

German report for the 48th meeting of the ISO/Technical Committee 20/Subcommittee 13

**hosted by INPE/Brazil, San Jose dos Campos, 27 April 2016,
Wednesday (15:00-16:50 h)**

ISO TC20 / SC13 status:

- published standards: 84 (68)
- standards under development: 18 (22)
- withdrawn standards: 51 (45)

Activities since the last formal ISO TC20/SC13 meeting 20.5.2015

DIN/DLR congratulates Eduardo Bergamini for his extended chairmanship of the SC13

Votings on revisions of already existing standards (26)

Remark: Some of the standards appeared twice for review due to CCSDS updates in the meantime.

ISO published documents (10)

ISO 10537:2010 Space data and information transfer systems – Encapsulation

ISO 12175:1994/Amd 1:2015 Space data and information transfer systems --
Standard formatted data units -- Structure and construction rules

ISO 13526:2010/Amd 1:2015 Space data and information transfer systems --
Tracking data message

ISO 18202:2015 Space data and information transfer systems -- Mission operations
message abstraction layer

ISO 20618:2015 Space data and information transfer systems -- Spacecraft onboard
interface services -- Device enumeration service

ISO 22642:2015 Space data and information transfer systems -- TC synchronization and channel coding

ISO 22645:2005/Amd 1:2015 Space data and information transfer systems -- TC synchronization and channel coding

ISO 22646:2005/Amd 1:2015 Space data and information transfer systems -- Space packet protocol

ISO 22664:2013/Amd 1:2015 Space data and information transfer systems — TC (telecommand) space data link protocol

ISO 22666:2007/Amd 1:2015 Space data and information transfer systems -- AOS (advanced orbiting systems) space data link protocol

Documents voted on but not yet published (5)

ISO 13527:2010 Space data and information transfer systems - XML formatted data unit (XFDU) structure and construction rules

ISO 13537:2010 Space data and information transfer systems – Reference architecture for space data systems

ISO 13541:2010 Space data and information transfer systems -- Attitude data Messages

ISO 15396:2007 Space data and information transfer systems - Cross support reference model - Space link extension services

ISO 15893:2010 Space data and information transfer systems – Space communications protocol specification (SCPS) -- Transport protocol (SCPS-TP)

Voting ongoing (10)

ISO 22645:2005/Amd 1:2015 Space data and information transfer systems -- TC synchronization and channel coding Pu, Vpu (based on CCSDS 132.0-B-2)

ISO 18440 Ed2 Space data and information transfer systems — Space link extension — Internet protocol for transfer services

ISO 18441 Ed2 Space data and information transfer systems — Space link extension — Application program interface for transfer services — Core specification

ISO 18442 Ed2 Space data and information transfer systems — Space link extension — Application program interface for return all frames service

ISO 18443 Ed2 Space data and information transfer systems — Space link extension — Application program interface for return channel frames service

ISO 18444 Ed2 Space data and information transfer systems — Space link extension — Application program interface for return operational control fields service

ISO 18445 Ed2 Space data and information transfer systems — Space link extension — Application program interface for the forward CLTU service

ISO 18446 Ed2 Space data and information transfer systems — Space link extension — Application program interface for the forward space packet service

ISO 22664:2013/Amd 1:2015 Space data and information transfer systems — TC (telecommand) space data link protocol (Revision to take into account CCSDS 232.0-B-3)

ISO 22666:2007/Amd 1:2015 Space data and information transfer systems -- AOS (advanced orbiting systems) space data link protocol (Revision to take into account CCSDS 732.0-B-3)

Document revised but no new voting result seen (1)

ISO 17355:2007 Space data and information transfer systems - CCSDS file delivery protocol - Revision to take into account CCSDS 727.0-B-4

Votings on new standards (6):

Votings ISO CD/DIS/FDIS (4)

ISO/DIS 21077 Space data and information transfer systems - Data motion imagery (CCSDS 766.1-B-1)

ISO/DIS 21080 Space data and information transfer systems - Licklider Transmission Protocol (LTP) for CCSDS (CCSDS 734.1-B-1)

ISO/DIS 21082 Space data and information transfer systems - Mission Operations – MAL space packet transport binding and binary encoding (CCSDS 524.1-B-1)

ISO/DIS 21076 Space Communications Cross Support--Architecture Requirements Document. Magenta Book (CCSDS 901.1-M-1)

Votings pending ISO CD/DIS/FDIS (2)

ISO/DIS 21323 Space data and information transfer systems — CCSDS Bundle protocol Specification (CCSDS 734.2-B-1)

ISO/DIS 21324 Space data and information transfer systems — Space data link security Protocol (CCSDS 355.0-B-1)

Documents withdrawn (1)

ISO 22647:2010 Space data and information transfer systems -- Space link Identifiers

DIN publication

New ISO standards are published automatically as DIN standards.

DIN personal changes

Within DIN Mr. Dipl.-Ing. Kristofer Proll is now responsible for ISO TC20/SC13. Osvaldo Peinado will be the DIN representative during the ISO meetings.

Use of standards within DLR projects

All DLR space projects are forced to make use of the standards defined by CCSDS and ECSS (CEN), especially those standards, which are relevant for ground systems as coding and frequency standards, packet TM/TC, SLE services and Navigation Standards.

The new MIA standard is already in place for use of video communication between Spacestation and ground systems. Also current setting of the upcoming Voice standard is used in this are by DLR.

CEN/CLC/TC 5 Space

Two meetings of the CEN/CLC/TC 5 Space Group took place in Brussels during the reporting period (1.7.2015, 13.1.2016). Written liaison statements were submitted.

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Oberpfaffenhofen, 20.4.2016