



International Planetary Data Alliance (IPDA)

IPDA Document Standards Version 0.1

Editor:

P. Osuna

Authors:

P. Osuna, D. Crichton, G. Krishna

Abstract

This document describes the types of official IPDA documents and the process by which documents are advanced from Working Drafts to formal Recommendations.

Status of this document

This document has been reviewed by IPDA Members and other interested parties, and has been endorsed by the IPDA Steering Committee as an IPDA Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. IPDA's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability inside the Planetary Sciences Community.

Acknowledgments

This document is based on the W3C documentation standards, but has been adapted for the IPDA.

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1 Document types

The IPDA publishes the following documents:

Recommendation track documents. These are specifications, guidelines, etc. produced by the IPDA Projects. Documents on the Recommendation track may progress from [Working Draft](#) (WD) to [Proposed Recommendation](#) (PR) and finally to [Recommendation](#) (REC).

IPDA Notes. An IPDA Note is a dated, public record of an idea, comment, or document. Authorship of a Note may vary greatly (e.g., by an IPDA Project Group, by an IPDA member in isolation, by an IPDA participating institution, etc.).

IPDA will make every effort to make archival documents indefinitely available at their original address in their original form. The exact location of the Document Repository is still TBD within the new IPDA Web portal.

The IPDA Steering Committee appoints a Documentation Coordinator (DC) who oversees the document collection and assures that documents conform to these guidelines.

The DC may reformat, rename, or renumber documents so as to conform to changes in IPDA practice (e.g., changes to document styles or the "Status of this Document" section).

Each public document must clearly indicate whether it is a Note, [Working Draft](#) (WD), [Proposed Recommendation](#) (PR), or [Recommendation](#) (REC).

The primary language for IPDA documents is English.

1.1 Status

Each document must include a section about the status of the document. The status section should explain why IPDA has published the document, whether or not it is part of the Recommendation track, who developed it, where to send comments about it, whether implementation experience is being sought, any significant changes from the previous version, and any other relevant metadata.

The status section of a Working Draft must set expectations about the stability of the work (e.g., that it may be superseded, obsoleted, or dropped at any time, that it should not be cited as other than a work in progress, etc.) and must indicate how much consensus within IPDA there is about the Working Draft (e.g., no consensus, consensus among the Project participants, etc.).

The status section of a Note must indicate the level of endorsement within or by IPDA for the material in the Note, and set expectations about future commitments from IPDA to pursue the topics covered by the Note or to respond to comments about the Note.

1.2 Naming and version numbering conventions

IPDA document names have five components:

1. A document type code: NOTE, WD (Working Draft), PR (Proposed Recommendation), or REC (Recommendation).
2. A concise name, which should be a reasonable condensation of the document title.
3. A version number of the form I.J, where I and J are integers 0, 1, 2, ... 9, 10, 11,
4. A date. The date is the GMT date on which the current version of the document was produced, in the format YYYYMMDD. (This does not allow for multiple versions of a document to be released within one 24-hour period, but this should not be a major problem.)
5. An extension (.html, .pdf, .doc, etc.) that follows MIME type conventions.

The first four components are concatenated, separated by hyphens.

Version numbers follow these guidelines:

- The number to the left of the (first) decimal point starts with 0 for documents that are being discussed within a Project prior to publication for IPDA-wide review. The number increments to 1 for the first public version, and to 2, 3, ..., for subsequent versions that are not backward compatible and/or require substantial revisions to implementations.
- The number to the right of the decimal point is an integer counter, beginning with 0 and increasing in simple cardinal order (0, 1, 2, ... 9, 10, 11, ...). This number does not track every revision to a document, but rather, denotes a logical version or conceptually consistent view. This number should only be incremented when there are significant and substantial changes to text but few (minor) or no changes required of implementations. The version number normally remains fixed as a document is promoted from Working Draft to Proposed Recommendation to Recommendation, with editorial revisions indicated by the change of date.
- After a document reaches Recommendation status, subsequent revisions retrace the promotion process. Changes that are backward compatible result in increments in the number to the right of the decimal place (1.1, 1.2, ...). Changes that are not backward compatible require an increment of the number of the left of the decimal place (2.0), with subsequent backward compatible revisions following the same pattern (2.1, 2.2, ...).

The final published and approved Recommendation retains the date on the title page of the document, but the date is removed from the document filename in order to simplify reference to the document.

The following examples show a typical name and numbering progression for a sample document.

NOTE-MyNewIdea-1.0-20081001.pdf	(initial idea)
WD-ConciseName-0.1-20081225.pdf	(first Working Draft, in WG)
WD-ConciseName-0.1-20081231.pdf	(revised 6 days later)
WD-ConciseName-0.2-20090115.pdf	(text revised substantially)
WD-ConciseName-0.2-20090201.pdf	(final version in WG before PR)
WD-ConciseName-1.0-20090301.pdf	(published first version)
PR-ConciseName-1.0-20090501.pdf	(promoted to PR)
PR-ConciseName-1.0-20090615.pdf	(updated after RFC)
PR-ConciseName-1.0-20090801.pdf	(updated after TEG review)
REC-ConciseName-1.0.pdf	(accepted as REC; date, e.g., 20090901 appears on title page)
WD-ConciseName-1.1-20100628.pdf	(first update to WD in WG;

WD-ConciseName-1.1-2010715.pdf	does not affect software)
WD-ConciseName-1.1-2010801.pdf	(revised text)
PR-ConciseName-1.1-20100815.pdf	(revised text)
PR-ConciseName-1.1-201000915.pdf	(promoted to PR)
PR-ConciseName-1.1-20101001.pdf	(updated after RFC)
REC-ConciseName-1.1.pdf	(updated after TEG review)
	(accepted as REC)
WD-ConciseName-2.0-20110628.pdf	(major update to WD in WG;
	does affect software)
WD-ConciseName-2.0-2011715.pdf	(revised text)
WD-ConciseName-2.0-2011801.pdf	(revised text)
PR-ConciseName-2.0-20110815.pdf	(promoted to PR)
PR-ConciseName-2.0-201100915.pdf	(updated after RFC)
PR-ConciseName-2.0-20111001.pdf	(updated after TEG review)
REC-ConciseName-2.0.pdf	(accepted as REC)

Names will be reviewed and may be modified by the Document Coordinator to be consistent with these conventions. All versions 1.0 and higher are stored in the IPDA Document Repository (still TBD)

1.3 Format

The standard format for IPDA documents is PDF, though any document preparation tools may be used that allow for the publication of PDF and that retain the standard formatting elements and style. Document templates are provided for MSWord and HTML at **TBD place**. The document source in its original format should also be submitted and retained in the IPDA document collection.

1.4 How to publish a document

Documents are entered into the IPDA document collection by the Document Coordinator in response to a request from a Project lead or the person primarily responsible for editing a particular document. A request is initiated by **TBD process**.

1.5 Supplementary resources

The Document Coordinator maintains a repository of supplementary resources, such as XML schema, RDF vocabulary definitions, and WSDL files. Developers and any type of validation system/service should use these in preference to copies stored elsewhere. There is, however, no requirement to use them if a different implementation yields compliance with a given standard. Such additional items are considered part of the implementation but not part of the standard itself. Standards document authors should, however, reference them as informative appendices if applicable and seek consistency. At the same time, authors of auxiliary files should include comments stating which standards and versions thereof they support.

2 Standards process

The IPDA standards process is used to build consensus around an IPDA technology, both within IPDA and in the Planetary Science community as a whole. IPDA Working Drafts become Recommendations by following this process. The labels that describe increasing levels of maturity and consensus in the standards process are:

Note. An IPDA Note is a dated, public record of an idea, comment, practice, experience, insight, advice, guideline, or policy. Authorship of a Note may vary greatly (e.g., by an IPDA Project, by an IPDA member in isolation, an IPDA participating Institution, etc.). In some circumstances a Note may be the basis for a Working Draft, but typically Notes are used to describe items relevant to the IVOA other than descriptions of standards or protocols.

Working Draft. A document begins as a Working Draft. A Working Draft is a chartered work item of a Project and generally represents work in progress and a commitment by IPDA to pursue work in a particular area. The label "Working Draft" does not imply that there is consensus within IPDA about the document.

Proposed Recommendation. A Proposed Recommendation is believed to meet the relevant requirements of the Project charter and any accompanying requirements documents, to represent sufficient implementation experience, and to adequately address dependencies from the IPDA technical community and comments from previous reviewers.

IPDA Recommendation. An IPDA Recommendation is a document that is the end result of extensive consensus-building within the IPDA about a particular technology or policy. IPDA considers that the ideas or technology specified by a Recommendation are appropriate for widespread deployment and promote IPDA Charter.

Generally, Projects create Working Drafts with the intent of advancing them through the standards process. However, publication of a document at one maturity level does not guarantee that it will advance to the next. Some documents may be dropped as active work or may be subsumed by other documents. If, at any maturity level of the standards process, work on a document ceases (e.g., because a Project or activity closes, or because the work is subsumed by another document), a final version of the document should be issued with the status section noting that work on this document has concluded, and for what rationale, and with links provided to relevant follow-on documents. Any time a document advances to a higher maturity level, the announcement of the transition must indicate any formal objections. If, at any maturity level prior to Recommendation, review comments or implementation experience result in substantive changes to a document, the document should be returned to Working Draft for further work. The relationship between Working Drafts, Proposed Recommendations, and Recommendations is shown in the figure below.

2.1 Working Draft (WD)

IPDA official documents begin as Working Drafts. Working Drafts are the purview of a Project. Working Drafts may undergo numerous revisions during their development. During this volatile phase Working Drafts are not included in the formal IPDA document

collection, but rather are maintained by the responsible working group in its area of the IPDA Web portal.

Entrance criteria. A Working Draft is published at the discretion of a Project once the WG is satisfied that the document is sufficiently developed to merit broader exposure and feedback. Publication of a Working Draft is not an assertion of consensus, of endorsement, or of technical and editorial quality. Consensus is not a prerequisite for approval to publish; the Project lead may request publication of a Working Draft even if it is unstable and does not meet all Projects requirements. Working Drafts are subject to review by the document coordinator for compliance to these guidelines.

Ongoing work. Once a Working Draft has been published, the Working Group should continue to develop it by encouraging review and feedback within and outside of IPDA.

Next maturity level. After a suitable review and trial period, the Project leader may promote the Working Draft to a Proposed Recommendation. Such advancement should occur only when the Project leader is satisfied that consensus has been reached, and more formal and extensive review is now warranted. Advancement to Proposed Recommendation implies:

1. The Project has fulfilled the relevant requirements of the Project charter and those of any accompanying requirements documents.
2. The Project has formally addressed issues raised during the development and review process (possibly modifying the document).
3. The Project has reported all formal objections.
4. Each feature of the Working Draft has been implemented. The Project should be able to demonstrate two interoperable implementations of each feature, and validation tools should be available. If the leader of the Project believes that broader review is critical, the chair may advance the document to Proposed Recommendation even without adequate implementation experience. In this case, the document status section should indicate why the chair promoted the document directly to Proposed Recommendation. A report describing the implementations or any associated validation tools should be published as a Note, or should be documented as part of the Request for Comments (see below).

2.2 Proposed Recommendation (PR)

Entrance criteria. Proposed Recommendations are published by the leader of a Project following the criteria described above. Proposed Recommendations are considered to be technically mature and ready for wide review.

Ongoing work. The Project should continue to encourage review and feedback within and outside of IPDA.

Next maturity level. After a publication period of at least two weeks, the leader of the Project that developed the Proposed Recommendation may call for a formal Request for Comments (RFC). The RFC is sent to the widest possible IPDA distribution lists (ipda-all@googlegroups.com) and published by adding a link to the RFC on the IPDA document repository web page. **Distribution of the RFC initiates a four-week public review period.** All comments submitted during this review period must be posted publicly and responded to publicly. If the review identifies significant deficiencies in the document, such that revisions must be undertaken beyond minor editorial changes or

where revisions require changes to software based on the document, the document must be returned to the Working Draft status. Members of the Technical Experts Group (TEG), composed of the leaders of other Projects and some selected members per IPDA participating parties, must examine Proposed Recommendations during the RFC period and post comments in the public record. Comments from TEG members may be no more than “read and approved,” or “no dependency” but if TEG members have significant concerns it is during the RFC period that these must be documented.

Following the RFC period, the Project leader may issue a revised version of the document that takes into account the comments received during the RFC. (Such revisions must be minor in nature, or else the document must return to Working Draft status.) The TEG then has **four weeks** to make a final review of the document and the public record of comments and responses as a final check for interface problems or compatibility concerns with the standards developed by other Projects. TEG members are required to note their approval of and/or comments about the document on the RFC public comment website.

PRs being brought forward for promotion to REC should, when applicable, have at least two interoperable implementations. In its final review the TEG may agree to waive this requirement if there are extenuating circumstances. The chair of the TEG, working in consultation with the leader of the Project responsible for the PR, then makes a final summary recommendation, and the chair of the TEG forwards this recommendation to the Steering Committee for review and approval. If the TEG does not agree to waive the requirement regarding interoperable implementations, but there are otherwise no outstanding issues or unresolved problems, the final decision on promotion of the PR to REC rests with the Steering Committee. If the Steering Committee is satisfied that all comments and concerns have been properly taken into account, they promote the document to a Recommendation.

2.3 Recommendation (REC)

Entrance criteria. Recommendations are published by the IPDA Steering Committee following the criteria described above. Recommendations are the final form of IPDA documents and constitute an IPDA Standard.

Ongoing work. Recommendations may need to be revised and extended as time goes on. Significant revisions of Recommendations must proceed through the Working Draft and Proposed Recommendation phases. A significant revision is any revision that requires changes in software based on the document.

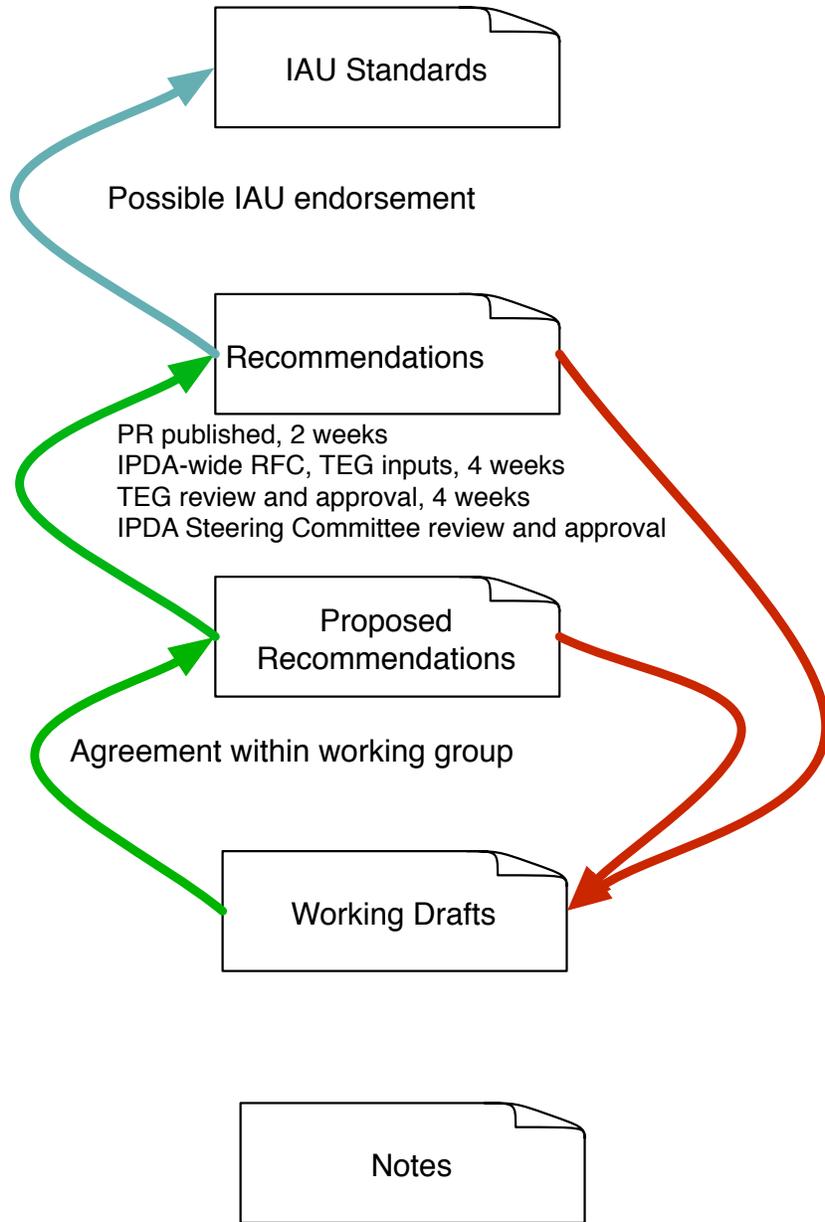
Next maturity level. A Recommendation is the highest level of maturity for an IPDA document. The IPDA Steering Committee may propose that Recommendations be endorsed as standards by the International Astronomical Union, working through IAU Commission n (TBD).

2.4 Document promotion process summary

The IPDA document promotion process is summarized in graphical form in the figure below.

1. Project prepares Working Draft (version ≥ 1.0) and submits to Document Coordinator for posting in the IPDA document collection.

2. Project reviews the Working Draft. Two reference implementations of any associated software are expected, as well as provision of validation tools.
3. The Leader of the Project, with consent of the Project members, promotes the document to a Proposed Recommendation and submits it to the Document Coordinator for posting in the IPDA document collection.
4. After a **minimum** publication period of **two weeks**, the Leader of the Project issues a formal Request for Comments (RFC) to the e-mail distribution list ipda-all@googlegroups.com. The RFC and all comments must be logged on a Web page whose URL is given in the RFC. A **minimum** comment period of **4 weeks** must be allowed. The leaders or of other Projects are required to examine Proposed Recommendations during the RFC period and to post comments in the public record.
5. The Project leader responds to comments on the Web page. If comments lead to significant changes to the document, the status reverts to Working Draft (back to Step 1).
6. If comments are addressed to the satisfaction of the Project Leader and Project members, the Project Leader requests a final review, **to be completed within 4 weeks, by the Technical Experts Group**, and they add their final comments to the RFC record. The chair of the Technical Experts Group, working in consultation with the leader of the Project responsible for the PR, then makes a final summary recommendation and the chair of the Technical Experts Group submits the PR to the Steering Committee for approval.
7. The Steering Committee is polled by the IPDA Chair to ascertain if there is consensus for promotion to Recommendation.
8. If yes, the IPDA Chair reports on approval to the TEG and Project leaders and asks the Document Coordinator to update the document status to Recommendation. If no, the concerns of the IPDA Steering Committee need to be resolved and a new poll taken, or if serious revisions are required, the document would revert to Step 1.
9. The IPDA Steering Committee may propose to the IAU Commission n that IVOA Recommendations be endorsed as IAU Standards. (TBD)



3 The document collection

The IPDA document collection is the primary source for IPDA documents. IPDA users, especially from outside the core collaboration, should always be directed to the document collection rather than be sent private copies of documents.

The IPDA document collection is organized so as to lead readers most naturally to the current versions of all documents in all document classes. A document archive is also maintained so that previous published versions of documents remain available (but not pre-published versions of Working Drafts, though working groups may opt to retain this on the TWiki).

This should be prepared by Emily in the IPDA Web pages.

Appendix: Recommended Text for Document Status

The following text examples may be used as templates in the Status portion of the document.

Note

This is an IPDA Note expressing suggestions from and opinions of the authors. It is intended to share best practices, possible approaches, or other perspectives on interoperability within the Planetary Science Community. It should not be referenced or otherwise interpreted as a standard specification.

Working Draft

This is an IPDA Working Draft for review by IPDA members and other interested parties. It is a draft document and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use IPDA Working Drafts as reference materials or to cite them as other than “work in progress”.

Proposed Recommendation

This is an IPDA Proposed Recommendation made available for public review. It is appropriate to reference this document only as a recommended standard that is under review and which may be changed before it is accepted as a full Recommendation.

Recommendation

This document has been produced by the IPDA [Project name] Project. It has been reviewed by IPDA Members and other interested parties, and has been endorsed by the IPDA Steering Committee as an IPDA Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. IPDA's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability inside the Planetary Science Community.