

# **FRENCH REPORT to ISO/TC20/SC13 submitted by CNES on behalf of AFNOR Saint Petersburg, Roscosmos, June 2017**

## **1 – MANAGEMENT:**

### 1-1 ORGANIZATION

The Director in charge of Standardization in CNES was head of “Programmes, International Affairs and Quality” Directorate. This might change in the upcoming months and Standardization could be moved under another Directorate responsibility..

### 1-2 AREA OF AGENCY INVOLVEMENT

Global, for category A missions.

### 1-3 MANPOWER ALLOTTED TO TC-20/SC-13

Tentatively maintained to 0.1 man x year on the SC-13 specifics.

In the order of 4 to 5 FTE in the CCSDS activities.

## **2 – IMPLEMENTATION ACTIVITIES**

### 2-1 SPACECRAFT UTILIZING SC13 STANDARDS FOR TLM / CMD

All CNES satellites make use of CCSDS / SC13 standards, at least partially.

The new satellite product lines, ISIS and Myriade Evolution, will be compliant with the Space Link and the Space Link Extension standards. All future CNES projects will be SLE compliant on the user side.

### 2-2 GROUND FACILITIES UTILIZING SC-13 STANDARDS

Implementation of CCSDS / SC13 standards (RF&Modulation, Packet TM&TC, OPM, SLE transfer services) is qualified in all CNES Ground Stations. The provider side is fully available from CNES Networks.

The generic ground segment which is part of both the ISIS and the Myriade Evolution product lines is progressing in development phases, confirming SLE and embarking on Mission Operations core standards. From its availability for future missions will comply to CCSDS / SC13 standards on the user side.

## **3 – DOCUMENTATION ACTIVITIES**

### 3-1 ADOPTION OF SC13 STANDARDS AT FRANCE NATIONAL LEVEL

Ballots completed since SC-13 (formal) meeting in Sao Jose dos Campos (Spring 2016):

<b>RÉFÉRENCE</b>	<b>TITLE</b>	<b>STATUS</b>	<b>RESPONSE DATE</b>	<b>FRANCE RESPONSE</b>	<b>CCSDS REFERENCE</b>
<b>ISO DIS 18440 (Ed.2)</b>	Space Link Extension -- Internet Protocol for Transfer Services	DIS	22/06/16	Approved	<b>CCSDS 913.1-B-2</b>
<b>ISO/DIS 18441 (Ed 2)</b>	Space data and information transfer systems -- Space link extension -- Application program interface for transfer services -- Core specification	DIS	22/06/16	Approved	<b>CCSDS 914.0-M-2</b>
<b>ISO/DIS 18442 (Ed 2)</b>	Space data and information transfer systems -- Space link extension -- Application program interface for return all frames service	DIS	22/06/16	Approved	<b>CCSDS 915.1-M-2</b>

RÉFÉRENCE	TITLE	STATUS	RESPONSE DATE	FRANCE RESPONSE	CCSDS REFERENCE
ISO/DIS 18443 Ed 2)	Space data and information transfer systems -- Space link extension -- Application program interface for return channel frames service	DIS	22/06/16	Approved	CCSDS 915.2-M-2
ISO/DIS 18444 Ed 2)	Space data and information transfer systems -- Space link extension -- Application program interface for return operational control fields service	DIS	22/06/16	Approved	CCSDS 915.5-M-2
ISO/DIS 18445 Ed 2)	Space data and information transfer systems -- Space link extension -- Application program interface for the forward CLTU service	DIS	22/06/16	Approved	CCSDS 916.1-M-2
ISO/DIS 18446 Ed 2)	Space data and information transfer systems -- Space link extension -- Application program interface for the forward space packet service	DIS	22/06/16	Approved	CCSDS 916.3-M-2
ISO/DIS 22645 Ed 2)	Space data and information transfer systems -- TM (telemetry) space data link protocol	DIS	22/06/16	Approved	CCSDS 132.0-B-2
ISO/DIS 22664 Ed 2)	Space data and information transfer systems -- TC (telecommand) space data link protocol	DIS	22/06/16	Approved	CCSDS 232.0-B-3
ISO/DIS 22666 Ed 2)	Space data and information transfer systems -- AOS (advanced orbiting systems) space data link protocol	DIS	22/06/16	Approved	CCSDS 732.0-B-3
ISO 15888	Space data and information transfer systems -- Standard formatted data units -- Referencing environment	Systematic Review	21/11/16	No resp.	CCSDS 622.0-B-1
ISO 11104	Space data and information transfer systems -- Time code formats	Systematic Review	03/03/17	Revision	CCSDS 301.0-B-3
ISO 15889	Space data and information transfer systems -- Data description language - EAST specification	Systematic Review	03/03/17	Confirmation	CCSDS 644.0-B-2
ISO 17107	Space data and information transfer systems -- XML specification for navigation data messages	Systematic Review	03/03/17	Confirmation	CCSDS 505.0-B-1
ISO 17214	Space data and information transfer systems -- Spacecraft onboard interface services -- Time access service	Systematic Review	03/03/17	Abstention	CCSDS 872.0-M-1
ISO 22671	Space data and information transfer systems -- Space link extension (SLE) -- Forward communications link transmission unit (CLTU) service	Systematic Review	03/03/17	Revision	CCSDS 912.1-B-3
ISO 22672	Space data and information transfer systems -- Space link extension (SLE) -- Forward space packet service specification	Systematic Review	03/03/17	Confirmation	CCSDS 912.3-B-1
ISO 16363	Space data and information transfer systems -- Audit and certification of trustworthy digital repositories	Systematic Review	31/05/2017	Confirmation	CCSDS 652 0-R-1

In progress : None.

### 3-2 TRANSLATIONS

None in the period

## **4 – MISCELLANEOUS**

### 4-1 Documents

No report.

### 4-2 Liaisons

No report.

### 4-3 Other

France expresses his warmest thanks to NASA for hosting and supporting the Spring 2017 Working Groups meetings in San Antonio.

France expresses his warmest thanks to ROSCOSMOS for hosting and supporting the Spring 2017 Management / ISO-TC20-SC13 meetings.

Respectfully submitted: **Jean-Marc Soula, CNES, French Representative to ISO-TC20-SC13 on behalf of AFNOR - BNAE.**