BS ISO 22647:2010

BSI Standards Publication

Space data and information transfer systems — Space link identifiers

bsi.

...making excellence a habit.™

Document Sharing Hub

National foreword

This British Standard is the UK implementation of ISO 22647:2010. It supersedes BS ISO 22647:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/68/-/7, Space systems and operations - Space data and information transfer systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© BSI 2010

ISBN 978 0 580 59965 1

ICS 49.140

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2010.

Amendments issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS ISO 22647:2010

INTERNATIONAL STANDARD

ISO 22647

Second edition
2010-09-15

Space data and information transfer systems — Space link identifiers

Systèmes de transfert des informations et données spatiales — Identificateurs de liaisons spatiales

Reference number
ISO 22647:2010(E)

Documents
Document Sharing Hub

© ISO 2010

Full document details: BS ISO 22647:2010

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub

Full document details: BS ISO 22647:2010

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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.

This second edition cancels and replaces the first edition (ISO 22647:2006), which has been technically revised.

ISO 22647 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 135.0-B-3, October 2006) 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*.

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

Documents
Document Sharing Hub

Full document details: BS ISO 22647:2010

INTERNATIONAL STANDARD ISO 22647:2010(E)

Space data and information transfer systems — Space link identifiers

1 Scope

This International Standard specifies the identifiers currently used by the space link protocols and shows how these identifiers are managed at the CCSDS level. It does not specify how these identifiers are managed in individual data systems of space projects.

The scope and field of application are further detailed in subclauses 1.2 and 1.3 of the enclosed CCSDS publication.

2 Requirements

Requirements are the technical recommendations made in the following publication (reproduced on the following pages), which is adopted as an International Standard:

CCSDS 135.0-B-3, October 2006, *Space link identifiers*

For the purposes of international standardization, the modifications outlined below shall apply to the specific clauses and paragraphs of publication CCSDS 135.0-B-3.

Pages i to v

This part is information which is relevant to the CCSDS publication only.

Page 1-2

Add the following information to the reference indicated:

[2] Document CCSDS 121.0-B-1, May 1997, is equivalent to ISO 15887:2000.

[3] Document CCSDS 717.0-B-1, May 1999, is equivalent to ISO 15894:2000.

[4] Document CCSDS 727.0-B-3, June 2005, is equivalent to ISO 17355:2007.

[5] Document CCSDS 714.0-B-2, October 2006, is equivalent to ISO 15893:2010.

[6] Document CCSDS 133.0-B-1, September 2003, is equivalent to ISO 22646:2005.

[7] Document CCSDS 713.0-B-1, May 1999, is equivalent to ISO 15891:2000.

[8] Document CCSDS 132.0-B-1, September 2003, is equivalent to ISO 22645:2005.

[9] Document CCSDS 232.0-B-1, September 2003, is equivalent to ISO 22664:2005.

[10] Document CCSDS 732.0-B-2, July 2006, is equivalent to ISO 22666:2007.

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

[11] Document CCSDS 211.0-B-4, July 2006, is equivalent to ISO 22663:2007.

[13] Document CCSDS 133.1-B-1, June 2006, is equivalent to ISO 10537:2010.

[14] Document CCSDS 131.0-B-1, September 2003, is equivalent to ISO 22641:2005.

[15] Document CCSDS 231.0-B-1, September 2003, is equivalent to ISO 22642:2005.

3 Revision of publication CCSDS 135.0-B-3

It has been agreed with the Consultative Committee for Space Data Systems that Subcommittee ISO/TC 20/SC 13 will be consulted in the event of any revision or amendment of publication CCSDS 135.0-B-3. To this end, NASA will act as a liaison body between CCSDS and ISO.

Documents
Document Sharing Hub
© ISO 2010 – All rights reserved

Full document details: BS ISO 22647:2010

The Consultative Committee for Space Data Systems

Recommendation for Space Data System Standards

SPACE LINK IDENTIFIERS

RECOMMENDED STANDARD

CCSDS 135.0-B-3

BLUE BOOK
October 2006

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

(blank page)

© ISO 2010 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

CCSDS RECOMMENDED STANDARD FOR SPACE LINK IDENTIFIERS

AUTHORITY

Issue:	Blue Book, Issue 3
Date:	October 2006
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 Recommendations is detailed in the *Procedures Manual 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 Recommendation is published and maintained by:

CCSDS Secretariat
Office of Space Communication (Code M-3)
National Aeronautics and Space Administration
Washington, DC 20546, USA

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

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 five 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.

© ISO 2010 – All rights reserved

Full document details: BS ISO 22647:2010

CCSDS RECOMMENDED STANDARD FOR SPACE LINK IDENTIFIERS

FOREWORD

This document is a technical Recommendation for use in developing flight and ground systems for space missions and has been prepared by the Consultative Committee for Space Data Systems (CCSDS).

This Recommendation documents the identifiers used by the space link protocols developed by CCSDS, shows how these identifiers are managed, and lists the identifiers that are defined or reserved by CCSDS as part of the specification of the space link protocols.

Through the process of normal evolution, it is expected that expansion, deletion or modification to this document may occur. This Recommendation is therefore subject to CCSDS document management and change control procedures, as defined in reference [B1]. 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.

© ISO 2010 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 22647:2010

CCSDS RECOMMENDED STANDARD FOR SPACE LINK IDENTIFIERS

At time of publication, the active Member and Observer Agencies of the CCSDS were:

Member Agencies

- Agenzia Spaziale Italiana (ASI)/Italy.
- British National Space Centre (BNSC)/United Kingdom.
- Canadian Space Agency (CSA)/Canada.
- Centre National d'Etudes Spatiales (CNES)/France.
- Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)/Germany.
- European Space Agency (ESA)/Europe.
- Federal Space Agency (Roskosmos)/Russian Federation.
- Instituto Nacional de Pesquisas Espaciais (INPE)/Brazil.
- Japan Aerospace Exploration Agency (JAXA)/Japan.
- National Aeronautics and Space Administration (NASA)/USA.

Observer Agencies

- Austrian Space Agency (ASA)/Austria.
- Belgian Federal Science Policy Office (BFSPO)/Belgium.
- Central Research Institute of Machine Building (TsNIIMash)/Russian Federation.
- Centro Tecnico Aeroespacial (CTA)/Brazil.
- Chinese Academy of Space Technology (CAST)/China.
- Commonwealth Scientific and Industrial Research Organization (CSIRO)/Australia.
- Danish Space Research Institute (DSRI)/Denmark.
- European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)/Europe.
- European Telecommunications Satellite Organization (EUTELSAT)/Europe.
- Hellenic National Space Committee (HNSC)/Greece.
- Indian Space Research Organization (ISRO)/India.
- Institute of Space Research (IKI)/Russian Federation.
- KFKI Research Institute for Particle & Nuclear Physics (KFKI)/Hungary.
- Korea Aerospace Research Institute (KARI)/Korea.
- MIKOMTEK: CSIR (CSIR)/Republic of South Africa.
- Ministry of Communications (MOC)/Israel.
- National Institute of Information and Communications Technology (NICT)/Japan.
- National Oceanic & Atmospheric Administration (NOAA)/USA.
- National Space Organization (NSPO)/Taipei.
- Space and Upper Atmosphere Research Commission (SUPARCO)/Pakistan.
- Swedish Space Corporation (SSC)/Sweden.
- United States Geological Survey (USGS)/USA.

Documents
Document Sharing Hub
© ISO 2010 – All rights reserved
Full document details: BS ISO 22647:2010

CCSDS RECOMMENDED STANDARD FOR SPACE LINK IDENTIFIERS

DOCUMENT CONTROL

Document	Title and Issue	Date	Status
CCSDS 135.0-B-1	Space Link Identifiers, Issue 1	January 2002	Original issue, superseded.
CCSDS 135.0-B-2	Space Link Identifiers, Recommended Standard, Issue 2	November 2005	Issue 2 (superseded): – adds Proximity-1 port ID assignments.
CCSDS 135.0-B-3	Space Link Identifiers, Recommended Standard, Issue 3	October 2006	Current issue: – adds a security subsection (2.5); – adds protocol IDs for IPv4, Encapsulation Service, and Encapsulation Service Extended Protocol IDs; – expands, clarifies meaning of Proximity-1 port ID for Packets.

© ISO 2010 – All rights reserved

Documents Document Sharing Hub
Full document details: BS ISO 22647:2010