

Overview of CCSDS Book Types and Development

Book Tracks and Types

Approved (Published) Book Types

There are three document tracks within CCSDS; each track has different book types:

- Normative Track
 - **Blue Book** = CCSDS Recommended Standard
 - **Magenta Book** = CCSDS Recommended Practice
- Non-normative Track
 - **Green Book** = CCSDS Informational Report
 - **Orange Book** = CCSDS Experimental Specification
 - **Silver Book** = CCSDS Historical Document
- Administrative Track
 - **Yellow Book** = CCSDS Record (CCSDS Procedures, Minutes, etc.)

Draft (Developmental) Stages of Books

CCSDS book development is an iterative process:

- Concept Paper = Precursor to any White Book
- **White Book** = CCSDS Proposed Standard or Practice
- **Red Book** = CCSDS Draft Recommended Standard or Practice; will/may be released for formal review
- **Pink Book or Pink Sheets** = CCSDS Draft Recommended Standard or Practice that is an update to a Blue or Magenta Book and is released for formal review

Book-Development Process Graphic

CCSDS book-development stages are represented in Figure 1.¹

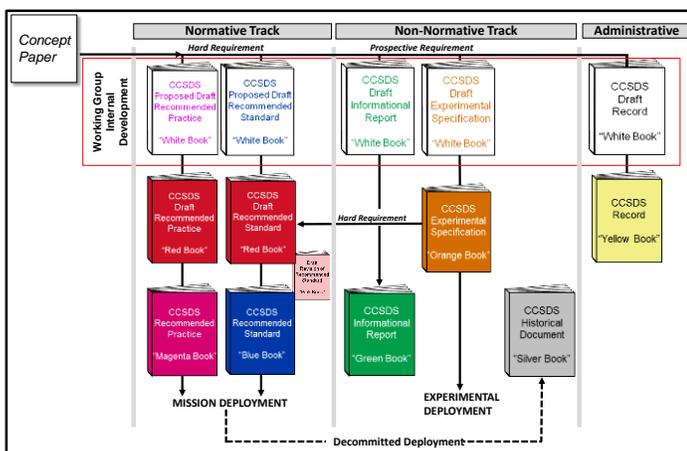


Figure 1: CCSDS Book-Development Stages

¹ Adapted from Tom Gannett's [Spring 2013 Boot Camp Slides](#).

Book and Document Descriptions²

CCSDS Approved Documents

Blue Books: Recommended Standards

“CCSDS Recommended Standards (**Blue Books**) define specific interfaces, technical capabilities or protocols, or provide prescriptive and/or normative definitions of interfaces, protocols, or other controlling standards such as encoding approaches. Standards must be complete, unambiguous and at a sufficient level of technical detail that they can be directly implemented and used for space mission interoperability and cross support. Standards must say very clearly, ‘this is how you must build something if you want it to be compliant’.”

Per appendix B of the *Organization and Processes for the Consultative Committee for Space Data Systems (A02.1.Y-3)*: “A CCSDS Recommended Standard must undergo reconfirmation review [...] three years after issue and every five years subsequently. Reconfirmation review shall result in reconfirmation, revision, or retirement to CCSDS historical status.”

Magenta Books: Recommended Practices

“CCSDS Recommended Practices (**Magenta Books**) are the consensus results of CCSDS community deliberations and provide a way to capture ‘best’ or ‘state of the art’ approaches for applying or using standards. They may include references to sets of standards selected to perform certain applications, or guidelines for standardized processes or procedures for accomplishing tasks, or other materials (such as reference models) to assist in the design, use or selection of standards. Practices say, ‘here is how the community recommends that you should carry out or describe this particular kind of operation at present, or how the community recommends that it should be carried out in the future’. Note that while CCSDS Recommended Standards are often concerned with the technical specifications for hardware and software components required for computer communication across interconnected space mission support networks, a Recommended Practice might specify some specific ‘Application Profiles’ of multiple CCSDS Standards that are recommended for use in particular mission support configurations.”

Per appendix B in [A02.1.Y-3](#): “A CCSDS Recommended Practice must undergo reconfirmation review [...] three years after issue

² The first paragraph of each “Approved Document” book description is verbatim text from the Publications area of [CCSDS.org](#).

and every five years subsequently. Reconfirmation review shall result in reconfirmation, revision, or retirement to CCSDS historical status.”

Green Books: Informational Reports

“CCSDS Informational Reports (**Green Books**) are intended to provide for the timely publication of a very broad range of general information for the CCSDS community. Informational documents are often published in support of an [Experimental specification](#), a Draft Standard or a [Recommended Standard](#). They may therefore contain descriptive material, supporting analysis, test results, scenarios, etc., which are otherwise inappropriate for the contents of a technical specification.”

Per appendix B in [A02.1.Y-3](#): “There is no requirement for a formal agency review prior to publishing a CCSDS informational document.”

Orange Books: Experimental

“CCSDS Experimental Specification (**Orange Books**) indicates that it is part of a research or development effort based on prospective requirements, and as such it is not considered a Standards Track document. Experimental Recommendations are intended to demonstrate technical feasibility in anticipation of a 'hard' requirement that has not yet emerged. Experimental work may be rapidly transferred onto the Standards Track should a hard requirement emerge in the future.”

Per appendix B in [A02.1.Y-3](#): “Generally, there is no requirement for a formal agency review prior to publishing a CCSDS experimental specification.”

Yellow Books: Record

“CCSDS Record documents (**Yellow Books**) are CCSDS administrative documents such as CCSDS charters, procedures and meeting minutes.”

Per appendix B in [A02.1.Y-3](#): “Yellow Books shall be used to document the test plans and test reports produced in support of CCSDS Blue Book and Orange Book interoperability testing.”

Silver Books: Historical

“CCSDS Historical designation (**Silver Books**) is reserved for any approved CCSDS document that has been superseded by a more recent version or is for any other reason considered to be obsolete. More often than not, a CCSDS Historic document will be a CCSDS Recommended Standard that has come to the end of its useful operational life and no longer controls a committed deployment of international CCSDS-compatible mission support infrastructure.”

Per appendix B in [A02.1.Y-3](#): “An Area Director makes the determination as to which documents transition to CCSDS

historical status; the CESG and the CMC must approve this recommendation, but there is no requirement for a formal agency review.”

Draft (Developmental) Books

Concept Paper

“Every CCSDS document starts out as a CCSDS concept paper.” (See [A02.1.Y-3](#) section 6.)

“A CCSDS concept paper [...] has a lifetime of only nine months. [...] Anyone [...] can write a CCSDS concept paper at any time, and it is generally used as the “talking paper” to get work started. [...] If accepted as a work item by the CESG, the concept paper becomes the primary initial working document of the [Working Group]. (See [A02.1.Y-3](#) appendix B.)

White Books

“A **White Book** [...] is a preliminary draft of a planned CCSDS Recommendation or Report. All such documents under development are given a white cover to indicate their preliminary status. White Books are generated in response to concept papers or New Work Item (NWI) proposals. CCSDS White Books are preliminary documents and as such are not necessarily endorsed by any CCSDS Member or Observer Agency or given any CCSDS-external distribution.” (See <http://public.ccsds.org/about/white.html>)

Elevation to the next level, of Draft Recommended Standard/Practice [Red Book status], is a major advance in status, indicating a strong belief that the [document] is mature and will be useful. (See [A02.1.Y-3](#) appendix B.)

Red Books

“A **Red Book** [...] is a draft of a CCSDS technical Recommendation. It describes the technical consensus within a panel and may incorporate unofficial Agency comments received at the ‘working level.’ A Red-Book status indicates that the CCSDS believes that the document is technically mature and ready for extensive and formal review by appropriate technical organizations within each Member Agency. Official Member Agency comments about, or approval of, the [Red Book] is sought. Several iterations of a [Red Book] may occur in response to iterations in the Agency review process.” (See <http://public.ccsds.org/about/red.html>)

Pink Books/Sheets

Pink Books/Sheets are Draft Recommendations that are updates to either a Blue Book or Magenta Book; the books/sheets will be released for formal review. Pink sheets are for changed pages only.