

# **China Status Report**

November 14, 2017

ISO TC20/SC13

Darmstadt, Germany

**China Aerospace Standardization Institute (CASI)**

## Systematic review

- the following ISO documents were reviewed by CASI during the work period between November 2016 and October 2017: **(Ballots completed) (8+1)**
  - ISO 15889:2011: The Data Description Language EAST Specification ([CCSDS 644.0-B-3](#))
  - ISO 17107:2011: XML Specification for Navigation Data Messages (CCSDS 505.0-B-1)
  - ISO 11104:2011: Time Code Formats ([CCSDS 301.0-B-4](#))
  - ISO 22671:2011: Space Link Extension – Forward CLTU Service Specification ([CCSDS 912.1-B-4](#))
  - ISO 22672:2011 : Space Link Extension – Forward Space Packet Service Specification Specification ([CCSDS 912.3-B-3](#))
  - ISO 17214:2011: Spacecraft Onboard Interface Services--Sub network Time Access Service ([CCSDS 872.0-M-1](#))
  - ISO 16363:2012: Audit and Certification of Trustworthy Digital Repositories ([CCSDS 652.0-M-1](#))
  - ISO 22641:2012: TM Synchronization and Channel Coding ([CCSDS 131.0-B-2](#))
  - [ISO 26900:2012: Orbit Data Messages \(CCSDS 502.0-B-2\)](#) *in ISO/TC20/SC14 & SC13)*

## CIB (Committee Internal Ballot)

- N 1614. (1-month CIB for the approval of revision projects for CCSDS documents that were recently published or about to be published. )
  - ISO 21077:2016: The Data Description Language EAST Specification (CCSDS 766.1-B-2, 2016.8) , last version 2015.5
  - ISO 22669:2013: Space Link Extension – Return All Frames Service Specification (CCSDS 911.1-B-4, 2016.8),
  - ISO 22670:2013: Space Link Extension Return All Frames Service Specification (CCSDS 911.2-B-3, 2016.8 )
  - ISO 26143:2013: Space Link Extension – Forward CLTU Service Specification (CCSDS 912.1-B-4)
  - ISO 22671:2011: Space Link Extension – Forward CLTU Service Specification (CCSDS 912.3-B-4, 2016.8)
  - ISO 22672:2011: Space Link Extension – Forward Space Packet Service Specification Specification (CCSDS 912.3-B-3, 2016.8)
  - ISO 18441:2016: Space Link Extension – Application Program Interface for Transfer Services – Core Specification (CCSDS 914.0-M-2 Cor.1 , 2016.8 ) , last version 2015.9
  - ISO 13541:2010: Attitude Data Messages, (CCSDS 504.0-B-1 Cor.1, 2015.7)

## CIB (Committee Internal Ballot)

- N 1615. This CIB is for approval to proceed with Withdrawal Consultations for CCSDS documents that were recently retired. (1-month).

### Spacecraft Onboard Interface Services

- ISO 20211:2015: Device Access Service(CCSDS 871.0-M-1)
  - ISO 20216:2015: Device Data Pooling Service (CCSDS 871.1-M-1)
  - ISO 20107:2015: Device Virtualization Service (CCSDS 871.2-M-1)
  - ISO 20618:2015: Device Enumeration Service (CCSDS 871.3-M-1)
  - ISO 17214:2011: Time Access Service (CCSDS 872.0-M-1)
  - ISO 20217:2015: File and Packet Store Services (CCSDS 873.0-M-1)
  - ISO 17213:2015: Message Transfer Service (CCSDS 875.0-M-1)
  - ISO 18439:2013: Space Communication Cross Support – Service Management – Service Specification(CCSDS 910.11-B-1)
- No. 1, 2, 3, 5, 6, 7 China Academy of Space Technology (CASI) had used these 6 standards in flight software architecture and completed verifications on prototypes. CASI is planning to use these standards on future Chinese spacecrafts, so we recommend to keep these standards.

## **CIB (Committee Internal Ballot)**

- **N 1616 , N 1617 ( 1-month CIB)**

Is approve for adoption under the Fast Track process. If this proposal is approved, the document will be submitted for an immediate DIS ballot.

- CCSDS 922.1-B-1: April 2017, Space Link Extension – Cross Support Transfer Service – Monitored Data Service,
- CCSDS 921.1-B-1: April 2017, Space Link Extension – Cross Support Transfer Service – Specification Framework

## **CIB (Committee Internal Ballot)**

- N 1618, N1619 (1-month CIB)

to confirm the responses of all members of the recently closed Systematic Review

- ISO 17107:2011 (Ed. 1) Space data and information transfer systems -- XML specification for navigation data messages
- ISO 15889:2011 (Ed. 3) Space data and information transfer systems -- The data description language EAST specification

## SC13 standardization in CHINA

- establish the **SC3(Space data and information transfer systems )** in **SAC/TC425**( National Technical Committee 425 on Space Technology and Operation of Standardization Administration of China)  
*(peer to ISO/TC20/SC13)*
- 10 National standards are listed in plan 2018 ( identify ISO standards)
  - Time code formats
  - AOS (advanced orbiting systems) space data link protocol
  - TC (telecommand) space data link protocol
  - TC (telecommand) synchronization and channel coding
  - TM (telemetry) space data link protocol
  - TM (telemetry) synchronization and channel coding
  - Communications operation procedure-1
  - Proximity-1 space link protocol -- Data link layer
  - Proximity-1 space link protocol -- Physical layer
  - Proximity-1 space link protocol -- Coding and synchronization sublayer

## **SC13 standardization in CHINA**

- Finished 8 aerospace industry standards in 2017
  - Terminology and abbreviations of space data system
  - Reference architecture for space data system
  - Space data system time code formats
  - TM space data link protocol
  - TC space data link protocol
  - AOS space data link protocol
  - Space data system file delivery protocol
  - Space data system space packet protocol