11 May 2022
14:00UTC

Agenda

Time (UTC)	Duration	Topic	Presenter
14:00	5 minutes	Welcome	Sami Asmar – CCSDS General Secretary
14:05	10 minutes	Introduction	Klaus-Juergen Schulz – CESG Chair
14:15	10 minutes	Role of the CESG	Peter Shames – SEA Area Director
14:25	10 minutes	MOIMS Workplan	Mario Merri – MOIMS Area Director
14:35	10 minutes	SIS Workplan	Tomaso de Cola – SIS Area Director
14:45	10 minutes	SLS Workplan	Ignacio Aguilar – SLS Area Director
14:55	10 minutes	SOIS Workplan	Jonathan Wilmot – SOIS Area Director
15:05	10 minutes	CSS Workplan	Erik Barkley – CSS Area Director
15:15	10 minutes	SEA Workplan	Peter Shames – SEA Area Director
15:25	5 minutes	Fall 2022 Meetings	Michael Blackwood - Secretariat
15:30		Adjournment	Klaus-Juergen Schulz – CESG Chair

Members of the CESG
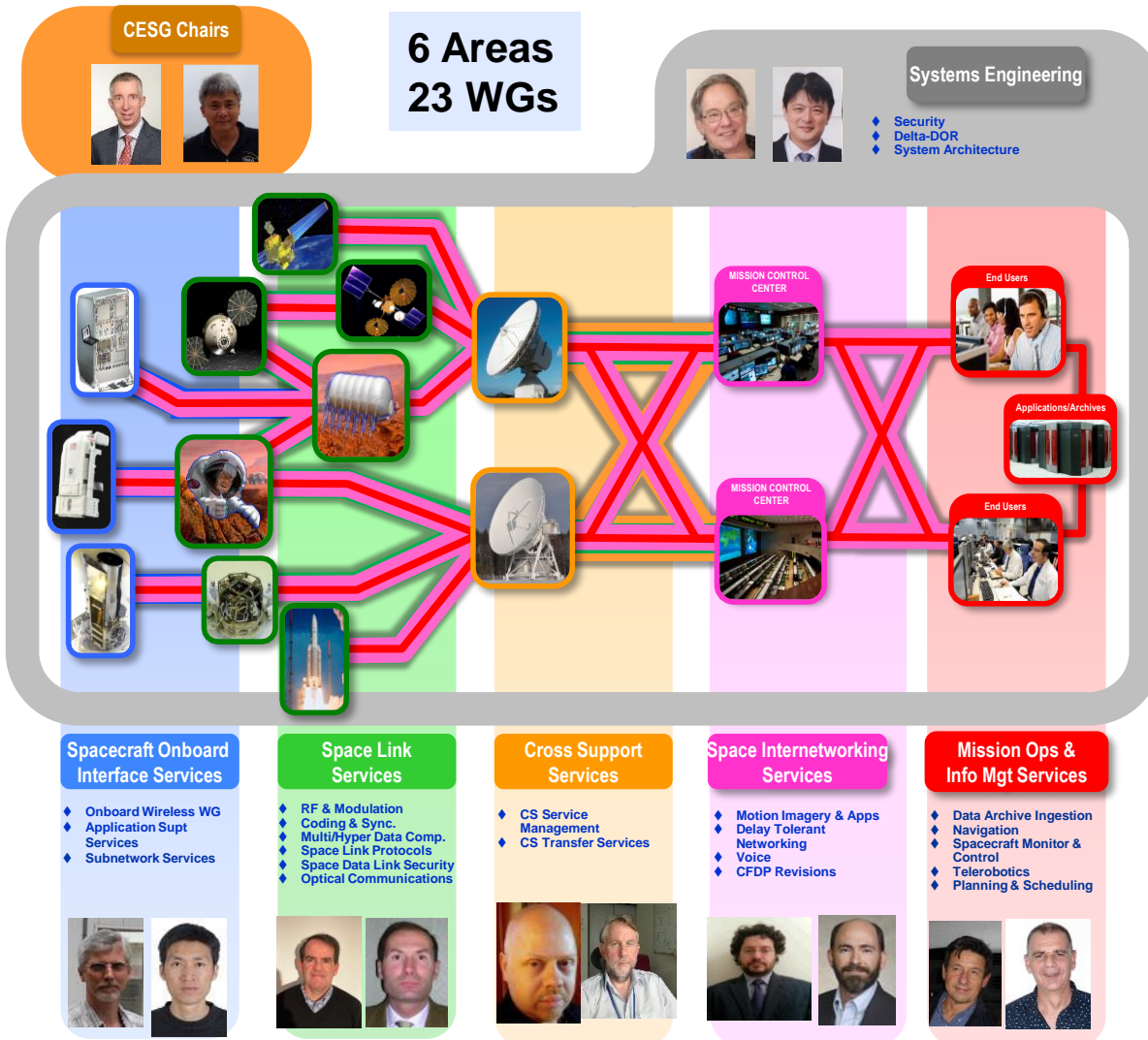
CESG Chair	*K.-J. Schulz*
Deputy	*Timothy Pham*
SE Area Director	**Peter Shames**
Deputy	*Hiroshi Takeuchi*
MOIMS Area Director	**Mario Merri**
Deputy	*Marc Duhaze*
CSS Area Director	**Erik Barkley**
Deputy	*Colin Haddow (retires)*
SLS Area Director	**Ignacio Aguilar Sanchez**
Deputy	*Gilles Moury*
SIS Area Director	**Tomaso de Cola**
Deputy	*Rodney Grubbs*
SOIS Area Director	**J. Wilmot**
Deputy	*X. He*

CCSDS Publications since CMC Mtg Fall 2021

Blue Books – Recommended Standards

- **CCSDS 732.1-B-2, Unified Space Data Link Protocol, October 2021**
- **CCSDS 732.0-B-4, AOS Space Data Link Protocol, October 2021**
- **CCSDS 232.0-B-4, TC Space Data Link Protocol, October 2021**
- **CCSDS 132.0-B-3, TM Space Data Link Protocol, October 2021**
- **CCSDS 508.1-B-1 Cor. 1, Technical Corrigendum 1 to CCSDS 508.1-B-1, (Issued November 2019), October 2021**
- **CCSDS 508.0-B-1 Cor. 2, Technical Corrigendum 2 to CCSDS 508.0-B-1, (Issued June 2013), October 2021**
- **CCSDS 503.0-B-2 Cor. 1, Technical Corrigendum 1 to CCSDS 503.0-B-2 (Issued June 2020), October 2021**
- **CCSDS 401.0-B-32   Radio Frequency and Modulation Systems—Part 1: Earth Stations and Spacecraft, October 2021**
- **CCSDS 927.1-B-1, Terrestrial Generic File Transfer, November 2021**
- **CCSDS 902.1-B-1 Cor. 1, Technical Corrigendum 1 to CCSDS 902.1-B-1 (Issued May 2018), December 2021**
- **CCSDS 414.1-B-3, Pseudo-Noise (PN) Ranging Systems, January 2022**
- **CCSDS 883.0-B-1, Spacecraft Onboard Interface Services-High Data Rate Wireless Proximity Network Communications, February 2022**
- **CCSDS 902.2-B-1, Cross Support Service—Management Communications Planning Information Format, March 2022**
- **CCSDS 131.3-B-2, CCSDS Space Link Protocols over ETSI DVB-S2 Standard, April 2022**
- **CCSDS 131.0-B-4, TM Synchronization and Channel Coding, April 2022**

Magenta Books – Recommended Practices

- **CCSDS 141.1-M-1, Atmospheric Characterization and Forecasting for Optical Link Operations, January 2022**

Orange Books

- **CCSDS 811.1-O-1, CAST Flight Software as a CCSDS Onboard Reference Architecture, November 2021**

Green Books – Informational Reports

- **CCSDS 230.1-G-3, TC Synchronization and Channel Coding—Summary of Concept and Rationale, October 2021**
- **CCSDS 120.0-G-4, Lossless Data Compression, November 2021**
- **CCSDS 120.1-G-3, Image Data Compression, November 2021**
- **CCSDS 413.1-G-2, Simultaneous Transmission of GMSK Telemetry and PN Ranging, November 2021**
- **CCSDS 350.1-G-3, Security Threats against Space Missions, February 2022**

Yellow Books

- **CCSDS 870.10-Y-1, MO Services and SOIS Electronic Datasheets, December 2021**

Authorisation to publish

- **No open polls**

Agency Reviews

- **CCSDS 922.1-P-1.1, Cross Support Transfer Services—Monitored Data Service**
- **CCSDS 922.2-P-1.1, Cross Support Transfer Service—Tracking Data Service**

Approval of new Projects

New Projects of the CSS Area

- **Cross Support Service Management Working Group Project - Magenta Book**
- **Cross Support Transfer Services Working Group Project - Update Blue Book**

New Projects of the SLS Area

- **Charter Modifications to the 5.01 RF and Modulation Working Group**

New Appointments

- **No new appointments since Fall 2021**

CESG Topics since Fall 2021

1. Security in cooperative missions

- **ESA will approach IOAG for the creation of a "Cooperative Security Working Group" involving the agencies security offices (ESA: ESO; NASA:CIO; ASI, CNES, UKSA, JAXA, ISRO …), will be discussed at IOAG #25 23-25 May 2022**
- **CCSDS to standardise the technical security protocols and the associated management protocols**

2. Systems Management & Configuration

- **Functional Resource Model (FRM): Formal names, data types, value ranges**
- **Electronic Data Sheets (EDS): Inclusion of FRM definitions for specification of onboard subsystems including their verification (derivation of test tools)**
  - **Mini-Demonstration: Bundle Node Agent definition using FRM and EDS to derive a more formal definition ready for implementation, testing and ensuring interoperability**

- **Not yet concluded: How will BP nodes be configured in cooperative mission scenarios, including the security aspect -> fast track to interoperation of few bundle nodes for first cooperative missions (Gateway, LunaNet, Moonlight)**
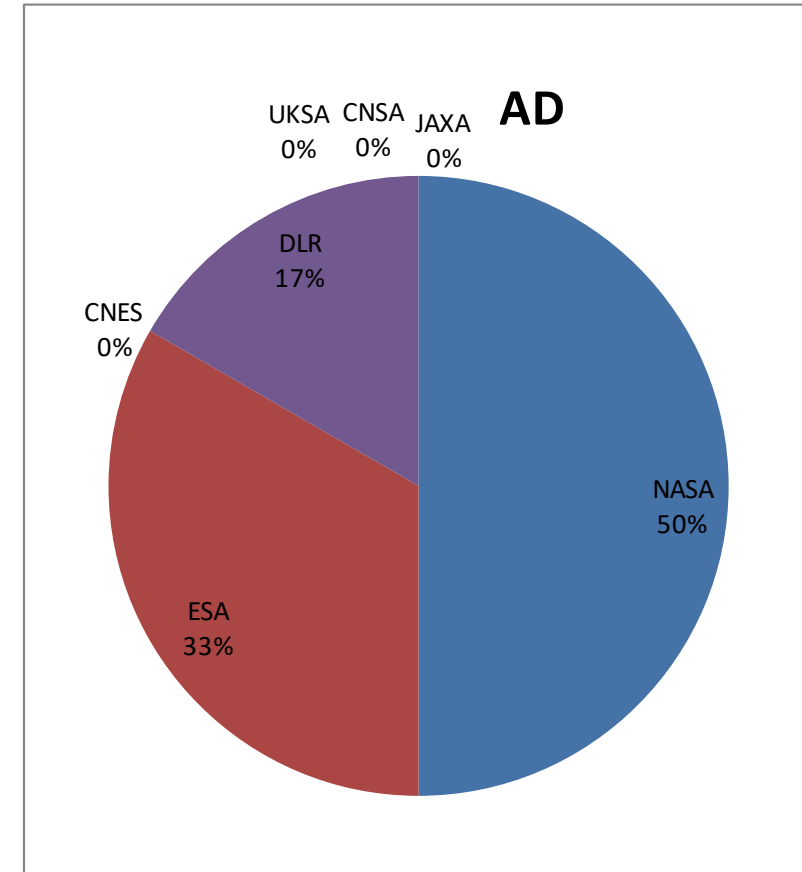
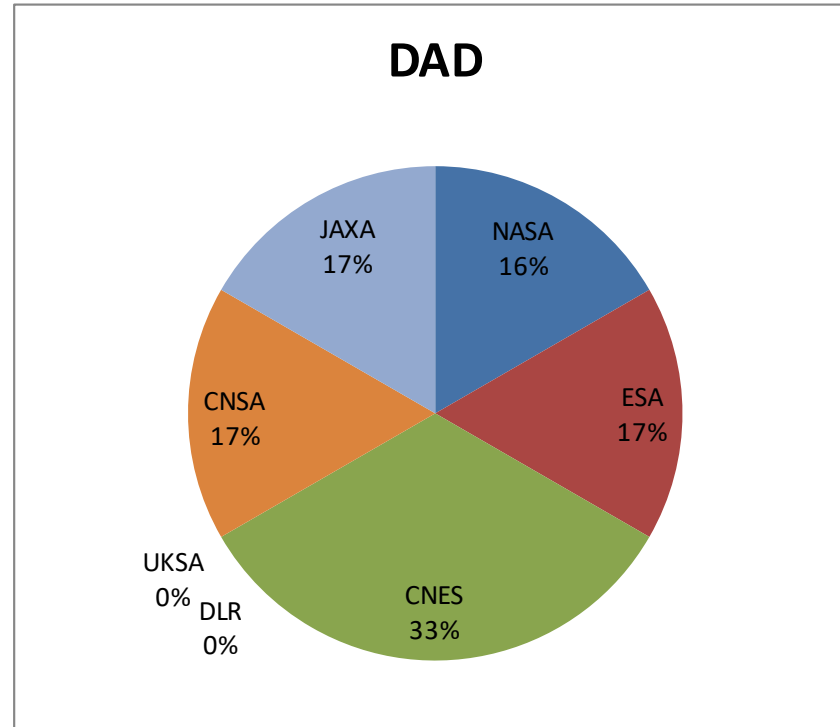## 3. Data Delivery via commercial Clouds

- **Presentation to IOAG by CSS AD (Erik Barkley) on adaptation of SLE protocol for Clouds**

CCSDS Resources

Area	WG	C	Co	NASA BB	NASA P1	NASA P2	NASA GB	NASA MB	NASA YB	ESA BB	ESA P1	ESA P2	ESA GB	ESA MB	CNES BB	CNES P1	CNES P2	CNES GB	CNES MB	DLR BB	DLR P1	DLR P2	DLR GB	DLR MB	OTHER BB	OTHER P1	OTHER P2	OTHER GB	OTHER MB	OTHER OB	Notes
SEA	SA	NASA						2																							
SEA	Security	NASA	ESA		1		1	1					1	2		1															
SEA	Time	NASA	ESA				1																								
SEA	D-DOR	ESA	NASA			1		2		1	1																					P3=JAXA
MOIMS	DAI	UKSA	NASA					2											1											2		MBs=UKSA
MOIMS	NAV	NASA	ESA	3	3	1	1				1	4			2	2									1						BB=UKSA
MOIMS	SM&C	ESA	NASA				1			2	2		1			1						1		1								
MOIMS	MP&S	ESA	CNES							1	1											1										
CSS	SM	NASA	ESA	1						1	1	1									1	1										
CSS	CSTS	ESA		1				1		5													1							1	OB=ESA
SOIS	APP	NASA	UKSA																										1	1	2	MB=AFRL (USA), OBs=NASA / CNSA, GB=UKSA
SOIS	WIR	NASA	FSA	1	1																1					1	1			1	OB=NASA, P2=CSA (1) and JAXA (1)
SOIS	SNW	NASA	ESA					5																								
SLS	RFM	ESA	NASA			1				1	1																					
SLS	C&S	ESA	NASA	2	2					1	1	3																				
SLS	MHDC	NASA	ESA			1	1			2	2		1			1																P3=CNES
SLS	SLP	NASA	UKSA				3	1																								
SLS	SDLS	CNES	NASA				1								1		1															
SLS	OPT	NASA	ESA	1								2	1								2				1					1	BB=NASA/DLR, OB=NASA
SIS	MIA	NASA	DLR	1		1														1											
SIS	DTN	NASA	JAXA	4	2	1	2					1									1					1					P1=JAXA
SIS	VOICE	DLR	FSA																													
SIS	CFDP	ESA	UKSA																														
				14	9	6	11	14	0	14	10	11	5	2	3	2	3	0	1	0	5	4	1	1	2	2	1	1	3	5	**130**

NASA	ESA	CNES	DLR	OTHER
54	42	9	11	14
% 41.54	32.31	6.92	8.46	10.77

CNES, CNSA, UKSA, AFRL, FSA, Japan, JAXA, NASA

130

	AD	DAD
NASA	3	1
ESA	2	1
CNES		2
DLR	1	
UKSA		
CNSA		1
JAXA		1
Total	6	6

DAD

- JAXA 17%
- NASA 16%
- ESA 17%
- CNES 33%
- DLR 0%
- UKSA 0%
- CNSA 17%

AD

- UKSA 0%
- CNSA 0%
- JAXA 0%
- DLR 17%
- CNES 0%
- NASA 50%
- ESA 33%

WG Chair / Deputy Chair Overview

Area	WG	C	Co
SEA	SA	NASA	0
SEA	Security	NASA	ESA
SEA	Time	NASA	ESA
SEA	D-DOR	ESA	NASA
MOIMS	DAI	UKSA	NASA
MOIMS	NAV	NASA	ESA
MOIMS	SM&C	ESA	NASA
MOIMS	MP&S	ESA	CNES
CSS	SM	NASA	ESA
CSS	CSTS	ESA	0
SOIS	APP	NASA	UKSA
SOIS	WIR	NASA	FSA
SOIS	SNW	NASA	ESA
SLS	RFM	ESA	NASA
SLS	C&S	ESA	NASA
SLS	MHDC	NASA	ESA
SLS	SLP	NASA	UKSA
SLS	SDLS	CNES	NASA
SLS	OPT	NASA	ESA
SIS	MIA	NASA	DLR
SIS	DTN	NASA	JAXA
SIS	VOICE	DLR	FSA
SIS	CFDP	ESA	UKSA

	WG Chair	WG Deputy Chair
NASA	13	6
ESA	7	7
CNES	1	1
DLR	1	1
UKSA	1	3
JAXA	0	1
FSA	0	2
Total	23	21

WG Chair

WG Chair pie chart: NASA 57%, ESA 31%, CNES 4%, DLR 4%, UKSA 4%, JAXA 0%, FSA 0%

WG Deputy Chair

WG Deputy Chair pie chart: NASA 29%, ESA 33%, CNES 5%, DLR 5%, UKSA 14%, JAXA 5%, FSA 9%
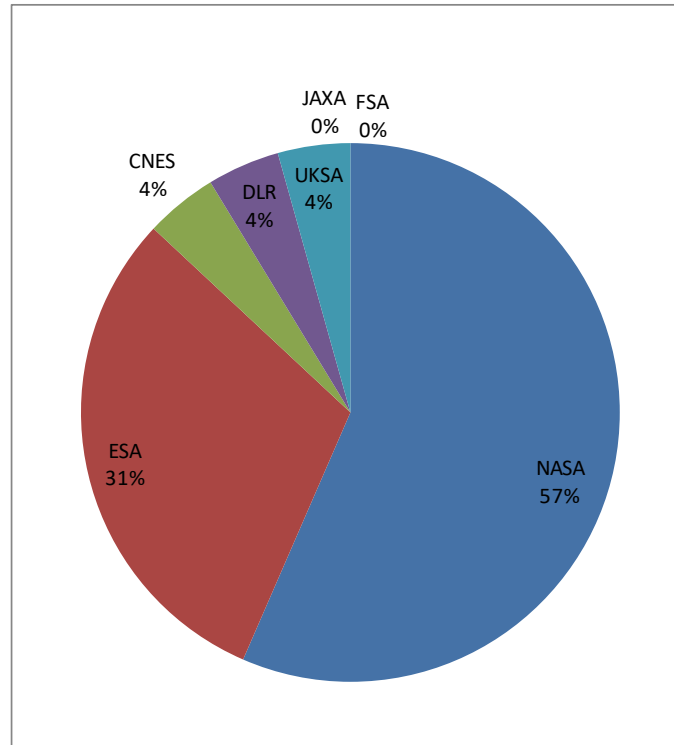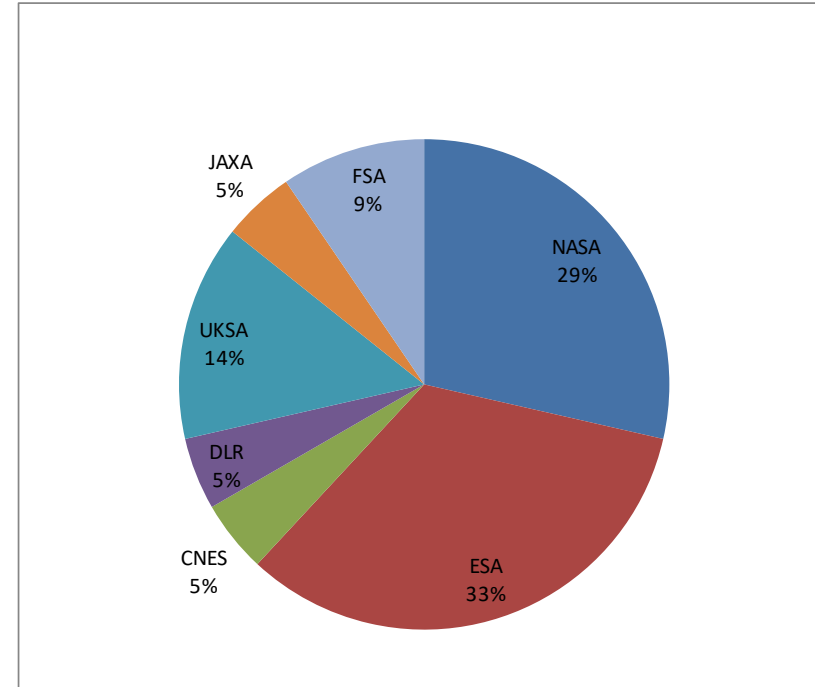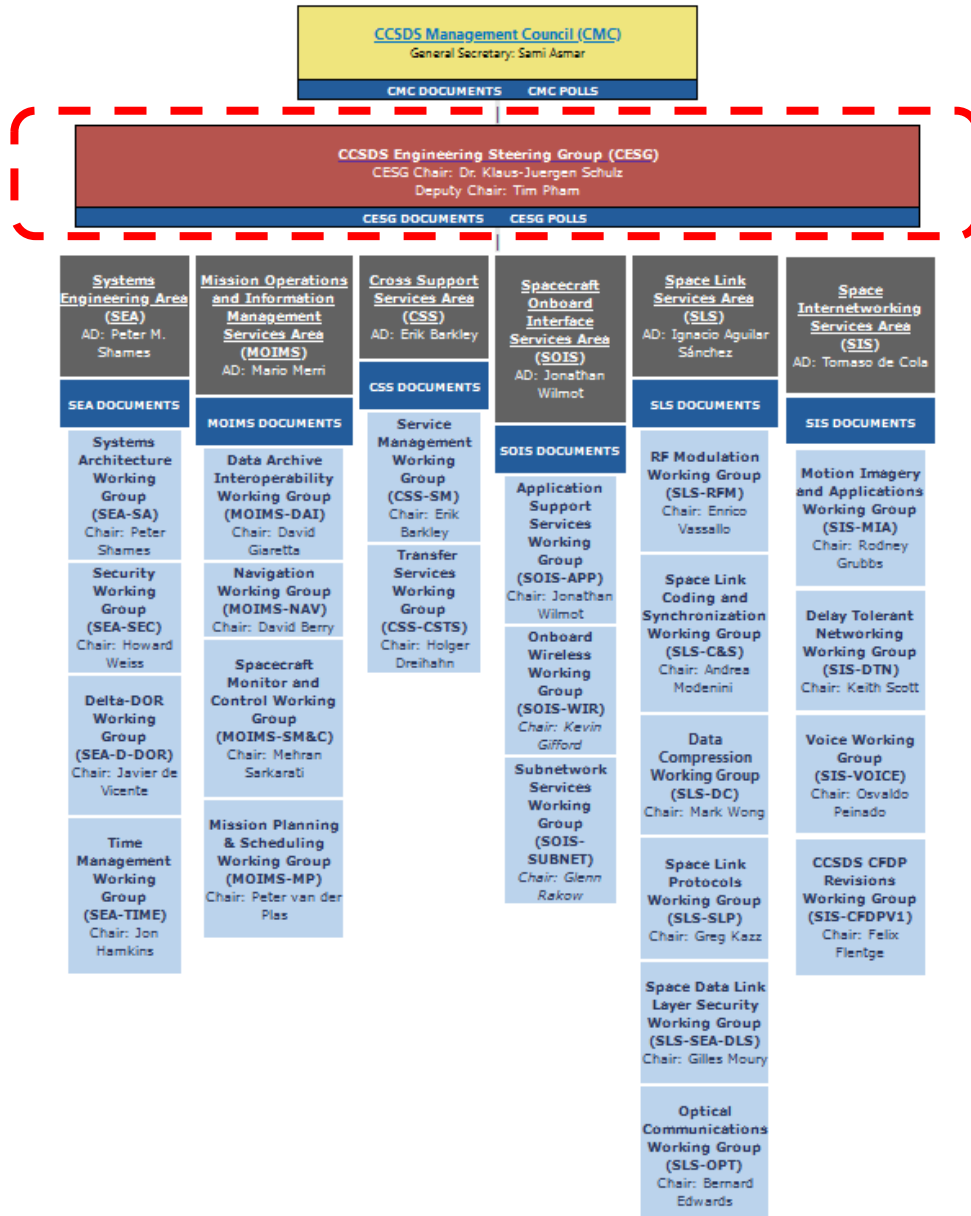
CCSDS Technical Organization

CCSDS Engineering Steering Group
- CESG Chair and Deputy
- 6 Area Directors & Deputies
- Review and approve documents for technical content (and other criteria)

CCSDS Working Organization
- 6 areas of work
- Total of 23 Working Groups (Spring 2022)
- Create projects & produce documents

But … just what does the CESG do?

- **"The CCSDS Engineering Steering Group (CESG) is responsible for technical management across CCSDS domains and for the top-level coordination of the overall international standardization process."**

  - **"A candidate for selection as CESG chair, Area Director, or their deputies must have demonstrated the ability to function independently of his/her own agency's agenda and to be able to fairly lead the development of international consensus. "**

- **"Providing the CCSDS-wide forum where the work programs of the Areas may be coordinated and synchronized in the context of an overall architecture for space- mission cross support and the needs of individual customers"**

- "Ensuring that all CCSDS work follows the set of architectural principles agreed to by the CESG and is properly synchronized with work in other areas and with the smooth evolution of the large installed base of CCSDS-compatible mission-support infrastructure"

- "Identifying "red flag" items where technical work in a proposed CCSDS document is not of the required quality or nature … or where significant issues exist"

- Final technical approval before release for agency review or publication

CCSDS/MOIMS Document Status (Nov21-Apr22)-1

- ## Data Archive Interoperability WG (DAI)
  - **MB:** 650.0 Open Archival Information System (OAIS): 5y revision — Completed AR. Unclear CCSDS-ISO relation
  - **MB:** 652.0 Audit and Certification of Trustworthy Digital Repositories: 5y revision — Completed AR. Unclear CCSDS-ISO relation
  - **MB:** 653.0 Information Preparation to Enable Long Term Use (IPELTU) — Completed AR. Unclear CCSDS-ISO relation
  - **MB:** 652.1 Requirements for Bodies Providing Audit and Certification of Trustworthy Digital Repository: 5y revision — Under CESG poll for AR: resolving conditions
  - **MB:** 671.0 Open Archive Information Systems Interoperability Framework (OAIS-IF) Architecture Description — On-going

- ## Navigation WG (NAV)
  - **GB:** 500.2 Navigation Data Messages Overview: refresh — New project approved, but not yet started
  - **BB:** 502.0 Orbit Data Message (ODM - NASA, ESA): 5y revision — Completed AR (14Dec), disposing RIDs and prototype
  - **BB:** 503.0 Tracking Data Message (TDM - NASA, ESA): 5y revision — Lower priority because of workload
  - **BB:** 504.0 Attitude Data Message (ADM - CNES, ESA): 5y revision — Waiting polls for AR
  - **BB:** 505.0 Navigation Data Message XML Specs (NDM - no prototype): 5y revision — Drafting
  - **BB:** 507.0 Navigation Events Message (NEM – CNES, ESA) — Lower priority because of workload
  - **BB:** 508.0 Conjunction Data Message (CDM): 5y revision — Drafting
  - **BB:** 509.0 Pointing Request Message (PRM) — New corrigendum in work

- **Spacecraft Monitor & Control WG (SM&C)**
  - **BB:** 521.0 Mission Operations - Message Abstraction Layer (MAL) (ESA, CNES) — **Basis for MO 2.0. Close to polls for AR**
  - **GB:** 520.0 MO Services Concept (ESA): 5y revision — **Slowed down to reflect MO 2.0**
  - **MB:** 520.1 Mission Operations Reference Model (DLR): 5y revision — **Disposing CESB poll conditions for AR with the support of the Security WG + MO 2.0**
  - **BB:** 522.2 Mission Product Data Distribution Services (ESA, CNES) — **Slowed down to reflect MO 2.0**
  - **BB:** 522.x File Management Services (ESA, ?) — **Slowed down to reflect MO 2.0**

- **Mission Planning & Scheduling WG (MP&S)**
  - **BB:** 529.1 Mission Planning and Scheduling (ESA, DLR) — **Close to polls for AR**

- **Motion Imagery and Applications WG**
  - **May 25th-26th**
    - Review Yellow Book related to the RTP Video over DTN Blue Book
    - Draft Resolution to Publish RTP Video over DTN Blue Book
    - Reach consensus on new project related to Quality Standards for Video
    - Draft Schedule and Project Plan for Quality Standards for Video Project

- **CFDP Revisions WG**
  - **Not meeting**

- **VOICE WG**
  - **Not meeting**

- **Delay Tolerant Networking WG**
  - **BPv7:**
    - Identification and prioritisation of the outstanding issues which will be addressed in the initial BPv7 specification fed into the BP Red Book.
    - Real-time document editing: crafting text to address outstanding issues (see above).
    - Target a resolution to AD to submit the document for editorial review and CESG polling for distribution as a Red Book soon after the Spring meetings.
  - **LTP:**
    - Consolidation of the LTP specification in terms of requirements
    - Presentation of ongoing work about LTP from agencies

  - **BPsec:**
    - Discussion with SEA Security WG on resolving some text / formatting for the document.
    - Discussion about the information to be included in the Green Book.
    - Target a resolution to AD to submit document for editorial review and CESG polling for distribution as a Red Book soon after the Spring meetings.

SLS Meeting Objectives: 1/2

- **RF & Modulation WG (D. Lee)**
  - **211.1-B Proximity-1 Physical Layer:**
    - Concept Paper Concerning Lunar S-band Proximity links   Discussion
  - **401.1-B RF & Modulation:**   Discussion
    - High Rate Doppler Effect on GMSK Receiver   Discussion
    - Filtering for SP-L/M   Discussion
    - Modulations for 22 GHz space-to-space links   Discussion
    - Modulations for 27 GHz space-to-space links   Joint RFM/C&S/SLP meeting
  - **Open ISL + Lunar S-band Prox Link**   Review in light of new requirements (lunar missions, RA
  - **RFM Charter and projects**   protection, Proximity-1 PL changes)

- **Space Link Code/Sync WG (A. Modenini & K. Andrews)**
  - **Link Framing/Coding:**   Joint SLP/OPT/C&S Meeting
    - Generic Frame Procedure, Frame Length Extension, Slicing
    - Variable Length Frame protocol concept
  - **732.0-B AOS SDL Protocol**
    - Draft specification AOS FECF   Review
  - **CCSDS 131.0-B TM C&S**
    - 17-cell randomizer (draft Yellow Book)   Review (joint SLP/C&S)
  - **CCSDS 130.11G and CCSDS 130.12G**
    - Replacing CADU with SMTF   Review

- **Space Link Protocols WG (G. Kazz & M. Cosby)**
  - **732.1-B USLP:**
    - 3 technical corrigenda for Annex C (Prox-1 frame to USLP mapping)   Achieve consensus on updates
  - **211.0-B-6 Prox-1 Space Data ink Protocol**
    - NASA/JPL proposal for Lunar S-band Prox Links   Understand change proposals
  - **130.0-G Overview of Space Communication Protocols**   Discussion on updates
  - **130.3-G Space Packet Protocols (GB)**   Discussion on updates

- **Space Data Link Security (SDLS) WG (G. Moury & H. Weiss)**   Review draft and finalization of the document
  - **350.11-G SDLS Extended Procedures**   Revision of the document
  - **355.0-B-2 SDLS Core Protocol**   Revision of the document
  - **350.5-G-2 SDLS Core Protocol**

- **Data Compression (DC) WG (M. Wong & L. Santos)**
  - **Not meeting**

- **Optical Communications WG (B. Edwards & C. Heese)**
  - **Generic Frame Procedure**   As part of Joint SLP/C&S/OPT meeting
  - **CCSDS 142.0-B-1 Optical Communications C&S for O3K**
    - Pink Sheet updates   Review

SOIS Meeting Workplan 1/1

- **4.01 SOIS Subnet WG (Chair: Glenn Rakow)**
  - **Complete WG review of Subnetwork Packet Service (851.0)**
  - **Complete WG review of Subnetwork Memory Access Service (852.0)**
  - **Work Subnetwork Synchronization Service (853.0)**
  - **Work Subnetwork Discovery Service (854)**
  - **Update schedules in CWE to reflect staffing profile**

  - **851.0 in final WG review**

  - **852.0 in final WG review**
  - **853.0 Major rework to reflect mission use cases and relationship to Time-Sensitive Networking (TSN) IEEE 802.1**
  - **854.0 Develop mission use cases (crewed or servicing mission**

- **4.02 SOIS App WG (Chair: Jonathan Wilmot)**
  - **Finalize EDS (876.0) BB pink sheets and EDS GB (870.0) with Artemis and ESA SEDS study feedback**

  - **Update schedules in CWE to reflect staffing profile**
    - Welcome new WG member from GSFC
  - **Final disposition of 16 SOIS open issues on Github**
  - **CESG Action item FRM and SEDS formalizations of CCSDS protocol standards**

  - **Discuss how to deal with expected updates/extensions**
  - **Discuss future work for common mission software services**

  - **Ongoing series of meeting with Artemis engineers and ESA study team. Valuable feedback to ensure SOIS standards address mission needs**
  - **Discuss staffing availability**

  - **Series of meetings and emails discussing FRM, and SEDS applicability to MIB and operational interface definitions**

- **4.03 SOIS Wireless WG (Chair: Kevin Gifford)**
  - **Published CCSDS 883.0-B-1 (BBv1) (Feb 2022)**
  - **Continue 3GPP band survey for lunar surface spectrum trade study (via NASA 3GPP WG)**
    - **3GPP is working Non-Terrestrial Networks in releases 17 & 18**
  - **Finalize CCSDS-883-0-B-2 text for pink sheets (First set), finalize interop testing, submit for agency review (01-Jun-2022)**
  - **Discuss a second BB revision to include WPA3 results and 5G (Release-16 basis) CCSDS-883-0-B-3 (Second set of pink sheets)**
  - **Update the SOIS-WIR project activities on the CWE**
  - **Continue Stakeholder coordination (e.g., Nokia lunar LTE demonstration team, NASA spectrum)**

  - *Note: The Wireless WG thought it best to only maintain one BB (883.0) and have two sets of pink sheets to update and add information. This keeps all the information in one place, contextually consistent and addresses concerns from the SLS Area*

Cross Support Transfer Services WG

Monitored Data Service (BB-2)	Currently in agency review; process any early RIDs
Tracking Data Service (BB-2)	Currently in agency review; process any early RIDs
All SLE Books	Check revisions prior to submitting for agency review
Functional Resource Model (MB)	(Currently in polling for agency review)
Functional Resource Model (SANA+)	Review Tier 2 resource definitions

Cross Support Service Management WG

Service Management Concept (GB)	Survey for refresh
Communications Planning Information Format (BB)	(Published)
Terrestrial Generic File Transfer (BB)	(Published)
Service Management Utilization Request Format (BB)	Submit for agency review
Service Package Data Format (BB)	Submit for agency review
Event Sequence (BB)	Review draft material developed
Configuration Profile, Service Agreement (BB)	Review draft material developed and auto schema (from FRM) generation progress; discuss service agreement content

CSS (Area Level)

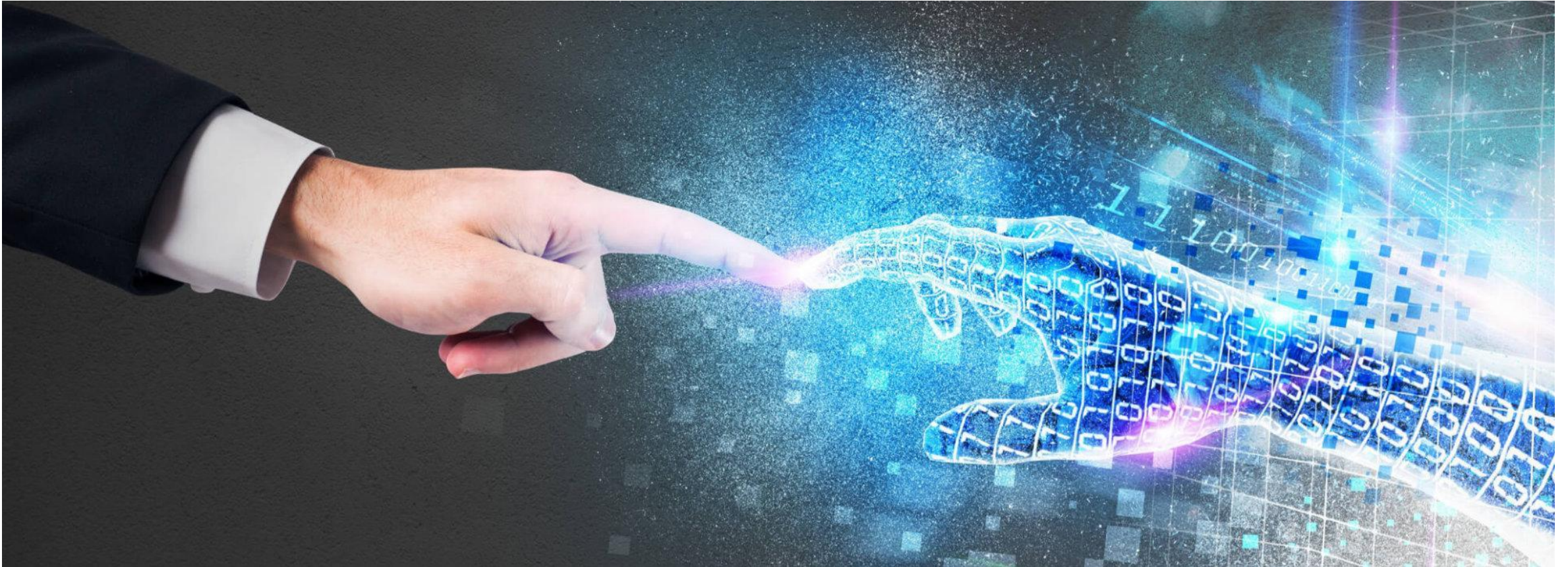|	
CSTS & CSSM	Discuss, coordinate: re o FRM classification metadata o FRM & use of Eclipse modeling framework (EMOF) o CSS Area standards & cloud computing/BOF formation o Use of GitHub

- **Security WG (Chair: Howie Weiss)**
  - Key Management (GB, MB)   MB sent to CESG for approval to publish, application being worked in SDLS, GB in work
  - Threat GB   GB published Feb 22
  - Algorithm GB Updates   GB In work
  - Intergovernmental Certificate Authority   MB In development
  - Bundle Protocol Security (BPSec)   Joint with DTN WG, agree to base on IETF
  - Security Glossary   MB being updated
  - *Standard security section*   *Mandatory*

- **Delta-DOR WG   (Chair: Javier de Vicente)**
  - Delta-DOR Architectural Guidelines (MB)   MB in process
  - Delta-DOR Raw Data Exchange update (BB)   BB in progress
  - Delta-DOR Operations update (MB)   MB in progress

- **System Architecture WG (Chair: Peter Shames)**
  - RASDS MB Extensions   Updates in development, joint with TC20 / SC 14
  - SCCS Architecture Reqmts MB   Updates for new standards, in development
  - CCSDS Ontology   Glossary issues noted, TC20/SC14 meetings held

- **Time Exchange / Sync Standards WG (Chair: Jon Hamkins)**
  - Time Management GB   GB in progress, expected soon
  - Time Management BB & MB   In planning, waiting on GB completion

- **SANA Steering Group (SSG) (Chair: Peter Shames)**
  - SANA Steering Group (SSG)   Active, meeting this month
  - CCSDS Registry interfaces   Working on improving access & controls for SANA Registries
  - *Standard SANA section*   *Mandatory*

- **Cross-area planning meeting (Chair: Peter Shames)**
  - SEA, DTN & Security: coordinate on approach for secure, multi-agency, DTN interoperability

CCSDS Fall 2022 Meeting – Location and Dates

TOULOUSE

Hosted by CNES at the
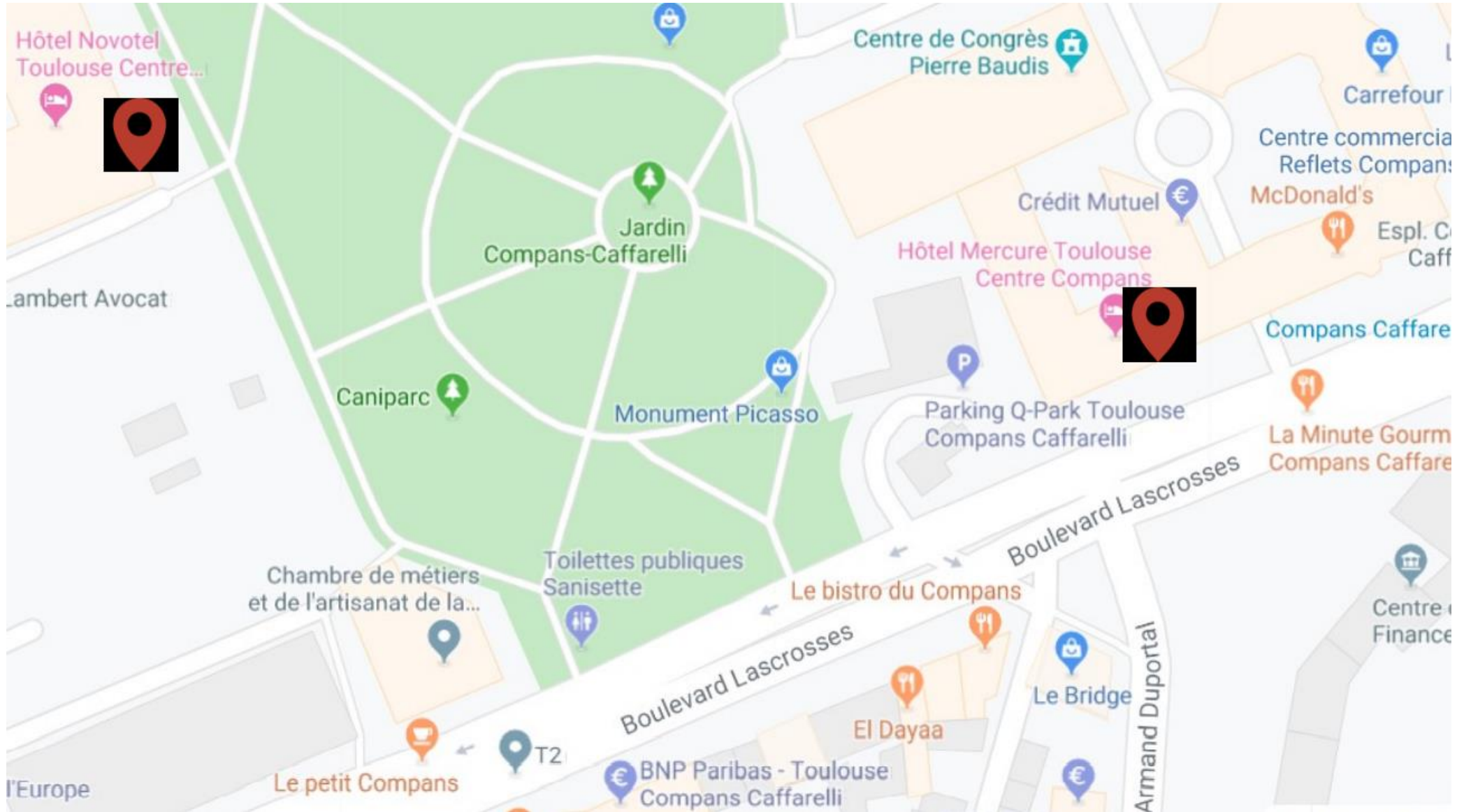
Mercure Hotel (+ extension at the nearby Novotel)

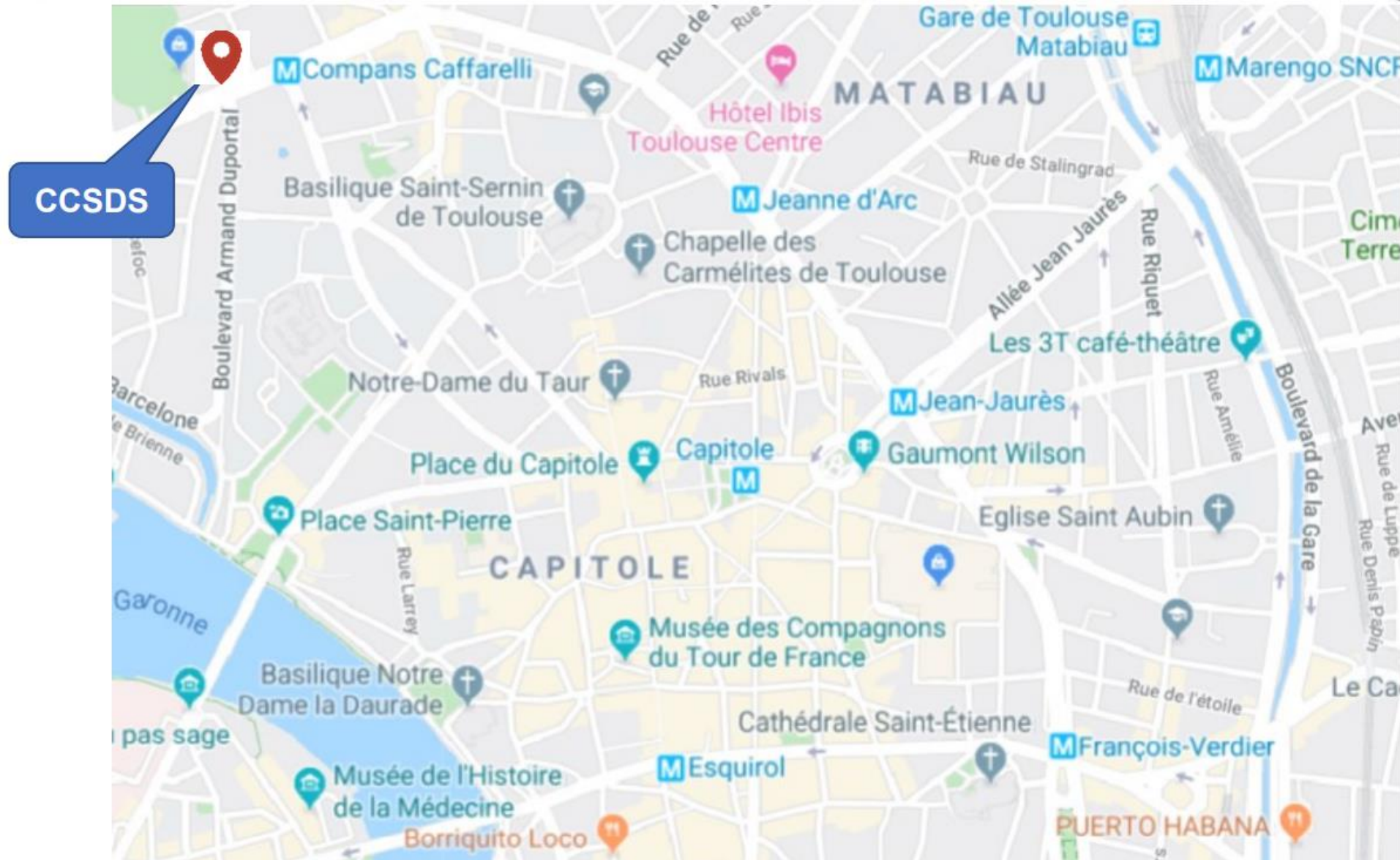**CCSDS Fall meetings** : October 17 to 21, 2022

CESG : October 24, 2022

CESG+CMC and CMC/ISO meetings : October 26 to 28, 2022

Address and hotel arrangements

Hôtel Mercure Toulouse Centre Compans

4 Stars Hôtel - 8 Espl. Compans Caffarelli, 31000 Toulouse

Novotel Toulouse Centre Compans Caffarelli

4 Stars Hôtel - 5 place Alfonse Jourdain, 31000 Toulouse

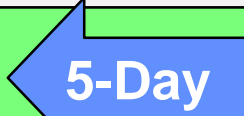### Rooms preferential rates (2022): To be confirmed

Week days - 110 € including breakfast

Friday ~ Sunday – 90 € including breakfast

Hotel reservation will open by the Spring meeting.

Public parking at # 13 € / day.

Future Meetings

Date	WG/CMC	Host	Location	Date	Comments
Fall 2022	WG/CESG	CNES	Toulouse, France	17-24 October 2022	5-Day
	CMC/SC13	CNES	Toulouse, France	26-28 October 2022	
Spring 2023	WG/CESG	NASA	Huntsville, Alabama, USA	Currently being finalized	5-Day
	CMC/SC13	JAXA	Tokyo, Japan	TBD Date	
Fall 2023	WG/CESG	ESA	TBD, hosted by ESTEC	TBD Date	
	CMC/SC13	ESA		TBD Date	
Spring 2024	WG/CESG	NASA	TBD	TBD Date	
	CMC/SC13	INPE	Sao Jose dos Campos, Brazil	TBD Date	
Fall 2024	WG/CESG	UKSA	TBD	TBD Date	
	CMC/SC13	UKSA	TBD	TBD Date	
Spring 2025	WG/CESG	NASA	TBD	TBD Date	
	CMC/SC13	ROSCOSMOS	TBD	TBD Date	

Working Group Agendas and Additional Resources

All information about the CCSDS Spring 2022 Meetings can be found on the CCSDS Public Website page: **https://public.ccsds.org/meetings/2022Spring/default.aspx**

Individual Working Group Agendas may be found on the CCSDS Public Website at: **https://public.ccsds.org/meetings/2022Spring/2022SpringAgendas.aspx**

A schedule of individual meeting sessions is available on the public website in two versions. As a List or a Table.

To find contact information for each Area Director and Working Group Chair and request a meeting invitation visit the CWE at: **https://cwe.ccsds.org/default.aspx**.

If you have any questions about the meetings or require any other assistance, please let us know at **secretariat@mailman.ccsds.org**.

The Secretariat wishes to thank CNES for providing the information about the fall 2022 CCSDS meetings, the CESG for presenting today, and all of the attendees. We look forward to seeing you all in person later this year.