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**Space data and information transfer  
systems — IP over CCSDS space links**

*Systèmes de transfert des informations et données spatiales —  
Protocole Internet utilisant les liaisons spatiales CCSDS*

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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 20206 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 702.1-B-1, September 2012) and was adopted (without modifications except those stated in clause 2 of this International Standard) by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 13, *Space data and information transfer systems*.

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## Recommendation for Space Data System Standards

# IP OVER CCSDS SPACE LINKS

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## RECOMMENDED STANDARD

### CCSDS 702.1-B-1

Note:  
This current  
issue includes  
all updates through  
Technical Corrigendum 1,  
dated April 2014

**BLUE BOOK**  
September 2012

## AUTHORITY

Issue:	Recommended Standard, Issue 1
Date:	September 2012
Location:	Washington, DC, USA

This document has been approved for publication by the Management Council of the Consultative Committee for Space Data Systems (CCSDS) and represents the consensus technical agreement of the participating CCSDS Member Agencies. The procedure for review and authorization of CCSDS documents is detailed in *Organization and Processes for the Consultative Committee for Space Data Systems*, and the record of Agency participation in the authorization of this document can be obtained from the CCSDS Secretariat at the address below.

This document is published and maintained by:

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Space Communications and Navigation Office, 7L70  
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NASA Headquarters  
Washington, DC 20546-0001, USA

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## STATEMENT OF INTENT

The Consultative Committee for Space Data Systems (CCSDS) is an organization officially established by the management of its members. The Committee meets periodically to address data systems problems that are common to all participants, and to formulate sound technical solutions to these problems. Inasmuch as participation in the CCSDS is completely voluntary, the results of Committee actions are termed **Recommended Standards** and are not considered binding on any Agency.

This **Recommended Standard** is issued by, and represents the consensus of, the CCSDS members. Endorsement of this **Recommendation** is entirely voluntary. Endorsement, however, indicates the following understandings:

- o Whenever a member establishes a CCSDS-related **standard**, this **standard** will be in accord with the relevant **Recommended Standard**. Establishing such a **standard** does not preclude other provisions which a member may develop.
- o Whenever a member establishes a CCSDS-related **standard**, that member will provide other CCSDS members with the following information:
  - The **standard** itself.
  - The anticipated date of initial operational capability.
  - The anticipated duration of operational service.
- o Specific service arrangements shall be made via memoranda of agreement. Neither this **Recommended Standard** nor any ensuing **standard** is a substitute for a memorandum of agreement.

No later than three years from its date of issuance, this **Recommended Standard** will be reviewed by the CCSDS to determine whether it should: (1) remain in effect without change; (2) be changed to reflect the impact of new technologies, new requirements, or new directions; or (3) be retired or canceled.

In those instances when a new version of a **Recommended Standard** is issued, existing CCSDS-related member standards and implementations are not negated or deemed to be non-CCSDS compatible. It is the responsibility of each member to determine when such standards or implementations are to be modified. Each member is, however, strongly encouraged to direct planning for its new standards and implementations towards the later version of the Recommended Standard.

## FOREWORD

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Through the process of normal evolution, it is expected that expansion, deletion, or modification of this document may occur. This Recommended Standard is therefore subject to CCSDS document management and change control procedures, which are defined in *Organization and Processes for the Consultative Committee for Space Data Systems* (CCSDS A02.1-Y-3). Current versions of CCSDS documents are maintained at the CCSDS Web site:

<http://www.ccsds.org/>

Questions relating to the contents or status of this document should be addressed to the CCSDS Secretariat at the address indicated on page i.

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## CCSDS RECOMMENDED STANDARD FOR IP OVER CCSDS SPACE LINKS

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- China National Space Administration (CNSA)/People's Republic of China.
- Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)/Germany.
- European Space Agency (ESA)/Europe.
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- Instituto Nacional de Pesquisas Espaciais (INPE)/Brazil.
- Japan Aerospace Exploration Agency (JAXA)/Japan.
- National Aeronautics and Space Administration (NASA)/USA.
- UK Space Agency/United Kingdom.

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- Swedish Space Corporation (SSC)/Sweden.
- United States Geological Survey (USGS)/USA.

**DOCUMENT CONTROL**

<b>Document</b>	<b>Title</b>	<b>Date</b>	<b>Status</b>
CCSDS 702.1-B-1	IP over CCSDS Space Links, Recommended Standard, Issue 1	September 2012	Original issue
CCSDS 702.1-B-1 Cor.1 EC 1	Technical Corrigendum 1 Editorial change 1	April 2014	Cor.1: – clarifies distinction between Protocol ID space for the Encapsulation Service and IPE Header Protocol ID space. EC 1: – updates superseded references with current issues; – updates obsolescent style elements.

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