

Standards Process

The "standards process" is the set of steps involved in modifying the *PDS Standards Reference* (PDSSR) and, by implication, the tools, other software, and the data system which it governs. The scope of the "standards process" includes modifications to the *Planetary Science Data Dictionary Document* (PSDDD), although a separate document (the *Keyword Approval Process*) is in preparation and will address those issues specifically.

The "standards process" involves the Standards Coordinator, a member of the Engineering Node (EN) staff assigned to maintain the integrity of the Standards and oversee the change process; the PDS [Technical Group \(TG\)](#), comprising representatives from each Discipline Node and the Radio Science Advisor; and ad hoc working groups established to flesh out, debug, and evaluate Standards Change Requests (SCR's). The status of any SCR is specified by the value of its STANDARDS_STATUS keyword.

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Step 1. The SCR is the vehicle by which standards changes are requested, refined, approved (or rejected), and implemented (if approved). An SCR may be submitted by anyone having access to <http://pds-engineering.jpl.nasa.gov/index.cfm?pid=2&cid=55>. The originator completes at least the required fields in the form ([Appendix A](#)) and receives an acknowledgement, including the SCR tracking number. The system providing the acknowledgement simultaneously posts the SCR, opens a blog for public comment, and notifies the Standards Coordinator of its submission. At this point, the value of the SCR's STANDARDS_STATUS keyword is initialized to SUBMITTED.

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Step 2. The Standards Coordinator assigns the SCR an initial priority, then recruits a [Working Group](#) to refine the SCR and appoints one of its members as chair. The ideal [Working Group](#) includes proponents, skeptics, representatives from disciplines which would be most affected, and technical experts who can identify impacts within PDS, impacts on external interfaces, and inconsistencies with other standards (ODL, ISO, etc.). When the ideal [Working Group](#) cannot be recruited, the Standards Coordinator appoints volunteers who are simply interested or willing to serve. The size and composition of the [Working Group](#) should be matched to the difficulty of the expected task. Once the [Working Group](#) has been established, the Standards Coordinator sets STANDARDS_STATUS = IN_PROGRESS. If a [Working Group](#) cannot be recruited, the Standards Coordinator sets STANDARDS_STATUS = PARKED and attempts to recruit a [Working Group](#) at some later time.

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Step 3. The task of the [Working Group](#) is to refine the SCR so that it meets the goals of the originator while being consistent with the constraints of PDS. The SCR form should be fleshed out to include a brief history of the [Working Group](#) deliberations, the need being addressed, any relevant background information including urgency in making the change, one or more proposed solutions (including verbatim text changes, if any, which can be inserted into PDS documents), and an impact assessment. The impact assessment must include what work will be needed and an estimate of the resources required. The impact assessment must include indirect impacts — for example, changes at Discipline Nodes required to accommodate an SCR which is written entirely in terms of "central" operations. If the [Working Group](#) determines that the impact is low, it may recommend that the SCR be implemented after approval by only the [Technical](#)

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Group. Once a draft suitable for review by the TG has been completed, it is delivered to the Standards Coordinator who will schedule discussion and set STANDARDS_STATUS = DRAFT. If the Working Group is unable to reach agreement or concludes that the SCR is not in the best interests of PDS or the planetary community, the chair notifies the Standards Coordinator who, if there are no ideas for resolving the impasse, restarts the process at Step 2.

Step 4. After discussion — which can include blog, e-mail, telecon, and face-to-face components — the Technical Group takes one of four possible actions:

- (a) approves the SCR and forwards it to Management Council for final approval (STANDARDS_STATUS = TG_ENDORSED)
- (b) approves a low-impact SCR for implementation after only TG approval (STANDARDS_STATUS = TG_APPROVED)
- (c) rejects the SCR and refers it back to the Working Group (STANDARDS_STATUS reset to IN_PROGRESS) (return to Step 3)
- (d) rejects the SCR outright (STANDARDS_STATUS = REJECTED)

If the SCR is ENDORSED, the Standards Coordinator arranges for presentation to the Management Council. If the SCR is TG_APPROVED, the Standards Coordinator reports on the action to the Management Council. Either approval requires a two-thirds favorable vote by those participating in the TG and at least a majority of those eligible to vote. Outright rejection requires a majority vote of those participating. If one or more votes is conducted and none of these results obtains, the default action is referral back to the Working Group.

Step 5. The Management Council votes "yes" or "no" on SCR's which have been TG_ENDORSED. At its option, the MC may direct that SCR's which are TG_APPROVED be submitted for formal Management Council approval before implementation. Any SCR voted favorably by the Management Council has STANDARDS_STATUS = APPROVED. An SCR that is not approved by the Management Council is returned to the TG for disposition (returns to Step 4); at its discretion, the Management Council may offer suggestions or recommendations on how the TG should proceed.

Step 6. SCR's approved by the Management Council or given TG_APPROVED status by the Technical Group and not redirected by the Management Council are assigned to the Engineering Node for implementation which does so using its normal procedures for change in a configuration controlled environment. When the SCR is fully implemented and operational, the Standards Coordinator sets STANDARDS_STATUS = IMPLEMENTED.

The Standards Coordinator advises the originator, the Working Group, and the Tech Session of changes in STANDARDS_STATUS.

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Appendix A. Web-Based Submission Form

The following information is needed for each Standards Change Request. Some of it should be entered at the time the SCR is submitted. The original information will be revised and supplemented as the SCR evolves. In the following, REQUIRED indicates those fields which must be completed during initial submission through the web interface.

Title (REQUIRED): a terse (less than 64 character) identifier that summarizes the proposal/issue and distinguishes it from other titles in the SCR queue.

Submission Date (NOT VISIBLE ON WEB FORM): Filled in by the web-based system.

Submitter (REQUIRED): Name of the person filling out the web form.

E-Mail (REQUIRED): E-mail address of the Submitter.

Problem (REQUIRED): A statement of the problem and its immediate consequences. Is there an error in the PDSSR? Is something ambiguous? Is something needed to address a situation which was not previously anticipated? Is this a request for a new PDS feature or service? Should the change be implemented now, or would it be appropriate to wait (until PDS4, for example)?

Proposed Solution (REQUIRED): Outline your proposed solution, including changes to PDS standards and/or the Data Dictionary. If you don't have a solution, enter "UNKNOWN" and the Working Group will try to find one.

Current Urgency (REQUIRED): Who needs this, when, and why? Do the consequences become more severe if there is delay?

Impact Assessment (OPTIONAL): What will need to be changed if this request is approved, and what will be the resources needed to implement it? Include impacts on the core system; discipline, data, and sub-nodes; and any implications for other systems (ADS, IPDA, etc.). If not sure, list possible impacts that should be investigated by the Working Group.

Priority (SET BY STANDARDS COORDINATOR based on Current Urgency, past experience, and competing proposals): Should this be worked immediately (4), accelerated (3), allowed to flow through at "normal" speed (2), or placed on the back burner (1)?

Working Group (OPTIONAL): Recommend people or DN's that would likely be interested in serving on the Working Group. The actual Working Group will be appointed by the Standards Coordinator.

Requested Changes (OPTIONAL): List specific changes requested in detail, such as wording to be replaced in documents, full definitions of new elements, etc.

Appendix B. STANDARDS STATUS Keyword Values and Their Meanings

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SUBMITTED	An SCR has been submitted, the required minimum fields have been completed, and the system has issued an SCR tracking number. The Standards Coordinator is (or soon will be) in the process of appointing a Working Group to refine the SCR.
PARKED	The Standards Coordinator was unable to recruit a Working Group, or an earlier Working Group could not reach consensus on a proposal. The Standards Coordinator will periodically seek to set up a new Working Group. A possible <i>end state</i> . NB: The Standards Coordinator has the option of appointing him/herself as a Working Group of one and forwarding the SCR to the Tech Session with a negative recommendation, in hopes of getting a REJECTED vote and clearing a bad proposal from the system.
IN_PROGRESS	The <u>Working Group</u> is fleshing out the SCR, resolving conflicts, identifying impacts, and estimating resources needed to address the impacts.
DRAFT	A draft SCR, suitable for review by the <u>Technical Group</u> , has been completed and forwarded to the <u>Technical Group</u> for review.
TG_ENDORSED	<u>Technical Group</u> has approved the SCR and forwarded it to the MC for a vote.
TG_APPROVED	<u>Technical Group</u> has approved the SCR, judged its impact to be "low," and forwarded it to EN for implementation with an advisory to MC. MC has the option, at any time, to change the TG_APPROVED status to TG_ENDORSED so that it can conduct its own vote.
REJECTED	The SCR was rejected by the <u>Technical Group</u> and will not be the subject of further discussion or action. A possible <i>end state</i> . NB: Rejection does not preclude resubmission.
APPROVED	The SCR has been approved by the MC and has been forwarded to EN for implementation, which may be in progress.
IMPLEMENTED	The SCR has been fully implemented. A possible <i>end state</i> .

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