

Production Rules for Release B

Background

- production rules become quite complicated for Release B but no L4 rqrmts exist to specify what we support

Impacts

- I&T will need to add new test cases

Issues

- design component links to be added after Release B components are loaded into RTM

Summary

- update RTM with L4s which indicate the production rules supported by the PDPS design

Version A Changes

- Version A changed the text of S-PLS-02530 to text that maps better to the RBR than the previous text for the level\_4 requirement.

Table 1: Reference table of new L4s and their RbR parents

L4 ID	Rel	RTM Key	L4 Text	Clarification	RbR ID	RTM key	RbR Text
<u>S-PLS-02500</u>	<u>B</u>	<u>NEW</u>	The PLANG CI shall be <u>capable of planning data processing requests which have optional inputs.</u>	<u>Optional inputs allow the job to be run even if that input is unavailable (assuming all the other constraints have been met).</u>	<u>PGS-0210#B</u>	4588	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required
					<u>PGS-0520#B</u>	4878	The PGS shall have the capability to generate data products from any single data input or combination of data inputs according to the algorithms provided by the scientists.

S- PLS- 02510	B	New	The PLANG CI shall be capable of planning data processing requests which specify alternates for input data sets which may be unavailable.	Alternate inputs allow a job to be run with any of a pre-defined, ordered set of possible inputs.	PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required
					PGS-0520#B	487 8	The PGS shall have the capability to generate data products from any single data input or combination of data inputs according to the algorithms provided by the scientists.
S- PLS- 02520	B	New	The PLANG CI shall be capable of setting a timer for each alternate input data set which specifies how long to wait for that data set before attempting to use the next alternate.		PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required

S- PLS- 02530	B	New	The PLANG CI shall be capable of planning a subset of Data processing Requests (DPRs) that are generated from a Processing Request (PR) based upon a "keep" parameter and a "skip" parameter which establish a repeatable pattern of the DPRs to be run or not run.	The intent is to provide the capability to run a PGE some subset of the number of times it is possible to be run. For example, it may be desired to have a PGE which works on a daily data set to run only every fifth day.	PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required
S- PLS- 02540	B	New	The PLANG CI shall be capable of determining the temporal extent of input data sets required to produce data products based on the AM-1 spacecraft orbit.	Provides a mechanism to produce orbit-based L1A products from LO data.	PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required
					PGS-0520#B	487 8	The PGS shall have the capability to generate data products from any single data input or combination of data inputs according to the algorithms provided by the scientists.

S- DPS- 20614	B	New	The PRONG CI shall be capable of using Data Server <u>subsetting services when it requests input data sets to be staged.</u>		PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required
S- DPS- 20616	B	New	The PRONG CI shall be capable of using Data Server <u>subsampling services when it requests input data sets to be staged.</u>		PGS-0210#B	458 8	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required

Table 2. L4 Rqmts to be added to LEVEL\_4

L4 ID	Rel	RTM Key	L4 Text	Clarification	Req Type	req_status	verification method
S-PLS-02500	B	New	The PLANG CI shall be capable of planning data processing requests which have optional inputs.	Optional inputs allow the job to be run even if that input is unavailable (assuming all the other constraints have been met).	functional	approved	test
S-PLS-02510	B	New	The PLANG CI shall be capable of planning data processing requests which specify alternates for input data sets which may be unavailable.	Alternate inputs allow a job to be run with any of a pre-defined, ordered set of possible inputs.	functional	approved	test
S-PLS-02520	B	New	The PLANG CI shall be capable of setting a timer for each alternate input data set which specifies how long to wait for that data set before attempting to use the next alternate.		functional	approved	test
S-PLS-02530	B	New	The PLANG CI shall be capable of planning a subset of Data processing Requests (DPRs) that are generated from a Processing Request (PR) based upon a "keep" parameter and a "skip" parameter which establish a repeatable pattern of the DPRs to be run or not run.	The intent is to provide the capability to run a PGE some subset of the number of times it is possible to be run. For example, it may be desired to have a PGE which works on a daily data set to run only every fifth day.	functional	approved	test
S-PLS-02540	B	New	The PLANG CI shall be capable of determining the temporal extent of input data sets required to produce data products based on the AM-I spacecraft orbit.	Provides a mechanism to produce orbit-based L1A products from L0 data.	functional	approved	test
S-DPS-20614	B	New	The PRONG CI shall be capable of using Data Server subsetting services when it requests input data sets to be staged.		functional	approved	test
S-DPS-20616	B	New	The PRONG CI shall be capable of using Data Server subsampling services when it requests input data sets to be staged.		functional	approved	test

Table 3. Links to be added between REQ\_BY\_REL and LEVEL\_4

RbR ID	L4 ID
PGS-0210#B	S-PLS-02500
PGS-0520#B	S-PLS-02500
PGS-0210#B	S-PLS-02510
PGS-0520#B	S-PLS-02510
PGS-0210#B	S-PLS-02520
PGS-0210#B	S-PLS-02530
PGS-0210#B	S-PLS-02540
PGS-0520#B	S-PLS-02540
PGS-0210#B	S-DPS-20614
PGS-0210#B	S-DPS-20616