shall provide the capability to receive the metadata from the DADS, when IP data has been ingested into the EOSDIS archives.
			IMS-0680#B	The IMS shall provide data order capabilities integrated with metadata search capabilities.
			IMS-0770#B	The IMS shall allow users to formulate a data order based on any combination of the inventory core metadata attributes and geophysical parameters at a minimum.
S-CLS-10230	B	The WKBCH CI shall provide the capability for users to preview billing costs for non-EOSDIS Data Products prior to Data Request submission.	IMS-1350#B	The IMS shall provide the capability for users to preview billing costs, which are based upon MOUs with the ADC and non-EOSDIS data centers, prior to ADC and non-EOSDIS data product order submission.
S-CLS-10240	B	The WKBCH CI shall provide the capability for users to request subsetted, subsampled, and summary products.	IMS-0340#B	The metadata maintained by the IMS shall contain content-based summary information, including statistical summaries and granule features, for all ECS standard and special products.
			IMS-0705#B	The IMS shall provide the capability to request a subset (ie. scene) of a Landsat 7 subinterval indentified by: a. WRS b. Geographic location (x,,z) spatial with rectangular boundries c. Spectral Band d. Time
			IMS-0700#B	The IMS shall provide the capability for users to request subsetted, subsampled, and summary data products, which have been processed at the PGS during the routine production processing and archived at the DADS, whenever associated inventory information is displayed.
S-CLS-10250	B	The WKBCH CI shall automatically provide the user an estimate of how long it will take before products are ready for delivery.	IMS-0730#B	The IMS shall, using information supplied by the DADS, provide the user an estimate of how long it will take before subsetted, subsampled, and summary data products are ready for visualization.
S-CLS-10260	B	The WKBCH CI shall provide the capability for users to issue Data Requests for Data Products that are generated on demand.	IMS-0925#B	The IMS shall provide the capability for users to construct a Product Order associated with a Product Processing Order.
			IMS-1005#B	The IMS shall forward, to the appropriate DADS, Product Orders for distribution of the products generated as a result of the Product Processing Order.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10280	B	The WKBCH CI shall provide users the capability to create, cancel, renew, update and list the contents of Subscriptions, including standing requests.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-10290	A	The WKBCH CI shall provide users the capability to browse data in ECS supported visualization formats in a window during the data selection and acquisition process,	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS
S-CLS-10300	B	The WKBCH CI shall provide visual overlays to aid in the selection of spatial data and to enhance the display of geographic metadata.	IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.
			IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-10310	B	The WKBCH CI shall provide users the capability of positioning the cursor by entering an image X,Y coordinate.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-1590#B	The IMS toolkit data visualization tools shall provide capabilities for sizing and positioning the cursor by: a. Earth coordinates b. Image coordinates c. Instrument scan-line coordinated
S-CLS-10320	B	The WKBCH CI shall provide users the option to display Latitude/Longitude pairs as symbols, displayed in their proper geolocation on all visualizations produced by the WKBCH CI.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
S-CLS-10330	A	The WKBCH CI shall provide users the capability of displaying 8-bit raster images.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10340	A	The WKBCH CI shall provide users the capability of displaying 24-bit raster images.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS
S-CLS-10350	A	The WKBCH CI shall provide users the option to display a series of Latitude/Longitude pairs as lines, displayed in their proper geolocation on top of all visualizations produced by the WKBCH CI.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
S-CLS-10360	A	The WKBCH CI shall provide users the capability to display browse information in table format.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-10370	A	The WKBCH CI shall provide users the capability to display browse information in text format.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-10380	A	The WKBCH CI shall provide users the capability to produce an animation of a browse movie loop.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#A	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-10390	A	The WKBCH CI binaries that run on ECS supported workstations shall be publicly available.	IMS-1510#B	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1510#A	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
S-CLS-10400	A	The WKBCH CI shall provide users the option to display a series of visualizations as an animation.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-1530#A	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
S-CLS-10410	A	The WKBCH CI shall provide the capability of displaying ECS supported visualization data as a two-dimensional color scatter plot.	IMS-1540#B	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
			IMS-1540#A	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
S-CLS-10420	A	The WKBCH CI shall provide the capability of selecting different color palettes for the pseudocolor visualizations.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
			IMS-1550#A	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10430	A	The WKBCH CI shall provide the capability of displaying two-dimensional data arrays as pseudocolor images.	IMS-1540#B	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
			IMS-1540#A	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
S-CLS-10440	A	The WKBCH CI shall provide the capability of zooming and panning pseudocolor visualizations of data.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1550#A	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10450	A	The WKBCH CI shall provide the capability of zooming and panning raster images.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
			IMS-1550#A	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10460	B	The WKBCH CI shall provide users Lat/Long lists for the production of built-in vector overlays as part of the application.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
S-CLS-10470	B	The WKBCH CI shall provide users the capability to display browse information in vector graphic format.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
			IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-10480	B	The WKBCH CI shall provide the capability of displaying ECS supported visualization data as a series of lineplots.	IMS-1540#B	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
S-CLS-10490	B	The WKBCH CI shall provide the capability of displaying a horizontal or vertical profile through a pseudocolor image.	IMS-1540#B	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams
S-CLS-10500	B	The WKBCH CI shall provide the capability of displaying multi-dimensional arrays of data as a series of two-dimensional pseudocolor images.	IMS-1540#B	The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) b. Three-dimensional plots c. Contour plots d. Three-dimensional surface diagrams

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-10510	B	The WKBCH CI shall provide the capability of importing color palettes.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10520	B	The WKBCH CI shall provide the capability for modifying the color palette.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10530	B	The WKBCH CI shall provide the capability of modifying the pseudocolor mapping by changing the data min/max values.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10540	B	The WKBCH CI shall provide the capability of modifying the pseudocolor mapping by adaptive equalization.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-10550	B	The WKBCH CI shall provide users the capability of calculating summarizing statistics of multi-dimensional arrays of EOS data.	IMS-1570#B	The IMS toolkit software shall provide statistical analysis capabilities.
S-CLS-10560	B	The WKBCH CI shall provide the capability of calculating summarizing statistics of user-selected columns from tables of values of EOS data.	IMS-1570#B	The IMS toolkit software shall provide statistical analysis capabilities.
S-CLS-10570	A	The WKBCH CI shall produce visualizations of images needed for QA, validation, Algorithm development, calibration functions, parameter verification and anomaly detection.	IMS-1520#A	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed
			IMS-1520#B	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-10580	A	The WKBCH CI shall produce visualizations of multi-dimensional arrays needed for QA, Validation, Algorithm development, calibration functions, parameter verification and anomaly detection.	IMS-1520#B	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed
			IMS-1520#A	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed
S-CLS-10590	A	The WKBCH CI shall produce visualizations of tables of numbers needed for QA, Validation, Algorithm development, calibration functions, parameter verification and anomaly detection.	IMS-1520#A	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed
			IMS-1520#B	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed
S-CLS-10600	B	The WKBCH CI shall display the Latitude and Longitude coordinates of the cursor, when the cursor is inside an EOS Grid array.	IMS-1590#B	The IMS toolkit data visualization tools shall provide capabilities for sizing and positioning the cursor by: a. Earth coordinates b. Image coordinates c. Instrument scan-line coordinated
S-CLS-10610	B	The WKBCH CI shall provide users the capability of positioning the cursor by entering a Latitude/Longitude value.	IMS-1590#B	The IMS toolkit data visualization tools shall provide capabilities for sizing and positioning the cursor by: a. Earth coordinates b. Image coordinates c. Instrument scan-line coordinated

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10615	B	The WKBCH CI shall provide users the capability of positioning the cursor by entering instrument scan line.	IMS-1590#B	The IMS toolkit data visualization tools shall provide capabilities for sizing and positioning the cursor by: <ul style="list-style-type: none"> <li>a. Earth coordinates</li> <li>b. Image coordinates</li> <li>c. Instrument scan-line coordinated</li> </ul>
S-CLS-10620	A	The WKBCH CI shall provide users the capability to view documentation ingested in any of the following document formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF), g) Interleaf.	IMS-0500#A	The IMS shall provide access to information to include at a minimum: <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0500#B	The IMS shall provide access to information to include at a minimum: <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>c. Engineering data</li> <li>d. EOC historical data</li> <li>e. Data acquisition plans and schedules</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>h. ESDIS Project Policies and Procedures obtained from SMC data base</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0540#B	The IMS shall display PGS system processing schedules to users.
S-CLS-10630	B	The system shall provide users a Training Option	IMS-0100#B	The IMS shall support, at a minimum: <ul style="list-style-type: none"> <li>a. Interactive sessions</li> <li>b. Non-interactive remote sessions</li> <li>c. Client-server interface</li> <li>d. Simulated sessions for training purposes</li> </ul>
S-CLS-10640	B	The Training option shall consist of simulated user sessions for identifying, searching for and obtaining data and services.	IMS-0100#B	The IMS shall support, at a minimum: <ul style="list-style-type: none"> <li>a. Interactive sessions</li> <li>b. Non-interactive remote sessions</li> <li>c. Client-server interface</li> <li>d. Simulated sessions for training purposes</li> </ul>
			IMS-1505#B	The IMS toolkit software shall provide the tools to simulate an on-line IMS session for training sessions.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10650	A	The WKBCH CI shall provide the user the capability to identify Data and services provided by ECS.	EOSD5040#B	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			EOSD5040#A	ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science.
			IMS-0030#A	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0030#B	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
S-CLS-10660	A	The WKBCH CI shall provide users the capability to access Advertisements.	IMS-0390#B	The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS search and order service.
S-CLS-10670	A	The WKBCH CI shall provide unregistered users the capability to browse public Advertisements.	IMS-0085#B	The IMS shall provide unregistered users access to ECS services as authorized by the SMC.
			IMS-0085#A	The IMS shall provide unregistered users access to ECS services as authorized by the SMC.
S-CLS-10680	A	The WKBCH CI shall provide users the capability to access descriptions of providers in the advertising service.	IMS-0390#B	The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS search and order service.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10690	A	The WKBCH CI shall provide users the capability to access Advertisements describing non-ECS data and services.	EOSD5010# A	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			EOSD5010# B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
S-CLS-10700	A	The WKBCH CI shall provide the user the capability to locate non-ECS data and services interoperable with ECS.	EOSD5010# B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			IMS-0600#B	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0030#A	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0600#A	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0030#B	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			EOSD5010# A	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10710	A	The WKBCH CI shall provide the registered user the capability to obtain ECS data and services.	IMS-0600#B	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0030#A	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-1490#B	The IMS toolkit software shall provide users, including those working from ICCs and ISTs, with the capability to locally construct the requests for IMS services, forward the requests to the IMS server, and obtain request results.
			IMS-1490#A	The IMS toolkit software shall provide users, including those working from ICCs and ISTs, with the capability to locally construct the requests for IMS services, forward the requests to the IMS server, and obtain request results.
			IMS-0600#A	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0030#B	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
S-CLS-10720	A	Registered users shall be able to obtain ECS data and services via their corresponding interfaces in the WKBCH CI, provided that the users are authorized for the specific services and/or data.	EOSD5010#B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0030#B	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			EOSD5010#A	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			IMS-0600#B	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0930#B	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.
			IMS-0500#A	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information f. Processing schedules g. Documentation i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-0930#A	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0600#A	The IMS shall provide the capability to search a directory of information that describes whole EOSDIS, non-EOSDIS, and ADC earth science data sets.
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
			IMS-0030#A	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
S-CLS-10730	B	The WKBCI shall provide users the capability to search data dictionary information to obtain the precise definitions of terms used within ECS.	IMS-0320#B	Standard Product related metadata shall contain, at a minimum: a. Keywords and glossary from investigators b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing c. Identifiers for locating products in the DADS archive by granule d. Documentation on algorithms, including version history, authors, written description of product, equations, and references e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products g. Published papers, research results, significant results, and references by author and date h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C
			IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			EOSD5010# B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			EOSD5060# B	ECS shall enable interoperability with equivalent International systems, e.g. European and Japanese systems, to support the following: a). Browse services b). Data retrieval services.
S-CLS-10750	A	The WKBCH CI shall provide users a search and results interface to search for and view Inventory information.	IMS-0930#B	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.
			IMS-0500#A	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information f. Processing schedules g. Documentation i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-0430#A	The IMS shall maintain an on-line inventory with information that individually describes each granule of EOSDIS data, where granule refers to the minimum traceable logical unit of data stored in the archives, as defined by the instrument science team.
			IMS-0930#A	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.
			IMS-0430#B	The IMS shall maintain an on-line inventory with information that individually describes each granule of EOSDIS data, where granule refers to the minimum traceable logical unit of data stored in the archives, as defined by the instrument science team.
			IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10755	A	The WKBCH CI shall provide users a search and results interface to search for and view Directory information.	IMS-0390#A	The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS search and order service.
S-CLS-10770	A	The WKBCH CI shall support hierarchical searching of documents in HTML format.	EOSD5030#B	ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW.
			IMS-0530#B	The IMS shall provide document text search.
			IMS-0535#B	The IMS shall support hierarchical searching of suitably structured documents.
			EOSD5030#A	ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW.
S-CLS-10780	A	The WKBCH CI shall list Dependent Valid Values to assist users in formulating Search Requests.	IMS-0630#B	The IMS shall provide the capability to select metadata for retrieval by: <ul style="list-style-type: none"> <li>a. Boolean operators</li> <li>b. Relational operators</li> <li>c. Attribute values</li> <li>d. Search strings</li> <li>e. Combinations thereof</li> </ul>
			IMS-0650#B	The IMS shall query non-geographic metadata by any of the following criteria at a minimum: <ul style="list-style-type: none"> <li>a. Exact word match</li> <li>b. Phrase match</li> <li>c. Character set (string)</li> <li>d. Wildcard construct (prefix, embedded, suffix)</li> <li>e. Character range</li> <li>f. Logical and Boolean operators</li> <li>g. Min/max range search</li> <li>h. Any combination of the above</li> </ul>
			IMS-0550#A	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: <ul style="list-style-type: none"> <li>a. Architecture</li> <li>b. Data Base management system</li> <li>c. Data Base structure</li> <li>d. Query languages</li> <li>e. Data formats</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0630#A	The IMS shall provide the capability to select metadata for retrieval by: a. Boolean operators b. Relational operators c. Attribute values d. Search strings e. Combinations thereof
			IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSs: a. Architecture b. Data Base management system c. Data Base structure d. Query languages e. Data formats
S-CLS-10800	A	The WKBCH CI shall provide users the capability to specify electronic distribution of data (i.e., over a network) in Electronic Distribution Requests.	IMS-0590#B	The IMS shall provide the capability to distribute information: a. On-line (i.e., over a network) b. Off-line (hardcopy or offline data media).
			IMS-0590#A	The IMS shall provide the capability to distribute information: a. On-line (i.e., over a network) b. Off-line (hardcopy or offline data media).
S-CLS-10810	A	The WKBCH CI shall provide users the capability to specify off-line distribution of data (i.e., hardcopy or off-line data media) in Media Distribution Requests, as available from specific Data Servers.	IMS-0590#B	The IMS shall provide the capability to distribute information: a. On-line (i.e., over a network) b. Off-line (hardcopy or offline data media).
			IMS-0590#A	The IMS shall provide the capability to distribute information: a. On-line (i.e., over a network) b. Off-line (hardcopy or offline data media).
S-CLS-10830	A	The WKBCH CI shall provide the capability to access and present guide information as ASCII text documents.	IMS-0415#A	The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0500#A	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0415#B	<p>The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.</p>
			IMS-0500#B	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>c. Engineering data</li> <li>d. EOC historical data</li> <li>e. Data acquisition plans and schedules</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>h. ESDIS Project Policies and Procedures obtained from SMC data base</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
S-CLS-10840	A	The WKBCH CI shall provide the ability for terminals with HTML viewers to access guide information in HTML format which includes graphics and hypertext.	IMS-0415#B	<p>The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0500#B	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>c. Engineering data</li> <li>d. EOC historical data</li> <li>e. Data acquisition plans and schedules</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>h. ESDIS Project Policies and Procedures obtained from SMC data base</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
			IMS-0415#A	<p>The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.</p>
			IMS-0510#A	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0500#A	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information f. Processing schedules g. Documentation i. Science Processing Library software j. Documentation on data format and metadata standards
S-CLS-10850	A	The WKBCH CI shall provide users the capability to submit Metadata problem reports.	IMS-0460#A	The IMS shall provide the capability to accept metadata problem reports from users, and inform the PGS quality assurance staff of the problem.
			IMS-0460#B	The IMS shall provide the capability to accept metadata problem reports from users, and inform the PGS quality assurance staff of the problem.
S-CLS-10860	B	The WKBCH CI shall provide users the capability to display processing schedules.	IMS-0540#B	The IMS shall display PGS system processing schedules to users.
S-CLS-10870	B	The WKBCH CI shall provide users the capability to display data acquisition plans and schedules.	IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10880	B	The WKBCH CI shall provide users the capability to display documentation on data formats and Metadata standards.	IMS-0500#B	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>c. Engineering data</li> <li>d. EOC historical data</li> <li>e. Data acquisition plans and schedules</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>h. ESDIS Project Policies and Procedures obtained from SMC data base</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
S-CLS-10882	B	The WKBCH CI shall provide users the capability to display climatology information.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
S-CLS-10884	B	The WKBCH CI shall provide users the capability to display geographic reference aids.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10890	B	The WKBCH CI shall provide users the capability to display ESDIS Project Policies and Procedures.	IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
S-CLS-10910	A	The WKBCH CI shall provide users the capability to transparently search across any combination of Data Servers for stored EOSDIS Data Granules.	IMS-0030#B	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			EOSD5010#A	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
			IMS-0610#B	The IMS shall provide the capability to search the data inventory which describes each granule of EOSDIS data.
			IMS-0610#A	The IMS shall provide the capability to search the data inventory which describes each granule of EOSDIS data.
			IMS-0030#A	The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data and services available from all DAACs without requiring that the user know the physical location of the data.
			EOSD5010#B	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.
S-CLS-10930	B	The WKBCH CI shall provide users the capability to search inventory based on any combination of the inventory core metadata attributes and inventory product specific metadata attributes.	IMS-0610#B	The IMS shall provide the capability to search the data inventory which describes each granule of EOSDIS data.
			IMS-0660#B	The IMS shall provide inventory metadata search based on any combination of the core (Table C-10, Appendix C) and where applicable dataset-specific (Table C-11, Appendix C) inventory metadata attributes and geophysical parameters at a minimum.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-10940	A	The WKBCH CI shall provide informational messages to users to indicate that a query is being executed.	IMS-0665#B	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
			IMS-0665#A	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
S-CLS-10950	B	The WKBCH CI shall provide the capability for users to submit Subscription Requests for periodic delivery of data described by Advertisements.	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-10960	A	The WKBCH CI shall provide the capability for users to generate orders for ECS data to be distributed on a one-time basis.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
			IMS-0740#A	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, spacecraft housekeeping and ancillary data.
S-CLS-10970	B	The WKBCH CI shall provide the capability for the user to request standard product software and associated documentation to be distributed on-line.	IMS-0750#B	The IMS shall provide the capability for the user to order Standard Product software and associated documentation in accordance with EOSDIS distribution criteria.
S-CLS-10980	B	The WKBCH CI shall provide the capability for the user to request standard product software and associated documentation to be distributed off-line (i.e. media).	IMS-0750#B	The IMS shall provide the capability for the user to order Standard Product software and associated documentation in accordance with EOSDIS distribution criteria.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-10990	A	The WKBCH CI shall provide users the capability to specify the content of Data Requests.	IMS-0810#B	<p>The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Data type</li> <li>c. Data set identifier</li> <li>d. Data set subsetting instructions</li> <li>e. Data formats</li> <li>f. Distribution instructions, including media requirements</li> <li>g. Request priority</li> <li>h. Suggested earliest start time</li> <li>i. Suggested latest completion time</li> </ul>
			IMS-0810#A	<p>The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Data type</li> <li>c. Data set identifier</li> <li>e. Data formats</li> <li>f. Distribution instructions, including media requirements</li> <li>g. Request priority</li> <li>h. Suggested earliest start time</li> <li>i. Suggested latest completion time</li> </ul>
			IMS-0780#A	<p>The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.</p>
S-CLS-11000	B	The WKBCH CI shall provide the capability to submit Subscription Requests for on-demand processing of ECS data by pre-existing processes.	IMS-0920#B	<p>The IMS shall provide the capability for users to construct and submit standing orders and one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Algorithm input requirements</li> <li>c. Text description of need for processing</li> <li>d. Level 0-4 data set/subset</li> <li>e. Required time of generation</li> <li>f. Requested priority for product processing</li> <li>g. Resulting product type</li> <li>h. Processing parameters</li> </ul>
			IMS-0980#B	<p>The IMS shall determine the necessary processing required to generate a requested product.</p>

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-11010	B	The WKBCH CI shall automatically provide the capability to confirm or reject a Data Request.	IMS-0800#B	The IMS shall determine the amount of data expected to be returned as the result of the product order and provide the information to the requester.
			IMS-0820#B	The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum: a. Requester identification b. Request identification c. Request status d. If rejection, then the reason for the rejection e. If delayed longer than latest completion time specified by user, adjusted start and completion times
S-CLS-11020	B	The WKBCH CI shall provide users Data Request Status at the conclusion of the processing of a Data Requests.	IMS-0840#B	The IMS shall provide the capability to receive data order status from the DADS when the ordered data has been shipped to the user.
S-CLS-11030	B	The WKBCH CI shall provide the capability for users to determine reprocessing status of products which are being reprocessed.	IMS-1040#B	The IMS shall, using information provided by the PGS, notify users when processing will not be completed within the estimated time, and provide the reason for the delay and modified arrival times.
			IMS-1050#B	The IMS shall provide the capability to notify the user community if data has been reprocessed.
S-CLS-11040	B	The WKBCH CI shall provide users the capability to obtain data processing Status during the processing of a request initiated by the user.	IMS-0665#B	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
			IMS-1330#B	The IMS shall provide the capability to accept, from data processing requesters, data processing status requests, retrieve the request status, and display the status to the requester.
			IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-11050	B	The WKBCH CI shall provide users the capability to obtain and review User Session Logs for their own sessions.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-11060	B	The WKBCH CI shall provide science users the capability to obtain Distribution Request Status for user-initiated Distribution Requests.	IMS-1310#B	The IMS shall provide the capability to accept, from product requesters, product distribution status requests, retrieve the request status, and display the status to the requester for an ECS, ADC, or ODC data product.
S-CLS-11080	B	The WKBCH CI shall provide the capability for users to request and receive their current account balance.	IMS-1360#B	The IMS shall provide the capability for users to request and receive the current status of their account balance.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-11090	B	The WKBCH CI shall provide users the capability to display their account history.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
			IMS-1370#B	The IMS shall present account status reports prepared by the SMC to requesters.
S-CLS-11100	B	The WKBCH CI shall accept from the users user feedback information, on product data quality assessment and output it to the DAAC originating the data.	SDPS0091#B	The SDPS shall receive a quality report that is generated and transmitted by the PIs or the other science users, and appended to the data products being archived by the SDPS.
			IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-11110	B	The WKBCH CI shall accept from the users user feedback information, on schedule performance assessment and output it to the SMC.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-11120	B	The WKBCH CI shall accept from the users user feedback information, on ECS service quality evaluation and output it to the SMC.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-11130	B	The WKBCH CI shall provide the capability for authorized users to construct and submit Production Requests.	IMS-0920#B	The IMS shall provide the capability for users to construct and submit standing orders and one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: a. Requester identification b. Algorithm input requirements c. Text description of need for processing d. Level 0-4 data set/subset e. Required time of generation f. Requested priority for product processing g. Resulting product type h. Processing parameters

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-11140	B	The WKBCH CI shall provide the capability for users to update Distribution Requests prior to the shipment of Data.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-11150	B	The WKBCH CI shall provide product delay notification to users to notify them when products will not be distributed within the estimated time.	IMS-0830#B	The IMS shall, using information provided by the DADS, notify users when products will not be distributed within the estimated time, and provide the reason for the delay and modified arrival times.
			IMS-0970#B	The IMS shall determine if requested data products already exist and can be retrieved.
S-CLS-11160	B	The WKBCH CI shall provide authorized users the capability to request priority processing of Production Requests.	IMS-0960#B	The IMS shall provide the capability to request priority processing of requested data.
S-CLS-11170	B	The WKBCH CI shall display to users a processing status message to confirm or reject a Production Request.	IMS-1010#B	he IMS shall accept from the PGS a processing status message to confirm or reject a processing order, which shall contain the following information at a minimum: a. Requester identification b. Request identification c. Request status d. If rejection, then the reason for the rejection e. If delayed longer than latest completion time specified by user, adjusted start and completion times.
S-CLS-11190	B	The WKBCH CI shall provide the capability for users to submit a Conflict Adjudication Request to the SMC, in the event a processing conflict cannot be resolved between the SDSRV CI, the science user, and the Data Processing Subsystem.	IMS-1020#B	The IMS shall prepare, for output to the SMC, a request for conflict adjudication in the event a processing conflict cannot be resolved between the IMS, the requester, and the PGS.
S-CLS-11200	B	The WKBCH CI shall provide users a Conflict Adjudication Response from the SMC after submitting a Conflict Adjudication Request.	SDPS0015#B	The SDPS shall receive directives on priorities and policy, including schedule conflict resolutions, from the SMC.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1030#B	The IMS shall accept from the SMC and provide to the requester, conflict resolution, which shall contain the following information at a minimum: a. Request identification b. Data type c. Priority modifications d. Account balance modifications e. Information on when request will be serviced f. SMC contact point
S-CLS-11210	B	The WKBCH CI shall provide users a Notification when requests for data processing will not be completed within the estimated time.	IMS-1040#B	The IMS shall, using information provided by the PGS, notify users when processing will not be completed within the estimated time, and provide the reason for the delay and modified arrival times.
S-CLS-11220	B	The WKBCH CI shall provide the capability for users to issue Production Requests for the ad-hoc processing of subsetted, subsampled, and summary products based on geographical location (x, y, z - spatial with rectangular boundaries).	IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS
S-CLS-11230	B	The WKBCH CI shall provide the capability for users to issue Production Requests for the ad-hoc processing of subsetted, subsampled, and summary products based on spectral band.	IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS
S-CLS-11240	B	The WKBCH CI shall provide the capability for users to issue Production Requests for the ad-hoc processing of subsetted, subsampled, and summary products based on time.	IMS-0720#B	The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting, subsampling, or averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries) b. Spectral band c. Time d. WRS
S-CLS-11250	B	The WKBCH CI shall provide a capability to submit Subscription Requests for the distribution of ECS data.	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-11260	B	The WKBCH CI shall provide the capability for users to update Subscriptions for the distribution of ECS data.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-11270	B	The WKBCH CI shall provide users the capability to terminate their Subscriptions for on demand processing.	IMS-0950#B	The IMS shall accept from the originator changes to existing standing orders for data to be processed by the PGS.
S-CLS-11280	B	The WKBCH CI shall provide users the capability to modify their Subscriptions for on demand processing.	IMS-0950#B	The IMS shall accept from the originator changes to existing standing orders for data to be processed by the PGS.
S-CLS-11285	B	The WKBCH CI shall provide users the capability to create documents in HTML format.	IMS-0410#B	The IMS shall maintain an on-line guide (documentation /reference material) that provides information about individual EOSDIS data sets.
S-CLS-11290	B	The WKBCH CI shall provide a capability to translate user input Search Criteria into ECS internal query language.	IMS-0550#B	The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECSSs: <ul style="list-style-type: none"> <li>a. Architecture</li> <li>b. Data Base management system</li> <li>c. Data Base structure</li> <li>d. Query languages</li> <li>e. Data formats</li> </ul>
			IMS-0560#B	The IMS shall decompose complex data base search requests into executable data base queries in a manner which is transparent to the user.
S-CLS-11295	A	The WKBCH CI shall provide users the capability to create and submit Advertisements.	IMS-1500#B	The IMS toolkit software shall provide the tools to support user preparation or automated generation of metadata, for example, directory, inventory, and guide (documentation/reference material) entries.
			IMS-1500#A	The IMS toolkit software shall provide the tools to support user preparation or automated generation of metadata, for example, directory, inventory, and guide (documentation/reference material) entries.
S-CLS-12060	C	The WKBCH CI shall provide a GUI interface with automatic acronym expansion, which can be enabled and disabled interactively.		

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12070	B	The WKBCH CI shall provide a GUI interface with capability to save and restore the contents of data search and order forms.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-12110	B	The WKBCH CI shall provide a GUI interface with a command language.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0260#B	<p>The IMS shall provide interactive and batch information management capabilities for authorized users to add, update, delete, and retrieve information from the IMS data bases.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-12480	B	The WKBCH CI shall provide the capability to request any of the services available for the individual items in the output of a Metadata search.	IMS-0570#B	The IMS shall provide an incremental search capability.
			IMS-0930#B	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.
S-CLS-12500	B	The WKBCH CI shall provide users an interface to APIs for use in non-interactive remote user sessions.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-12510	A	The WKBCH CI shall provide the user a capability to view their User Profile.	IMS-0050#B	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.
			IMS-0050#A	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12520	A	The WKBCH CI shall provide the capability for a user to modify their User Profile information.	IMS-0050#A	<p>The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. User electronic address</li> <li>b. Data distribution media</li> <li>c. Data distribution address</li> <li>d. User expertise level</li> <li>e. Default query parameters</li> <li>f. Terminal characteristics</li> <li>g. Technical specialty.</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0050#B	<p>The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. User electronic address</li> <li>b. Data distribution media</li> <li>c. Data distribution address</li> <li>d. User expertise level</li> <li>e. Default query parameters</li> <li>f. Terminal characteristics</li> <li>g. Technical specialty.</li> </ul>
			SDPS0095#B	<p>The SDPS shall provide science user interfaces that are individually tailorable including settable preferences, user defined keywords, query save capabilities, and screen layout preferences.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
			SDPS0095#A	The SDPS shall provide science user interfaces that are individually tailorable including settable preferences, user defined keywords, query save capabilities, and screen layout preferences.
S-CLS-12530	B	The WKBCH CI shall provide users the capability to simultaneously view Search Results and Production Requests.	IMS-0940#B	The IMS shall integrate the searching of metadata holdings for identifying information needed to complete a processing request into the request construction and submission process.
S-CLS-12540	B	The WKBCH CI shall support multiple concurrent user sessions.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-12550	B	The WKBCH CI shall support multiple concurrent Service Requests.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-12560	A	The WKBCH CI shall provide the capability to save information selected in prior Metadata searches for use in subsequent Service Requests.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			SDPS0095#B	The SDPS shall provide science user interfaces that are individually tailorable including settable preferences, user defined keywords, query save capabilities, and screen layout preferences.
			IMS-0190#A	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-12570	B	The WKBCH CI shall provide users interactive user sessions.	IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-12580	B	The WKBCH CI shall provide a user session management capability to transition between user sessions.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-12670	B	The WKBCH CI shall provide users the capability to enable the logging of Service Requests, Service Request Status, and Notifications to the User Session Log.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-12680	B	The WKBCH CI shall provide users the capability to disable logging to the User Session Log.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-12690	B	The WKBCH CI shall provide users the capability to replay the User Session Log.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-12700	B	The WKBCH CI shall provide users the capability to obtain information about all their user sessions.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12720	B	The WKBCH CI shall provide users the capability to rebuild a user session context.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-12730	B	The WKBCH CI shall be able to accept Notifications of events associated with Service Requests or sessions	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-12740	B	The WKBCH CI shall be able to display such event Notifications to the user and accept input from the user where these events require instructions from the user, e.g., when a request exceeds a client specified threshold, and provide such feedback to the service which sent the event..	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-12750	B	The WKBCH CI shall provide users the capability to define default instructions for such events, by type of event and session..	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-12760	B	The WKBCH CI shall provide users the capability to suppress the display of event Notifications if the Notifications do not require user input or if the user has defined default instructions, by type of event and session..	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-12770	B	The WKBCH CI shall provide users the capability to modify and remove default instructions and rescind the directive to suppress event Notification, by type of event and session..	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12780	B	The WKBCH CI shall provide the default instructions defined by the user in response to an event if the the user has requested that the event Notification be suppressed.	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-12800	B	The WKBCH CI shall provide a capability to interactively display interrupt messages.	IMS-1385#B	The IMS toolkit software shall be able to interactively display interrupt messages.
S-CLS-12810	B	The WKBCH CI shall provide a dumb terminal interface with minimal and consistent use of non-standard keys.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-12820	B	The WKBCH CI shall provide a dumb terminal interface with capability to save and restore the contents of a menu or form.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12830	B	The WKBCH CI shall provide a dumb terminal interface with standardized use of commands and terminology across screens.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-12840	B	The WKBCH CI shall provide a dumb terminal interface with self-explanatory, meaningful error messages.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-12850	B	The WKBCH CI shall provide a dumb terminal interface with availability of a menu tree diagram.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-12860	B	The WKBCH CI shall provide a dumb terminal interface with a command language.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0260#B	<p>The IMS shall provide interactive and batch information management capabilities for authorized users to add, update, delete, and retrieve information from the IMS data bases.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
S-CLS-12870	B	The WKBCH CI shall support a dumb terminal interface that provides users system access from local and remote dumb terminals.	IMS-0110#B	The IMS user interface shall support access from dumb terminals, both local and remote, as well as bitmap display workstations that do not support the IMS toolkit.
			IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-12900	A	The WKBCH CI shall provide users a capability to store documents at his local workstation.	IMS-0480#A	The IMS shall allow the user to store documents in the ECS.
			IMS-0480#B	The IMS shall allow the user to store documents in the ECS.
S-CLS-12903	A	The WKBCH CI shall provide users a capability to save documents at his local workstation.	IMS-0480#B	The IMS shall allow the user to store documents in the ECS.
			IMS-0480#A	The IMS shall allow the user to store documents in the ECS.
S-CLS-12906	A	The WKBCH CI shall provide users a capability to print documents at his local workstation.	IMS-0480#A	The IMS shall allow the user to store documents in the ECS.
			IMS-0480#B	The IMS shall allow the user to store documents in the ECS.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-12908	B	The WKBCH CI shall provide users a capability to submit documents to the guide.	IMS-0480#B	The IMS shall allow the user to store documents in the ECS.
			IMS-0490#B	The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: a. ASCII text b. Microsoft WORD c. HTML d. Interleaf e. Postscript f. WordPerfect
S-CLS-12910	A	The user interface shall not require changes as a result of restructuring any of the data bases provided by the SDSRV CI.	IMS-1480#B	The Virtual IMS Information Management software shall allow a user to locate and identify desired data without having detailed knowledge of the systems: a. Architecture b. Data base management system c. Data base structure d. Query languages e. Data formats
			IMS-0170#A	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
			IMS-0170#B	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
S-CLS-12920	B	The WKBCH CI shall provide an option for Expert level of user interaction.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
S-CLS-12930	B	The Expert level of interaction shall provide direct information input with no automatically supplied help.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
S-CLS-12940	B	The WKBCH CI shall provide an option for Intermediate level of user interaction.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-12950	B	The Intermediate level of interaction shall provide prompting and automatically supplied help.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
S-CLS-12960	B	The WKBCH CI shall provide a Novice level of user interaction.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
S-CLS-12970	B	The Novice level of interaction shall provide prompting and automatic help facilities for user initiated actions.	IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
S-CLS-12980	A	The user interface shall not require changes as a result of restructuring any of the data bases provided by the DDICT CI.	IMS-0170#B	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
			IMS-0170#A	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
S-CLS-12990	A	The user interface shall not require changes as a result of restructuring any of the data bases provided by the ADSRV CI.	IMS-0170#A	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
			IMS-0170#B	The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface.
S-CLS-13000	A	The WKBCH CI application program interfaces shall be configuration controlled.	IMS-1765#A	The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users: a. Addition of metadata fields that are unique to the data maintained at a specific DAAC b. Addition of documents for use as guide metadata for DAAC-specific data products c. Development of DAAC-specific data acquisition request utilities d. Support of data visualization utilities for DAAC-specific products e. Support of DAAC-specific data analysis utilities f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1765#B	<p>The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users:</p> <ul style="list-style-type: none"> <li>a. Addition of metadata fields that are unique to the data maintained at a specific DAAC</li> <li>b. Addition of documents for use as guide metadata for DAAC-specific data products</li> <li>c. Development of DAAC-specific data acquisition request utilities</li> <li>d. Support of data visualization utilities for DAAC-specific products</li> <li>e. Support of DAAC-specific data analysis utilities</li> <li>f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services</li> <li>g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services</li> </ul>
S-CLS-13010	B	The WKBCH CI shall provide application program interfaces that will support development of extensions for support of data visualization utilities for DAAC-specific products.	IMS-1765#B	<p>The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users:</p> <ul style="list-style-type: none"> <li>a. Addition of metadata fields that are unique to the data maintained at a specific DAAC</li> <li>b. Addition of documents for use as guide metadata for DAAC-specific data products</li> <li>c. Development of DAAC-specific data acquisition request utilities</li> <li>d. Support of data visualization utilities for DAAC-specific products</li> <li>e. Support of DAAC-specific data analysis utilities</li> <li>f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services</li> <li>g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services</li> </ul>
S-CLS-13040	B	The WKBCH CI shall provide application program interfaces that will support development of a local user interface client accessing DAAC-unique Metadata searching services.	IMS-1765#B	<p>The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users:</p> <ul style="list-style-type: none"> <li>a. Addition of metadata fields that are unique to the data maintained at a specific DAAC</li> <li>b. Addition of documents for use as guide metadata for DAAC-specific data products</li> <li>c. Development of DAAC-specific data acquisition request utilities</li> <li>d. Support of data visualization utilities for DAAC-specific products</li> <li>e. Support of DAAC-specific data analysis utilities</li> <li>f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services</li> <li>g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13050	B	The WKBCH CI shall provide application program interfaces that will be capable of supporting the development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique Metadata searching services.	IMS-1765#B	The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users: a. Addition of metadata fields that are unique to the data maintained at a specific DAAC b. Addition of documents for use as guide metadata for DAAC-specific data products c. Development of DAAC-specific data acquisition request utilities d. Support of data visualization utilities for DAAC-specific products e. Support of DAAC-specific data analysis utilities f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services
S-CLS-13060	B	The WKBCH CI shall provide the user the capability to view the service availability status of all ECS services.	IMS-0020#B	The IMS shall always be accessible to users and an informational status message describing the current availability status of ECS services and the predicted time for resumption of services which are temporarily unavailable shall be provided.
S-CLS-13090	B	The WKBCH CI shall perform registration of new users from user supplied and default information.	IMS-0060#B	The IMS shall, when creating ECS user accounts, request registration approval, user account priorities, and authorized user services from the SMC.
S-CLS-13100	A	The WKBCH CI shall provide the user with registration approval results when new ECS user accounts are requested.	IMS-0060#B	The IMS shall, when creating ECS user accounts, request registration approval, user account priorities, and authorized user services from the SMC.
			IMS-0060#A	The IMS shall, when creating ECS user accounts, request registration approval, user account priorities, and authorized user services from the SMC.
S-CLS-13110	A	The WKBCH CI shall provide registered users with the capability to view their user account priorities, and authorized user services.	IMS-0060#B	The IMS shall, when creating ECS user accounts, request registration approval, user account priorities, and authorized user services from the SMC.
S-CLS-13115	B	The WKBCH CI shall provide registered users with the capability to request changes to their user account priorities and authorized user services.	IMS-0070#B	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
S-CLS-13120	A	The WKBCH CI shall provide users with initial system access procedures.	IMS-0070#A	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
			IMS-0070#B	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13130	A	The WKBCH CI shall provide users Priority Information.	IMS-0070#B	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
			IMS-0070#A	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
S-CLS-13160	B	The WKBCH CI shall provide users the capability to terminate user sessions with service providers.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-13170	B	The WKBCH CI shall provide users the capability to initiate user sessions with service providers.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-13200	B	The WKBCH CI shall provide users the capability to obtain the status information about user sessions with service providers.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-13210	B	The WKBCH CI shall provide users the capability to connect to an existing user session.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-13220	B	The WKBCH CI shall provide users the capability to issue Service Requests within the context of a user session.	IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
			IMS-0100#B	The IMS shall support, at a minimum: <ul style="list-style-type: none"> <li>a. Interactive sessions</li> <li>b. Non-interactive remote sessions</li> <li>c. Client-server interface</li> <li>d. Simulated sessions for training purposes</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13230	B	The WKBCH CI shall provide users the capability to cancel any time-intensive Service Requests by issuing a Cancellation Request.	IMS-0665#B	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
S-CLS-13240	B	The WKBCH CI shall provide users the capability to individually suspend and restore the Service Requests within a user session after interruption.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-13250	B	The WKBCH CI shall provide users the capability to view DAR generation information during the DAR planning and submittal process.	IMS-0280#B	The IMS shall maintain DAR generation information, for example, instrument information received from the ICC and spacecraft information received from the EOC, in a data base which will be accessible during the DAR planning and submittal process.
			ASTER-0010#B	ECS and ASTER GDS shall conform to the IRD Between EOSDIS Core System and Science Computing Facilities with regard to the passing of data production software and calibration coefficients between the two systems in support of data production software development for standard ASTER data products.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13260	A	The WKBCH CI shall provide a dumb terminal interface with Valid Value lists for all attributes.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-13265	A	The WKBCH CI Subsystem shall provide ChUI terminal support conforming to VT-100 standards.	IMS-0110#A	The IMS user interface shall support access from dumb terminals, both local and remote, as well as bitmap display workstations that do not support the IMS toolkit.
			IMS-0110#B	The IMS user interface shall support access from dumb terminals, both local and remote, as well as bitmap display workstations that do not support the IMS toolkit.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13270	A	The WKBCH CI shall provide a GUI interface with Valid Value lists for all variables.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-13300	A	The WKBCH CI shall provide users the capability to access text information as plain text documents for dumb terminals.	IMS-0415#B	<p>The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.</p>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0500#B	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>c. Engineering data</li> <li>d. EOC historical data</li> <li>e. Data acquisition plans and schedules</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>h. ESDIS Project Policies and Procedures obtained from SMC data base</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
			IMS-0110#B	<p>The IMS user interface shall support access from dumb terminals, both local and remote, as well as bitmap display workstations that do not support the IMS toolkit.</p>
			IMS-0110#A	<p>The IMS user interface shall support access from dumb terminals, both local and remote, as well as bitmap display workstations that do not support the IMS toolkit.</p>
			IMS-0415#A	<p>The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.</p>
			IMS-0500#A	<p>The IMS shall provide access to information to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Metadata</li> <li>b. Spacecraft housekeeping and ancillary data information</li> <li>f. Processing schedules</li> <li>g. Documentation</li> <li>i. Science Processing Library software</li> <li>j. Documentation on data format and metadata standards</li> </ul>
S-CLS-13310	A	The WKBCH CI shall provide access to ESN file transfer communication services.	IMS-1600#B	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1600#A	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>
S-CLS-13320	A	The WKBCH CI shall provide access to ESN remote log-on communication services.	IMS-1600#B	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>
			IMS-1600#A	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>
S-CLS-13330	A	The WKBCH CI shall provide access to ESN multi-media mail communication services.	IMS-1600#B	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>
			IMS-1600#A	<p>The IMS shall provide access to the following communication services at a minimum:</p> <ul style="list-style-type: none"> <li>a. File transfer</li> <li>b. Multi media mail</li> <li>c. Remote log-on</li> <li>d. Electronic Bulletin Board</li> <li>e. Access to other networks</li> </ul>

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13340	A	The WKBCH CI shall provide access to ESN access to other networks.	IMS-1600#B	The IMS shall provide access to the following communication services at a minimum: a. File transfer b. Multi media mail c. Remote log-on d. Electronic Bulletin Board e. Access to other networks
			IMS-1600#A	The IMS shall provide access to the following communication services at a minimum: a. File transfer b. Multi media mail c. Remote log-on d. Electronic Bulletin Board e. Access to other networks
S-CLS-13350	A	The WKBCH CI shall provide access to an ESN Electronic Bulletin board.	IMS-1600#B	The IMS shall provide access to the following communication services at a minimum: a. File transfer b. Multi media mail c. Remote log-on d. Electronic Bulletin Board e. Access to other networks
			IMS-1600#A	The IMS shall provide access to the following communication services at a minimum: a. File transfer b. Multi media mail c. Remote log-on d. Electronic Bulletin Board e. Access to other networks
S-CLS-13352	B	The WKBCH CI shall provide access to USENET newsgroups.	IMS-1600#B	The IMS shall provide access to the following communication services at a minimum: a. File transfer b. Multi media mail c. Remote log-on d. Electronic Bulletin Board e. Access to other networks
S-CLS-13370	A	The WKBCH CI shall provide users an interface for user authentication.	IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0040#A	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
S-CLS-13380	B	The WKBCH CI shall send User Authentication Requests to the SMC.	IMS-0130#B	The IMS shall verify that a user is authorized to access a particular IMS service before providing the service to the user.
			IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
			EOSD2400#B	ECS shall provide multiple categories of data protection based on the sensitivity levels of ECS data, as defined in NHB 2410.9.
S-CLS-13390	B	The WKBCH CI shall allow or deny the user system access based on User Validation Status returned from the SMC.	IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
			EOSD2400#B	ECS shall provide multiple categories of data protection based on the sensitivity levels of ECS data, as defined in NHB 2410.9.
S-CLS-13400	B	The WKBCH CI shall obtain user authentication information from the user.	IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
			DADS0770#B	The DADS shall reformat data sets in one of the approved standard formats including HDF.
			DADS0780#B	Each DADS shall have the capability to incorporate additional ingest and data distribution formats and conversion software.
			DADS0800#B	Each DADS shall provide the capability to translate input data to the internal ECS format including HDF.
S-CLS-13410	A	The WKBCH CI shall display the results of user validation to the user. 4.1.2.3 User Sessions	IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
			IMS-0040#A	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
S-CLS-13420	A	The WKBCH CI shall provide a User Registration Request to create a new ECS user account.	IMS-0060#B	The IMS shall, when creating ECS user accounts, request registration approval, user account priorities, and authorized user services from the SMC.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13440	A	The WKBCH CI shall provide registered users access to ECS services based on their account priorities and authorized user services.	IMS-0070#B	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
			IMS-0130#B	The IMS shall verify that a user is authorized to access a particular IMS service before providing the service to the user.
			IMS-0070#A	The IMS shall provide the user with initial system access procedures, priority information, and authorized services as maintained in the SMC.
			IMS-0130#A	The IMS shall verify that a user is authorized to access a particular IMS service before providing the service to the user.
S-CLS-13450	A	Where the User Profile specifies defaults for parameters which are applicable to an ECS Service Request, the user interface shall employ these defaults to assist the user in the formulation of a new request (e.g., by displaying them as default values).	IMS-0050#B	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.
			IMS-0180#B	The IMS shall extract relevant data from the user profile information and display as default values.
			IMS-0050#A	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.
			IMS-0180#A	The IMS shall extract relevant data from the user profile information and display as default values.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13460	B	The WKBCH CI shall provide users the capability to create a Session Profile for each user session. The Session Profile shall be able to contain any of the parameters which are in the User Profile and which may apply as defaults to ECS Service Requests.	IMS-0050#B	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.
			IMS-0140#B	The IMS shall provide the capability for multiple simultaneous sessions – for example, the capability to transition back and forth smoothly between directory search, inventory search, and data visualization. For example, when viewing a directory entry, the user shall have easy access to the corresponding guide (documentation/reference material) and inventory information.
S-CLS-13470	B	The user interface shall employ the defaults specified in the Session Profile to assist the user in the formulation of a new request in the context of a user session (e.g., by displaying them as default values in the respective input fields).	IMS-0180#B	The IMS shall extract relevant data from the user profile information and display as default values.
			IMS-0050#B	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a. User electronic address b. Data distribution media c. Data distribution address d. User expertise level e. Default query parameters f. Terminal characteristics g. Technical specialty.
S-CLS-13480	A	Users shall be able to save Search Request parameters at any time during the formulation of the Search Request.	IMS-0190#A	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
			IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13490	A	Users shall be able to retrieve any previously saved Search Request parameters into a new Search Request, edit the parameters, save the modified parameters, and/or submit the new Search Request.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
			IMS-0190#A	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13500	B	Users shall be able to save the results of Search Requests.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13510	B	Users shall be able to retrieve saved Search Results, delete items from the Search Result, and save the modified result.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13520	B	Users shall be able to save selected portions of a Search Result.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13530	B	Users shall be able to combine Search Results.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13540	B	Users shall be able to select Data Granules from multiple saved Search Results and submit a single Data Request for these Data Granules.	IMS-0190#B	The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, either in the current session or in future sessions.
S-CLS-13550	B	The WKBCH CI shall provide users the capability to search Production History on any combination of Production History Metadata attributes.	IMS-0545#B	The IMS shall provide the capability to search a products processing history.
			IMS-0930#B	The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired and the input data to be processed.
S-CLS-13560	B	The WKBCH CI shall allow users to search the holdings of ECS using Phenomenological Search Criteria for attributes supported by Data Server Schema.	IMS-0560#B	The IMS shall decompose complex data base search requests into executable data base queries in a manner which is transparent to the user.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13570	A	The user shall be able to indicate a spatial search criterion by drawing a polygon on a displayed map overlay.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0640#B	The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: a. Geographic reference b. Data element content (as specified in metadata) c. Minimum bounding rectangle d. Point and radius e. Polygon f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System) g. WRS h. Any combination of the above
S-CLS-13580	B	The WKBCH CI shall provide users the capability to graphically represent data availability for products(s) vs. time.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-13590	B	The WKBCH CI shall provide users the capability to graphically view the temporal extent of Data Granules.	IMS-0690#B	The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.
S-CLS-13600	B	The WKBCH CI shall display the cost estimates for Data specified in Distribution Requests prior to the submission of the Search Request.	IMS-1340#B	The IMS shall, using information provided by the SMC, provide the capability for users to preview billing costs for EOSDIS data products prior to order submission.
S-CLS-13610	B	When users submit a Distribution Request, they shall be given an opportunity to review the total amount that will be billed for the order and affirm, cancel or modify the Search Request.	IMS-1340#B	The IMS shall, using information provided by the SMC, provide the capability for users to preview billing costs for EOSDIS data products prior to order submission.
S-CLS-13620	B	The WKBCH CI shall provide the capability to visualize Data Products as continuous forward animation.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13630	B	The WKBCH CI shall provide the capability to visualize Data Products as single step forward animation.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
S-CLS-13640	B	The WKBCH CI shall provide the capability to visualize Data Products as single step backward animation.	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
S-CLS-13650	B	The WKBCH CI shall provide the capability to visualize Data Products as oscillating animation (i.e., continuous forward then continuous backward, alternating throughout the loop until user-directed termination).	IMS-1530#B	The IMS data visualization toolkit shall provide the capability to visualize data in raster and vector formats and to visualize animated products.
S-CLS-13660	B	The WKBCH CI shall provide users the capability to change the minimum/maximum values of the color tables for visualization of Data Products.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-13670	B	The WKBCH CI shall provide users the capability to modify color palettes for visualization of Data Products.	IMS-1550#B	The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast).
S-CLS-13680	B	The WKBCH CI shall allow users to access the Data Dictionary Service.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-13690	A	Users shall be able to navigate through guide documentation in a hyper-text fashion, where guide documentation has been created in the appropriate format.	IMS-0415#B	The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0415#A	The IMS shall provide the ability to access and present (dependent on the user's display device capabilities) guide information which includes graphics and hypertext, derivable from suitably structured documents, as well as plain text documents.
S-CLS-13700	B	Overlays provided for display to users shall be continuous over the entire display area, regardless of any gaps in the science data, for data following HDF-EOS geolocation conventions.	IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.
			IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
S-CLS-13710	A	The WKBCH CI shall provide users the capability to display on a coverage map the geographic coverage of Data Granules.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13720	A	Users shall be able to select Data Granules displayed on a coverage map for delivery.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
S-CLS-13730	B	Users shall be able to request an update of the status of a previously submitted Search Request.	IMS-0665#B	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
S-CLS-13740	B	Users shall be able to request that the workbench poll the status of a Search Request at a user selectable time interval.	IMS-0665#B	The IMS shall provide informational messages to indicate that a query is being executed, and shall provide the capability for the user to abort any time-intensive operations.
S-CLS-13750	B	The WKBCH CI shall provide users the capability to submit Subscription Requests which request a periodic search for new documents meeting user specified search conditions. All search conditions supported by the document search user interface shall be allowed in this context.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-13760	B	The WKBCH CI shall provide users the capability to issue a Subscription Request for revisions of a given document.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
S-CLS-13770	B	The WKBCH CI shall provide users the capability to issue a Subscription Request for new documents, based on topical keywords.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13780	B	When submitting Distribution Requests, users shall be able to request inclusion of Universal References to the appropriate documentation for this data, the tools needed to read this data, and an ASCII file describing each of these references.	DADS2370#B	Each DADS shall send to the user, at a minimum, the following: a. L0-L4 b. Special products (L1-L4) c. Metadata d. Ancillary data e. Calibration data f. Correlative data g. Documents h. Algorithms i. Planning and scheduling information
S-CLS-13790	B	The WKBCH CI shall provide users the capability to parameterize ASTER DARS with ASTER DAR Parameters.	IMS-1070#B	The IMS shall provide the capability for users to construct DARS for collection of EOS data which shall contain the following information at a minimum: a. Observation number b. Experimenter identification c. Experimenter address d. Investigation identification e. Scientific discipline f. Observation repetition period g. Tolerance in observation time h. User priority i. Scheduling priority and target of opportunity flag j. Descriptive text k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates l. Earliest start time m. Latest stop time n. Minimum coverage required o. Maximum coverage desired p. Number of instruments involved in the investigation q. Which instruments are involved in the investigation
S-CLS-13800	B	The WKBCH CI shall provide the capability for users to construct a Subscription Request associated with a Data Acquisition Request.	IMS-1071#B	The IMS shall provide the capability for users to construct a Product Order associated with a Data Acquisition Request.
			IMS-1072#B	The IMS shall provide the capability for users to construct a Product Processing Order associated with a Data Acquisition Request.
			IMS-1220#B	The IMS shall forward, to the appropriate DADS, product orders for distribution of the products generated as a result of the DAR.
			IMS-1210#B	The IMS shall forward the processing product orders associated with a DAR to the appropriate PGS.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-13810	B	The WKBCH CI shall accept Service Requests for Subscriptions for data and metadata.	IMS-1080#B	The IMS shall accept requests for acquisition of data to be processed one time or as standing orders.
S-CLS-13820	B	The WKBCH CI shall accept Service Requests for changes to existing DARs from the science user.	IMS-1090#B	The IMS shall accept requests for changes to existing DARs from the requester and forward the changes to the ICC.
S-CLS-13830	B	The WKBCH CI shall make ASTER data acquisition schedules and plans accessible to authorized users on request.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-13840	B	The WKBCH CI shall display data acquisition schedules as timelines.	IMS-1100#B	The IMS shall accept from the EOC the current data acquisition schedules and plans and make the data acquisition schedules and plans accessible to authorized users on request.
S-CLS-13850	B	The WKBCH CI shall provide users the capability to access the Guide during DAR formulation and submittal.	IMS-1120#B	IMS shall provide the capability to receive a geophysical parameter specification from the user and determine the instrument(s) required for the data acquisition.
			IMS-1130#B	The IMS shall provide descriptive information on instruments and parameters available in Standard Products to help with the creation of data acquisition requests.
			IMS-1170#B	The IMS shall provide instrument specific help to assist with setting instrument parameters.
			IMS-1150#B	The IMS shall provide product specific help to identify instruments needed to create a product.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-13860	B	The WKBCH CI shall provide EOS-AM spacecraft location projections as a reference aid to the creation of ASTER Data Acquisition Requests	IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.
			IMS-1140#B	The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum: a. Geographic reference aids b. Spacecraft location projections
S-CLS-13870	B	The WKBCH CI shall provide visualizations of ASTER instrument nominal view swaths and non-nominal view swaths based on user supplied angle as a reference aid to the creation of ASTER DARs.	IMS-1140#B	The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum: a. Geographic reference aids b. Spacecraft location projections
			IMS-1170#B	The IMS shall provide instrument specific help to assist with setting instrument parameters.
S-CLS-13880	B	The WKBCH CI shall provide instrument specific default settings for DAR instrument configurable parameters.	IMS-1160#B	The IMS shall provide instrument specific default settings for instrument configurable parameters.
			IMS-1170#B	The IMS shall provide instrument specific help to assist with setting instrument parameters.
S-CLS-13890	B	The WKBCH CI shall provide users the capability to view Valid Values for DAR Parameters.	IMS-1170#B	The IMS shall provide instrument specific help to assist with setting instrument parameters.
			IMS-1195#B	The IMS shall validate DAR parameters against constraints provided by external instrument operations facilities (e.g. ASTER) as applicable and in accordance with applicable MOUs.
			IMS-1190#B	The IMS shall validate DAR parameters against EOC and ICC provided constraints.
S-CLS-13900	B	The WKBCH CI shall constraint check and validate DAR Parameters.	IMS-1170#B	The IMS shall provide instrument specific help to assist with setting instrument parameters.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1190#B	The IMS shall validate DAR parameters against EOC and ICC provided constraints.
			IMS-1180#B	The IMS shall validate that user specified instrument settings are within the range of acceptable values.
			IMS-1195#B	The IMS shall validate DAR parameters against constraints provided by external instrument operations facilities (e.g. ASTER) as applicable and in accordance with applicable MOUs.
S-CLS-13920	B	The WKBCH CI shall provide DAR Disposition in response to the submittal of a DAR. This may be e-mail notification.	IMS-1230#B	The IMS shall accept from the ICC and provide to the requester such information as data acquisition request confirmation or rejection, and notification of data acquisition request scheduling and completion, to include at a minimum: a. Date and time b. Instrument ID c. Data acquisition request ID d. Request status e. Implementation schedule f. If rejection, then the reason for the rejection
S-CLS-13930	B	The WKBCH CI shall be expandable to make accessible to authorized users the current data acquisition schedules and plans for U.S. instruments on foreign spacecraft for the IP Information Management System or an equivalent IP facility.	IMS-0500#B	The IMS shall provide access to information to include at a minimum: a. Metadata b. Spacecraft housekeeping and ancillary data information c. Engineering data d. EOC historical data e. Data acquisition plans and schedules f. Processing schedules g. Documentation h. ESDIS Project Policies and Procedures obtained from SMC data base i. Science Processing Library software j. Documentation on data format and metadata standards
			IMS-1240#B	The IMS shall be expandable to accept from the IP Information Management System or an equivalent IP facility the current data acquisition schedules and plans for U.S. instruments on foreign spacecraft, and shall make the schedules and plans accessible to authorized users on request, in accordance with applicable MOUs.
			IMS-1250#B	The IMS shall be expandable to forward DARs for U.S. instruments on IP spacecraft to the IP Information Management System or an equivalent IP facility, in accordance with applicable MOUs.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.
			EOSD2400#B	ECS shall provide multiple categories of data protection based on the sensitivity levels of ECS data, as defined in NHB 2410.9.
S-CLS-13940	B	The WKBCH CI shall display DAR status when requested by users.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
			IMS-1320#B	The IMS shall provide the capability to accept, from data acquisition requesters, data acquisition status requests, retrieve the request status, and display the status to the requester.
S-CLS-13950	B	The WKBCH CI shall provide the user the capability to view the Data Requests recorded in the User Session Log.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-13960	B	The WKBCH CI shall provide the user the capability to view the DARs recorded in the User Session Log.	IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-13970	A	The WKBCH CI shall provide users the capability to display the Workbench selection map in either a flat equatorial projection, or north or south polar projections.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
			IMS-0580#A	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
S-CLS-13980	B	The WKBCH CI shall provide a legend describing the display of a Data Product, in each window in which a Data Product is displayed.	IMS-1520#B	<p>The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum:</p> <ul style="list-style-type: none"> <li>a. QA/Validation of products generated by the PGS</li> <li>b. Algorithm development</li> <li>c. Calibration functions, parameter verification, and anomaly detection</li> <li>d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed</li> </ul>
S-CLS-13990	B	The WKBCH CI shall provide users the capability to view resulting selection area on a map when a lat/lon selection is typed in for a search.	IMS-0580#B	<p>The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.</p>
			IMS-0690#B	<p>The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process.</p>
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14000	B	The WKBCH CI shall provide a user interface that indicates changes in status of an iconified window (e.g., additional results inserted into window).	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-14010	B	The WKBCH CI shall prompt the user to save his/her edits when the user quits the editing of workbench objects (e.g., a Result Set or a Guide document), if there are any unsaved edits.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14020	A	The WKBCH CI shall list Dependent Valid Values associated with search screens to show current Valid Values, as the parameterization of the search is changed.	IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-14030	B	The WKBCH CI shall provide users the capability to retrieve any previously saved Data Request parameters into a new Data Request, edit the parameters, save the modified parameters, and/or submit the new Data Request.	IMS-0740#B	<p>The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.</p>

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-14040	A	The WKBCH CI shall automatically add the date, time and client release version identification to User Comments.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
			IMS-1645#A	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-14045	A	The WKBCH CI shall accept user feedback information and send this information to User Services.	IMS-1645#A	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-14200	B	The WKBCH CI shall provide the capability to retrieve User Comments based on author, subject and date/time.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-14210	A	The WKBCH CI shall forward User Comments to the user's home DAAC.	IMS-1645#B	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service
S-CLS-14230	B	The DESKT CI shall provide the capability for a user to issue a Distribution Status Request for a previously submitted Distribution Request and receive Distribution Request Status as a result.	IMS-1310#B	The IMS shall provide the capability to accept, from product requesters, product distribution status requests, retrieve the request status, and display the status to the requester for an ECS, ADC, or ODC data product.
S-CLS-14240	B	The DESKT CI shall issue periodic Distribution Status Requests for a user-specified Distribution Request, at time intervals specified by the user.	IMS-1310#B	The IMS shall provide the capability to accept, from product requesters, product distribution status requests, retrieve the request status, and display the status to the requester for an ECS, ADC, or ODC data product.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14250	B	The WKBCI shall provide users the capability to issue a Status Request to determine the status of any active Service Request.	IMS-0740#B	The IMS shall provide the capability for users to generate and update requests for one-time orders or standing orders for the DADS to distribute DADS archive holdings to include, at a minimum, Standard Products, Standard Product software, EOC historical data, spacecraft housekeeping and ancillary data, and engineering data.
			IMS-1300#B	The IMS shall be capable of responding to user inquiries for status of user-initiated requests, and user request history.
S-CLS-14400	B	Time-related data for DARs shall be synchronized so that selection of a time range on a DAR timeline tool will be translated into date/time ranges in a DAR submission window.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
			IMS-1070#B	<p>The IMS shall provide the capability for users to construct DARS for collection of EOS data which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Observation number</li> <li>b. Experimenter identification</li> <li>c. Experimenter address</li> <li>d. Investigation identification</li> <li>e. Scientific discipline</li> <li>f. Observation repetition period</li> <li>g. Tolerance in observation time</li> <li>h. User priority</li> <li>i. Scheduling priority and target of opportunity flag</li> <li>j. Descriptive text</li> <li>k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates</li> <li>l. Earliest start time</li> <li>m. Latest stop time</li> <li>n. Minimum coverage required</li> <li>o. Maximum coverage desired</li> <li>p. Number of instruments involved in the investigation</li> <li>q. Which instruments are involved in the investigation</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14410	B	Time-related data for DARs shall be synchronized so that typing a date/time range in a DAR submission window will be graphically display as a blocked out time range on a DAR timeline window.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
			IMS-1070#B	<p>The IMS shall provide the capability for users to construct DARS for collection of EOS data which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Observation number</li> <li>b. Experimenter identification</li> <li>c. Experimenter address</li> <li>d. Investigation identification</li> <li>e. Scientific discipline</li> <li>f. Observation repetition period</li> <li>g. Tolerance in observation time</li> <li>h. User priority</li> <li>i. Scheduling priority and target of opportunity flag</li> <li>j. Descriptive text</li> <li>k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates</li> <li>l. Earliest start time</li> <li>m. Latest stop time</li> <li>n. Minimum coverage required</li> <li>o. Maximum coverage desired</li> <li>p. Number of instruments involved in the investigation</li> <li>q. Which instruments are involved in the investigation</li> </ul>
S-CLS-14420	B	Geographic selection criteria for DARs shall be synchronized so that selection of an area on a DAR map display will be translated into lat/lon coordinates in a DAR submissions window.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1140#B	<p>The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference aids</li> <li>b. Spacecraft location projections</li> </ul>
			IMS-1070#B	<p>The IMS shall provide the capability for users to construct DARS for collection of EOS data which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Observation number</li> <li>b. Experimenter identification</li> <li>c. Experimenter address</li> <li>d. Investigation identification</li> <li>e. Scientific discipline</li> <li>f. Observation repetition period</li> <li>g. Tolerance in observation time</li> <li>h. User priority</li> <li>i. Scheduling priority and target of opportunity flag</li> <li>j. Descriptive text</li> <li>k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates</li> <li>l. Earliest start time</li> <li>m. Latest stop time</li> <li>n. Minimum coverage required</li> <li>o. Maximum coverage desired</li> <li>p. Number of instruments involved in the investigation</li> <li>q. Which instruments are involved in the investigation</li> </ul>
S-CLS-14430	B	Geographic selection criteria for DARS shall be synchronized so that typing lat/lon coordinates in a DAR submission window will be graphically displayed as a blocked out area on a DAR map display.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-1070#B	<p>The IMS shall provide the capability for users to construct DARS for collection of EOS data which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Observation number</li> <li>b. Experimenter identification</li> <li>c. Experimenter address</li> <li>d. Investigation identification</li> <li>e. Scientific discipline</li> <li>f. Observation repetition period</li> <li>g. Tolerance in observation time</li> <li>h. User priority</li> <li>i. Scheduling priority and target of opportunity flag</li> <li>j. Descriptive text</li> <li>k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates</li> <li>l. Earliest start time</li> <li>m. Latest stop time</li> <li>n. Minimum coverage required</li> <li>o. Maximum coverage desired</li> <li>p. Number of instruments involved in the investigation</li> <li>q. Which instruments are involved in the investigation</li> </ul>
			IMS-1140#B	<p>The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference aids</li> <li>b. Spacecraft location projections</li> </ul>
S-CLS-14440	B	The WKBCH CI shall provide users the capability to retrieve any previously saved DAR parameters into a new DAR, edit the parameters, save the modified parameters, and/or submit the new DAR.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-14450	B	The WKBCH CI shall provide the capability for users to construct a Product Request associated with a DAR.	IMS-1071#B	The IMS shall provide the capability for users to construct a Product Order associated with a Data Acquisition Request.
			IMS-1110#B	The IMS shall provide the capability to receive a product request from the user and determine the instrument(s) required for the data acquisition.
S-CLS-14460	B	The WKBCH CI shall make spacecraft schedules accessible to authorized users on request.	IMS-0280#B	The IMS shall maintain DAR generation information, for example, instrument information received from the ICC and spacecraft information received from the EOC, in a data base which will be accessible during the DAR planning and submittal process.
			EOSD2400#B	ECS shall provide multiple categories of data protection based on the sensitivity levels of ECS data, as defined in NHB 2410.9.
S-CLS-14470	B	The WKBCH CI shall display spacecraft schedules as timelines.	IMS-0280#B	The IMS shall maintain DAR generation information, for example, instrument information received from the ICC and spacecraft information received from the EOC, in a data base which will be accessible during the DAR planning and submittal process.
S-CLS-14480	B	Time-related data for a Product Request shall be synchronized so that selection of a time range on a Product Request timeline tool will be translated into date/time ranges in a Product Request submission window.	IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.
S-CLS-14490	B	Time-related data for a Product Request shall be synchronized so that a date/time range typed in a Product Request window will be graphically display as a blocked out time range on a Product Request timeline window.	IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information f. Geographic reference aids g. Spacecraft location projections.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14500	B	Geographic selection criteria for a Product Request shall be synchronized so that selection of an area on a Product Request map display will be translated into lat/lon coordinates in a Product Request submissions window.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-14510	B	Geographic selection criteria for a DAR shall be synchronized so that typed lat/lon coordinates in a Product Request submission window will be graphically displayed as a blocked out area on a Product Request map display.	IMS-0510#B	<p>The IMS shall provide tools for research planning and data search, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Data acquisition schedules and plans</li> <li>b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product</li> <li>c. Descriptive information on instruments and geophysical parameters available in Standard Products</li> <li>d. Climatology information</li> <li>f. Geographic reference aids</li> <li>g. Spacecraft location projections.</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0640#B	<p>The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum:</p> <ul style="list-style-type: none"> <li>a. Geographic reference</li> <li>b. Data element content (as specified in metadata)</li> <li>c. Minimum bounding rectangle</li> <li>d. Point and radius</li> <li>e. Polygon</li> <li>f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System)</li> <li>g. WRS</li> <li>h. Any combination of the above</li> </ul>
S-CLS-14520	B	For WKBCH CI screens requiring user input, optional fields shall be distinguished from mandatory fields.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14530	B	<p>The WKBCH CI shall provide users access to Data Definitions of the following information at a minimum :</p> <ul style="list-style-type: none"> <li>a. Earth Science Data Types and services descriptions</li> <li>b. core metadata attribute definitions</li> <li>c. valid values</li> <li>d. synonyms for valid values</li> <li>e. product specific metadata</li> </ul>	IMS-0320#B	<p>Standard Product related metadata shall contain, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Keywords and glossary from investigators</li> <li>b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing</li> <li>c. Identifiers for locating products in the DADS archive by granule</li> <li>d. Documentation on algorithms, including version history, authors, written description of product, equations, and references</li> <li>e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references</li> <li>f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products</li> <li>g. Published papers, research results, significant results, and references by author and date</li> <li>h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs</li> <li>i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C</li> </ul>
S-CLS-14540	B	<p>Standard Product related Metadata accesible to users shall include keywords and glossary from investigators.</p>	IMS-0320#B	<p>Standard Product related metadata shall contain, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Keywords and glossary from investigators</li> <li>b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing</li> <li>c. Identifiers for locating products in the DADS archive by granule</li> <li>d. Documentation on algorithms, including version history, authors, written description of product, equations, and references</li> <li>e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references</li> <li>f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products</li> <li>g. Published papers, research results, significant results, and references by author and date</li> <li>h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs</li> <li>i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14550	B	Standard Product related Metadata accessible to users shall include of keywords, synonyms, and glossary for cross-product and cross-directory referencing.	IMS-0320#B	<p>Standard Product related metadata shall contain, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Keywords and glossary from investigators</li> <li>b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing</li> <li>c. Identifiers for locating products in the DADS archive by granule</li> <li>d. Documentation on algorithms, including version history, authors, written description of product, equations, and references</li> <li>e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references</li> <li>f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products</li> <li>g. Published papers, research results, significant results, and references by author and date</li> <li>h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs</li> <li>i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C</li> </ul>
S-CLS-14560	A	The WKBCH CI shall provide access to the lists of the Valid Values for data elements, where the data element has an enumerated set of values as a constraint.	IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0120#A	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-14570	B	The WKBCH CI shall provide users the capability to relate Phenomenological Search Criteria to Search Criteria containing values for searchable attributes supported in the Data Server Schema.	IMS-0560#B	The IMS shall decompose complex data base search requests into executable data base queries in a manner which is transparent to the user.
S-CLS-14580	B	The WKBCH CI shall provide users a consistent view of data dictionary entries based on the value given for an attribute.	IMS-0320#B	<p>Standard Product related metadata shall contain, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Keywords and glossary from investigators</li> <li>b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing</li> <li>c. Identifiers for locating products in the DADS archive by granule</li> <li>d. Documentation on algorithms, including version history, authors, written description of product, equations, and references</li> <li>e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references</li> <li>f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products</li> <li>g. Published papers, research results, significant results, and references by author and date</li> <li>h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs</li> <li>i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-14590	B	The WKBCH CI shall have the capability to send to the Data Dictionary CI, data dictionary information requests, consisting of any combination of the following: Earth Science Data Types, Core Metadata attribute, Product Specific Metadata.	IMS-0320#B	Standard Product related metadata shall contain, at a minimum: a. Keywords and glossary from investigators b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing c. Identifiers for locating products in the DADS archive by granule d. Documentation on algorithms, including version history, authors, written description of product, equations, and references e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products g. Published papers, research results, significant results, and references by author and date h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C
S-CLS-14600	B	The WKBCH CI shall have the capability to receive from the Data Dictionary CI	IMS-0320#B	Standard Product related metadata shall contain, at a minimum: a. Keywords and glossary from investigators b. Keywords, synonyms, and glossary for cross-product and cross-directory referencing c. Identifiers for locating products in the DADS archive by granule d. Documentation on algorithms, including version history, authors, written description of product, equations, and references e. Documentation on instrument(s) and spacecraft(s) including history of housekeeping and ancillary parameters, discipline characterization, calibration parameters, key individuals, and references f. Identifiers, algorithms, written descriptions, equations, authors, and references associated with static browse products and subsetted, subsampled, and summary data products g. Published papers, research results, significant results, and references by author and date h. Key organizations and personnel for all product-related DAACs, ADCs, and ODCs i. Granule-specific information as listed in Tables C-10 and C-11 in Appendix C
S-CLS-15610	A	The WKBCH CI shall have the capability to send Requests for Guide data to the NOAA SAAs.	IMS-0860#B	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
			IMS-0860#A	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-15620	A	The WKBCH CI shall have the capability to receive Guide Request Results from the NOAA SAAs.	IMS-0860#B	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
			IMS-0860#A	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
S-CLS-15630	A	The WKBCH CI shall have the capability to send Requests for Guide data to the ESDIS V0 IMS.	IMS-0860#B	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
			IMS-0860#A	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
			V0-0080#A	The ECS shall have the capability to send and the ESDIS V0 IMS shall have the capability to receive Guide Search Requests via V0 protocols.
			V0-0080#B	The ECS shall have the capability to send and the ESDIS V0 IMS shall have the capability to receive Guide Search Requests via V0 protocols.
S-CLS-15640	A	The WKBCH CI shall have the capability to receive Guide Request Results from the ESDIS V0 IMS.	V0-0090#A	The ESDIS V0 IMS shall have the capability to send and the ECS shall have the capability to receive Guide Search Results via V0 protocols.
			V0-0090#B	The ESDIS V0 IMS shall have the capability to send and the ECS shall have the capability to receive Guide Search Results via V0 protocols.
			IMS-0860#B	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
			IMS-0860#A	The IMS shall provide an interface to ADC and ODC data systems and archives that produce, process, and/or maintain Earth science data sets and that have agreed to make the information and services available to ECS.
S-CLS-15650	A	The WKBCH CI shall provide an interface for users to obtain data products from the NOAA SAA.	IMS-0620#A	The IMS shall provide access to inventories of selected ODCs and ADCs via level II and level III catalog interoperability as specified in ICDs.
S-CLS-15660	B	The WKBCH CI shall be capable of receiving data products electronically.	IMS-0915#B	The IMS shall provide an interface to the Version 0 system for ordering data products to be delivered directly to the user, or as specified in ICDs.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15670	A	The WKBCH CI shall provide an interface for users to obtain data products from the V0 system.	IMS-0915#A	The IMS shall provide an interface to the Version 0 system for ordering data products to be delivered directly to the user, or as specified in ICDs.
			IMS-0915#B	The IMS shall provide an interface to the Version 0 system for ordering data products to be delivered directly to the user, or as specified in ICDs.
S-CLS-15680	A	The WKBCH CI executables shall run on the following hosts: a. SGI IRIX 5.3 b. HP UX 9.05 c. SUN Solaris 2.4 d. IBM RS/6000 AIX 3.2.5	IMS-1510#B	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
			IMS-1510#A	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
S-CLS-15682	B	The WKBCH CI executables shall run on the following hosts: a. DEC Digital Unix 4.0 b. HP UX 10.01 c. SGI IRIX 6.2 (64 bit) d. IBM RS/6000 AIX 4.1	IMS-1510#B	The IMS data visualization toolkit capabilities shall be portable and execute on ECS supported workstations and appropriate ECS facility computers.
S-CLS-15690	A	The DESKT CI shall utilize the Motif widget set for providing GUI interfaces.	IMS-0120#A	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0150#A	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
			IMS-0120#B	<p>The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum:</p> <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
			IMS-0150#B	<p>The IMS shall supply a uniform user interface for access to the following at a minimum:</p> <ul style="list-style-type: none"> <li>a. Heterogeneous data sets</li> <li>b. Communications networks</li> <li>c. Data bases that are geographically dispersed</li> <li>d. Multi-disciplined directories and inventories</li> </ul>
S-CLS-15710	A	The WKBCH CI shall provide users access to ECS services via a network link.	IMS-0090#B	<p>The IMS shall be accessible to users via, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Direct connection</li> <li>b. Dial up connection</li> <li>c. Network link</li> </ul>
			IMS-0090#A	<p>The IMS shall be accessible to users via, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Direct connection</li> <li>c. Network link</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15720	B	The WKBCH CI shall provide users access to ECS services via a direct connection.	IMS-0090#B	The IMS shall be accessible to users via, at a minimum: a. Direct connection b. Dial up connection c. Network link
S-CLS-15730	A	Data requests to the NOAA SAA shall specify data distribution directly to the user or to a specified destination.		
S-CLS-15740	A	The WKBCH CI shall restrict users' access to data and services for which the users lack sufficient privileges.	IMS-0780#B	The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.
			IMS-0780#A	The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.
S-CLS-15750	A	The WKBCH CI shall provide users confirmation or rejection of their data requests.	IMS-0780#A	The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.
			IMS-0820#A	The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum: a. Requester identification b. Request identification c. Request status d. If rejection, then the reason for the rejection
			IMS-0780#B	The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.
			IMS-0820#B	The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum: a. Requester identification b. Request identification c. Request status d. If rejection, then the reason for the rejection e. If delayed longer than latest completion time specified by user, adjusted start and completion times
S-CLS-15760	B	The WKBCH CI shall restrict users' access to data and services for which the users lack sufficient privileges.	IMS-0130#B	The IMS shall verify that a user is authorized to access a particular IMS service before providing the service to the user.
S-CLS-15770	B	The WKBCH CI shall provide the user the predicted time for resumption of ECS services which are temporarily unavailable.	IMS-0020#B	The IMS shall always be accessible to users and an informational status message describing the current availability status of ECS services and the predicted time for resumption of services which are temporarily unavailable shall be provided.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15790	B	The WKBCH CI shall provide users access to ECS services via dialup link.	IMS-0090#B	The IMS shall be accessible to users via, at a minimum: a. Direct connection b. Dial up connection c. Network link
S-CLS-15810	B	The DESKT CI shall provide a menu tree diagram	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: a. Multiple window display b. Buttons and pull down menus c. Valid lists for all variables d. An information base of associations between variables (e.g., between instruments and geophysical parameters) e. Ability to restore a session after interruption f. Context-sensitive help g. Minimal and consistent use of non-standard keys h. Random movement through fields i. Capability to save and restore the contents of a menu or form j. Standardized use of commands and terminology across screens k. Self-explanatory, meaningful error messages l. Automatic acronym expansion, which can be enabled and disabled interactively m. Availability of a menu tree diagram n. Command language
S-CLS-15820	B	The WKBCH CI shall provide users the amount of data expected to be returned as the result of a product request.	IMS-0800#B	The IMS shall determine the amount of data expected to be returned as the result of the product order and provide the information to the requester.
S-CLS-15830	B	Data Distribution Requests shall contain requester identification, data type, data set identifier, data formats, distribution and media instructions, request priority, suggested earliest start time, and suggested latest completion time.	IMS-0810#B	The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: a. Requester identification b. Data type c. Data set identifier d. Data set subsetting instructions e. Data formats f. Distribution instructions, including media requirements g. Request priority h. Suggested earliest start time i. Suggested latest completion time
S-CLS-15840	A	Confirmation or rejection of product requests shall contain requester identification, request identification, request status, and the reason for rejection if rejected.	IMS-0780#B	The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			IMS-0820#B	<p>The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Request identification</li> <li>c. Request status</li> <li>d. If rejection, then the reason for the rejection</li> <li>e. If delayed longer than latest completion time specified by user, adjusted start and completion times</li> </ul>
			IMS-0780#A	<p>The IMS shall accept and validate from the ECS users, IPs, ADCs, and ODCs requests for ECS archival data products.</p>
			IMS-0820#A	<p>The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Request identification</li> <li>c. Request status</li> <li>d. If rejection, then the reason for the rejection</li> </ul>
S-CLS-15840	B	Confirmation or rejection of Product Requests shall contain requester identification, request identification, request status, and the reason for rejection if rejected.	IMS-0820#B	<p>The IMS shall provide to the user product order status information from the DADS to confirm or reject an order, which contains the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Requester identification</li> <li>b. Request identification</li> <li>c. Request status</li> <li>d. If rejection, then the reason for the rejection</li> <li>e. If delayed longer than latest completion time specified by user, adjusted start and completion times</li> </ul>
S-CLS-15850	B	The WKBCH CI shall display conflict resolution information from the SMC.	IMS-1030#B	<p>The IMS shall accept from the SMC and provide to the requester, conflict resolution, which shall contain the following information at a minimum:</p> <ul style="list-style-type: none"> <li>a. Request identification</li> <li>b. Data type</li> <li>c. Priority modifications</li> <li>d. Account balance modifications</li> <li>e. Information on when request will be serviced</li> <li>f. SMC contact point</li> </ul>

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15860	B	Conflict resolution information shall contain request identification, data type, priority modifications, account balance modifications, information on when request will be serviced, and SMC contact point.	IMS-1030#B	The IMS shall accept from the SMC and provide to the requester, conflict resolution, which shall contain the following information at a minimum: a. Request identification b. Data type c. Priority modifications d. Account balance modifications e. Information on when request will be serviced f. SMC contact point
S-CLS-15870	B	The WKBCH CI shall provide applications program interfaces to provide support of DAAC specific data analysis utilities.	IMS-1765#B	The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users: a. Addition of metadata fields that are unique to the data maintained at a specific DAAC b. Addition of documents for use as guide metadata for DAAC-specific data products c. Development of DAAC-specific data acquisition request utilities d. Support of data visualization utilities for DAAC-specific products e. Support of DAAC-specific data analysis utilities f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services
S-CLS-15880	B	The WKBCH CI shall provide applications program interfaces to support development of DAAC unique metadata search and access services that will operate independent of the delivered ECS services.	IMS-1765#B	The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs, ECS and other users: a. Addition of metadata fields that are unique to the data maintained at a specific DAAC b. Addition of documents for use as guide metadata for DAAC-specific data products c. Development of DAAC-specific data acquisition request utilities d. Support of data visualization utilities for DAAC-specific products e. Support of DAAC-specific data analysis utilities f. Development of DAAC-unique metadata search and access services that will operate independent of the delivered ECS IMS services g. Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata search and access services

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15890	B	The WKBCH CI map displays shall provide the following types of geographic data sets for background reference: land/oceans, major lakes, major rivers, mountain ranges, volcanoes, major highways and railroads, urban and built-up areas, and political boundaries.	IMS-0580#B	The IMS shall provide geographic and geophysical (e.g. ocean bathymetry surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata.
S-CLS-15900	B	The WKBCH CI shall support multiple addresses for product requests, which include mailing address, billing address and shipping address.	IMS-0050#B	The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: <ul style="list-style-type: none"> <li>a. User electronic address</li> <li>b. Data distribution media</li> <li>c. Data distribution address</li> <li>d. User expertise level</li> <li>e. Default query parameters</li> <li>f. Terminal characteristics</li> <li>g. Technical specialty.</li> </ul>
S-CLS-15910	B	The DESKT CI shall have the capability to prompt the user for confirmation when a user attempts addition, modification or deletion of an object.	IMS-0120#B	The IMS shall provide, dependent upon the user's display device capabilities, a user-friendly interface with the following features at a minimum: <ul style="list-style-type: none"> <li>a. Multiple window display</li> <li>b. Buttons and pull down menus</li> <li>c. Valid lists for all variables</li> <li>d. An information base of associations between variables (e.g., between instruments and geophysical parameters)</li> <li>e. Ability to restore a session after interruption</li> <li>f. Context-sensitive help</li> <li>g. Minimal and consistent use of non-standard keys</li> <li>h. Random movement through fields</li> <li>i. Capability to save and restore the contents of a menu or form</li> <li>j. Standardized use of commands and terminology across screens</li> <li>k. Self-explanatory, meaningful error messages</li> <li>l. Automatic acronym expansion, which can be enabled and disabled interactively</li> <li>m. Availability of a menu tree diagram</li> <li>n. Command language</li> </ul>
S-CLS-15920	B	The Client Visualization Tool shall support display of multiple images.	IMS-0230#B	The IMS shall restrict update of ECS directory, inventory, and guide (documentation/reference material) and other IMS data bases to authorized users based on the users access privileges.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
S-CLS-15940	B	The WKBCH CI shall provide users the capability to search for global granules.	IMS-0640#B	The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: a. Geographic reference b. Data element content (as specified in metadata) c. Minimum bounding rectangle d. Point and radius e. Polygon f. Geographic name (based on a standard data base, such as USGS Geographic Names Information System) g. WRS h. Any combination of the above
S-CLS-15950	B	The WKBCH CI shall provide users the capability to set thresholds for the number of results returned from a query.	IMS-0660#B	The IMS shall provide inventory metadata search based on any combination of the core (Table C-10, Appendix C) and where applicable dataset-specific (Table C-11, Appendix C) inventory metadata attributes and geophysical parameters at a minimum.
S-CLS-15970	B	The WKBCH CI shall be able to accept and display Notifications of events associated with subscriptions.	IMS-0670#B	The IMS shall provide the capability to accept, validate, and fill orders from users for periodic delivery of information stored at the IMS.
S-CLS-15980	B	The WKBCH CI shall provide a capability for users to submit software and related documents.	IMS-0260#B	The IMS shall provide interactive and batch information management capabilities for authorized users to add, update, delete, and retrieve information from the IMS data bases.
S-CLS-15990	B	The WKBCH CI shall send DARs for ASTER observational sequences to the ASTER GDS.	IMS-1200#B	The IMS shall forward DARs for specific observational sequences generated by an authorized user to the ICC.

L4 ID	Rel	L4 Text	RbR ID	RbR Text
			ASTER-0110#B	<p>ECS shall have the capability to send and ASTER GDS shall have the capability to receive DARs for the ASTER instrument. DARs shall contain the following information, at a minimum:</p> <ul style="list-style-type: none"> <li>a. Observation number</li> <li>b. Experimenter identification</li> <li>c. Experimenter address</li> <li>d. Investigation identification</li> <li>e. Scientific discipline</li> <li>f. Observation repetition period</li> <li>g. Tolerance in observation time</li> <li>h. User priority</li> <li>i. Scheduling priority and target of opportunity flag</li> <li>j. Descriptive text</li> <li>k. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates</li> <li>l. Earliest start time</li> <li>m. Latest stop time</li> <li>n. Minimum coverage required</li> <li>o. Maximum coverage desired</li> <li>p. Number of instruments involved in the investigation</li> <li>q. Which instruments are involved in the investigation</li> <li>r. Associated product generation request and product distribution request</li> <li>s. Pointing angle</li> <li>t. Calibration requirements</li> <li>u. Coordination requirements</li> <li>v. Data transmission requirements</li> <li>w. Illumination requirements (day/night)</li> <li>x. Specific time of observation</li> <li>y. Sun angle</li> <li>z. Direct downlink option</li> </ul>
S-CLS-16000	B	The WKBCH CI shall provide a capability for users to request status of ASTER DARs.	ASTER-0120#B	<p>ASTER GDS shall have the capability to send and ECS shall have the capability to receive DAR status, when requested by ECS. DAR status shall include such information as confirmation or rejection of the DAR, and notification of DAR scheduling and completion, to include at a minimum:</p> <ul style="list-style-type: none"> <li>a. Date and time</li> <li>b. Instrument ID</li> <li>c. DAR ID</li> <li>d. Request status</li> <li>e. Implementation schedule</li> <li>f. If rejection, then the reason for the rejection.</li> </ul>
			IMS-1260#B	<p>The IMS shall provide the capability to receive, from the IP Information Management System or an equivalent IP facility, data acquisition request status in accordance with applicable MOUs and provide the status to the data acquisition requester.</p>

<b>L4 ID</b>	<b>Rel</b>	<b>L4 Text</b>	<b>RbR ID</b>	<b>RbR Text</b>
S-CLS-16010	B	The WKBCH CI shall be capable of displaying the status of ASTER DARs to the user.	IMS-1260#B	The IMS shall provide the capability to receive, from the IP Information Management System or an equivalent IP facility, data acquisition request status in accordance with applicable MOUs and provide the status to the data acquisition requester.
			ASTER-0130#B	ECS shall have the capability to send and ASTER GDS shall have the capability to receive queries for the current status of ASTER DARs which were previously submitted to the ASTER GDS by ECS.
S-CLS-30500	A	The GTWAY CI shall provide for the submission of Service Requests.		