



**CCSDS**

The Consultative Committee for Space Data Systems

---

**CCSDS NAVIGATION  
WORKING GROUP  
DOCUMENT  
GUIDELINES**

**"UNOFFICIAL"**

**CCSDS-NAV.0-Y-1.23**

**APRIL-DECEMBER 2016**

## INTRODUCTION

The purpose of this document is to provide guidelines for members of the CCSDS Navigation Working Group (WG) with respect to developing and reviewing WG standards and records documents. It applies to the CCSDS Navigation WG only and is an "unofficial" document of the CCSDS.

This document was suggested by WG members. It was deemed desirable in order to assist new members of the WG, or existing members who have accepted the responsibility to be the Lead Editor for a document in development by the WG. Also, occasionally procedural issues arise with the WG, and there has been no set of administrative norms to which to appeal when addressing these issues.

The following conventions apply for the specifications in this document (same as in the CCSDS Publications Manual):

- a) the words 'shall' and 'must' imply a requirement;
- b) the word 'should' implies an optional, strong recommendation;
- c) the word 'may' implies an optional recommendation;
- d) the words 'is', 'are', and 'will' imply statements of fact.

## REFERENCES

[1] Organization and Processes for the Consultative Committee for Space Data Systems, CCSDS A02.1-Y-4, Yellow Book, Issue 4, April 2014.

[2] CCSDS Publications Manual, CCSDS A20.0-Y-4, Yellow Book, Issue 4, April 2014.

[3] The International System of Units (SI), 8th edition, 2006, <http://www.bipm.org/en/publications/si-brochure/>

## REVISION HISTORY

Version	Date	Description
Initial	November 2015	Initial issue
Rev 1	April 2016	Added guideline related to use of SI units and related reference
Rev 2	October 2016	Added guideline related to practices with respect to 5 Year revisions.
<u>Rev 3</u>	<u>December 2016</u>	<u>Added guideline related to "computer environments", an old requirement for which it is impossible for the WG to assess success.</u>

## CCSDS NAVIGATION WG GUIDELINES

01	Lead Editors must attend the CCSDS Boot Camp. This is a requirement levied by the CESG/CMC.
02	All WG members should become familiar with the <i>CCSDS Organization and Processes</i> document (Reference [1]).
03	Lead Editors should become familiar with the <i>CCSDS Publications Guide</i> (Reference [2]).
04	All WG members (Lead Editors in particular) should strive to make Navigation Data Messages as simple as possible in order to be better understood. The documents are in English and many users may have a less than perfect command of English. As such, the sentence structure, vocabulary, etc. should be kept as simple as possible without sacrificing clarity and precision.
05	Lead Editors should check pre-existing WG documents and try to be as consistent as possible with them. New documents should be as consistent as possible with prior documents without duplicating them, so as to minimize overlap, unless there is a very good reason.
06	All WG members must understand that we are not writing textbooks on flight dynamics... so keep it terse and refer to authoritative texts where necessary. NOTE: The CCSDS Editor greatly values the terse style in standards writers.
07	Lead Editors should put as much overview information as possible into either section 2 of the document or informative annexes (appendices). This will help keep the Green Book small (and revisions small in number too). It is also convenient for readers to have explanatory information (that cannot be in the standard itself) in the same document; the only way to do this is with an "informative annex" (as opposed to a "normative annex").
08	Lead Editors should put examples in informative annexes instead of inline.
09	Lead Editors must ensure that they properly increment draft numbers when sending out drafts. Even if changes are few in number, increment the draft number. This is important to ensure that everyone is reading and/or referring to the same document.
10	Lead Editors should distribute both "changes tracked" and "changes accepted" versions of drafts (exception: first version).
11	All WG members should do their best to review document drafts in a timely fashion (usually within 30 days). This is critical to keeping our work moving.
12	All WG members should use a Comment Resolution Matrix (CRM) to provide review commentary to the Lead Editor. If possible, include affected text in the CRM (at least a fragment to help the Lead Editor locate the material you are commenting on). NOTE: Lead Editors do not need to fill out a CRM for a document they are editing. A standard, blank CRM is available on the Navigation WG CWE at <a href="http://cwe.ccsds.org/moims/docs/MOIMS-NAV/blank-comment-resolution-matrix.docx">http://cwe.ccsds.org/moims/docs/MOIMS-NAV/blank-comment-resolution-matrix.docx</a> . To facilitate merging of multiple CRMs by a Lead Editor, the columns of the CRM template should not be re-sized, moved, deleted, or supplemented.
13	All WG members should understand that if they request a feature in a standard, they and/or their agency are tentatively making a commitment to participate in prototyping of the standard. Although such commitments are "tentative", they should be kept unless it becomes impossible.
14	Insofar as possible, an effort should be made to use units that are part of the International System of Units (SI Units); units are either SI base units, SI derived units, or units outside the SI that are accepted for use with the SI (see Reference [3]). Departures from the SI are not prohibited, but every effort should be made to minimize these departures from the SI.
15	When a Reconfirmation Review reaches a decision to "revise", we should follow the following guideline: If it's wrong, we need to fix it; if it's unclear, we need to clarify; if it's a new requirement, add or retract as needed; if it's stylistic or opinion or alternative formulation, leave it alone.
<u>16</u>	<u>The WG should strive to design products (data structures, files, etc.) that are readily ported between, and useable within, the widest possible variety of computing environments that may be in use by satellite owner/operators and other authorized parties.</u>