

This CCR responds to AC-96-0069 to prepare an L4 oriented requirements CCR to complement CCR 96-0053A which added an L3 (PGS-0595) and RBRs to provide a relational DBMS for ASTER's use. This effort was approved and funded through ESD0009 which specifies that ECS only provide the relational DBMS (Sybase selected) and supporting hardware. Database schema design and access through the vendor supplied APIs are the responsibility of the ASTER team.

Component links are being added only for the hardware L4 requirements. The L4 requirements specifying the Sybase relational DBMS are not being linked to a design component because the design object model would need to be corrupted to identify an independent COTS component which interfaces only with PGEs, and only a select few PGEs at that.

Empty attribute fields for the related Req_by_Rel are being populated by this CCR.

Changes since original submittal:

added tables 7 and 8 for L4 to COTS traceability

Table 1: Reference table for RBR and L4 changes

RBR_id	req_key	text	interpretation text	clar._text	L4 id	req_key	rel	text
PGS-0595#A	6146	The PGS shall provide, to the ASTER science software, access to a relational database management system.	No operational capabilities; only acceptance and integration & test	ASTER for EOS flight AM-1 thus no operational capabilities in A	<u>S-DPS-75000</u>	new	A	<u>The AITHW CI at the EROS Data Center shall provide, for algorithm integration and test use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.</u>
					<u>S-DPS-45000</u>	new	A	<u>The AITTL CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs undergoing algorithm integration and test at the EROS Data Center.</u>
PGS-0595#B	6147	The PGS shall provide, to the ASTER science software, access to a relational database management system.	Full relevance, i.e., operational	ASTER for EOS flight AM-1 thus full relevance in B	<u>S-DPS-75000</u>	new	A	<u>The AITHW CI at the EROS Data Center shall provide, for algorithm integration and test use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.</u>
					<u>S-DPS-</u>	new	A	<u>The AITTL CI shall provide a copy of</u>

					<u>45000</u>			<u>Sybase RDBMS for use by ASTER PGEs undergoing algorithm integration and test at the EROS Data Center.</u>
					<u>S-DPS-65000</u>	new	<u>B</u>	<u>The SPRHW CI at the EROS Data Center shall provide, for production use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.</u>
					<u>S-DPS-25000</u>	new	<u>B</u>	<u>The PRONG CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs run in the production environment at the EROS Data Center.</u>

Table 2: Level_4 Class Changes

L4 id	object key	rel	req_type	req_status	verification_method	text
<u>S-DPS-75000</u>	new	A	<u>functional</u>	<u>approved</u>	<u>inspection</u>	<u>The AITHW CI at the EROS Data Center shall provide, for algorithm integration and test use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.</u>
<u>S-DPS-45000</u>	new	A	<u>functional</u>	<u>approved</u>	<u>inspection</u>	<u>The AITTL CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs undergoing algorithm integration and test at the EROS Data Center.</u>
<u>S-DPS-65000</u>	new	B	<u>functional</u>	<u>approved</u>	<u>inspection</u>	<u>The SPRHW CI at the EROS Data Center shall provide, for production use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.</u>
<u>S-DPS-25000</u>	new	B	<u>functional</u>	<u>approved</u>	<u>inspection</u>	<u>The PRONG CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs run in the production environment at the EROS Data Center.</u>

Table 3: Req_by_Rel Class Changes

RBR_id	req_key	req_category	segment	req_type	s_verif_method	s_verif_stat	a_verif_method	a_verif_stat	text	interpretation text	clar_text
PGS-0595#A	6146	<u>mission essential</u>	SDPS	functional	<u>inspection</u>	<u>un-verified</u>	<u>inspection</u>	<u>un-verified</u>	The PGS shall provide, to the ASTER science software, access to a relational database management system.	No operational capabilities; only acceptance and integration & test	ASTER for EOS flight AM-1 thus no operational capabilities in A
PGS-0595#B	6147	<u>mission essential</u>	SDPS	functional	<u>inspection</u>	<u>un-verified</u>	<u>inspection</u>	<u>un-verified</u>	The PGS shall provide, to the ASTER science software, access to a relational database management system.	Full relevance, i.e., operational	ASTER for EOS flight AM-1 thus full relevance in B

Table 4: Link changes between Req_by_Rel and Lvel_4

RBR_id	L4 id
<u>PGS-0595#A</u>	<u>S-DPS-75000</u>
<u>PGS-0595#A</u>	<u>S-DPS-45000</u>
<u>PGS-0595#B</u>	<u>S-DPS-75000</u>
<u>PGS-0595#B</u>	<u>S-DPS-45000</u>
<u>PGS-0595#B</u>	<u>S-DPS-65000</u>
<u>PGS-0595#B</u>	<u>S-DPS-25000</u>

Table 5: Reference table for L4 and design component linkage

L4_Id	object key	Rel	Text	Component_Id	object key	Comp_Type	Dev_Category	Text
<u>S-DPS-75000</u>	new	A	The AITHW CI at the EROS Data Center shall provide, for algorithm integration and test use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.	<u>AITHW</u>	881	CI		Algorithm Integration & Test Hardware Configuration Item (CI)
<u>S-DPS-65000</u>	new	B	The SPRHW CI at the EROS Data Center shall provide, for production use by ASTER science software, a platform capable of supporting the ASTER Lookup Table database management system processing requirements.	<u>SPRHW</u>	882	CI		Science Processing Hardware Configuration Item (CI)

Table 6: Links changes between Level_4 and Component

L4_Id	Component_Id
<u>S-DPS-75000</u>	<u>AITHW</u>
<u>S-DPS-65000</u>	<u>SPRHW</u>

Table 7: Reference table for L4 and COTS linkage

L4_Id	object key	Rel	text	COTS_Id	object_key	COTS_Desc	Vendor_Name
<u>S-DPS-45000</u>	new	<u>A</u>	<u>The AITTL CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs undergoing algorithm integration and test at the EROS Data Center.</u>	<u>Sybase</u>	26	Relational Database Management System	Sybase
<u>S-DPS-25000</u>	new	<u>B</u>	<u>The PRONG CI shall provide a copy of Sybase RDBMS for use by ASTER PGEs run in the production environment at the EROS Data Center.</u>	<u>Sybase</u>	26	Relational Database Management System	Sybase

Table 8: Link changes between Level_4 and COTS

L4_Id	COTS_Id
<u>S-DPS-45000</u>	<u>Sybase</u>
<u>S-DPS-25000</u>	<u>Sybase</u>