

Toulouse, France

Hosted by CNES at the
Mercure Hotel

(with additional meeting rooms at the nearby Novotel)

- **CCSDS Technical Meetings: 18 to 22 October 2021**
 - **CESG: 25 October 2021**
- **CESG+CMC and CMC/ISO meetings: 26 to 28 October 2021**
- **Registration** will be required on the CCSDS web site. Participant badges will be available on site.
- **WiFi** is available in the hotel including meeting rooms.
- **Coffee Breaks** will be served in several areas between meeting rooms.
- **Lunches** will be served at the Mercure hotel: free of charge for registered participants with coupons distributed on registration day.
- **Cocktail Receptions** will be offered by CNES during both weeks: free of charge for registered participants with coupons distributed on registration day.



Upcoming Meetings – Fall 2021



Upcoming Meetings – Fall 2021

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

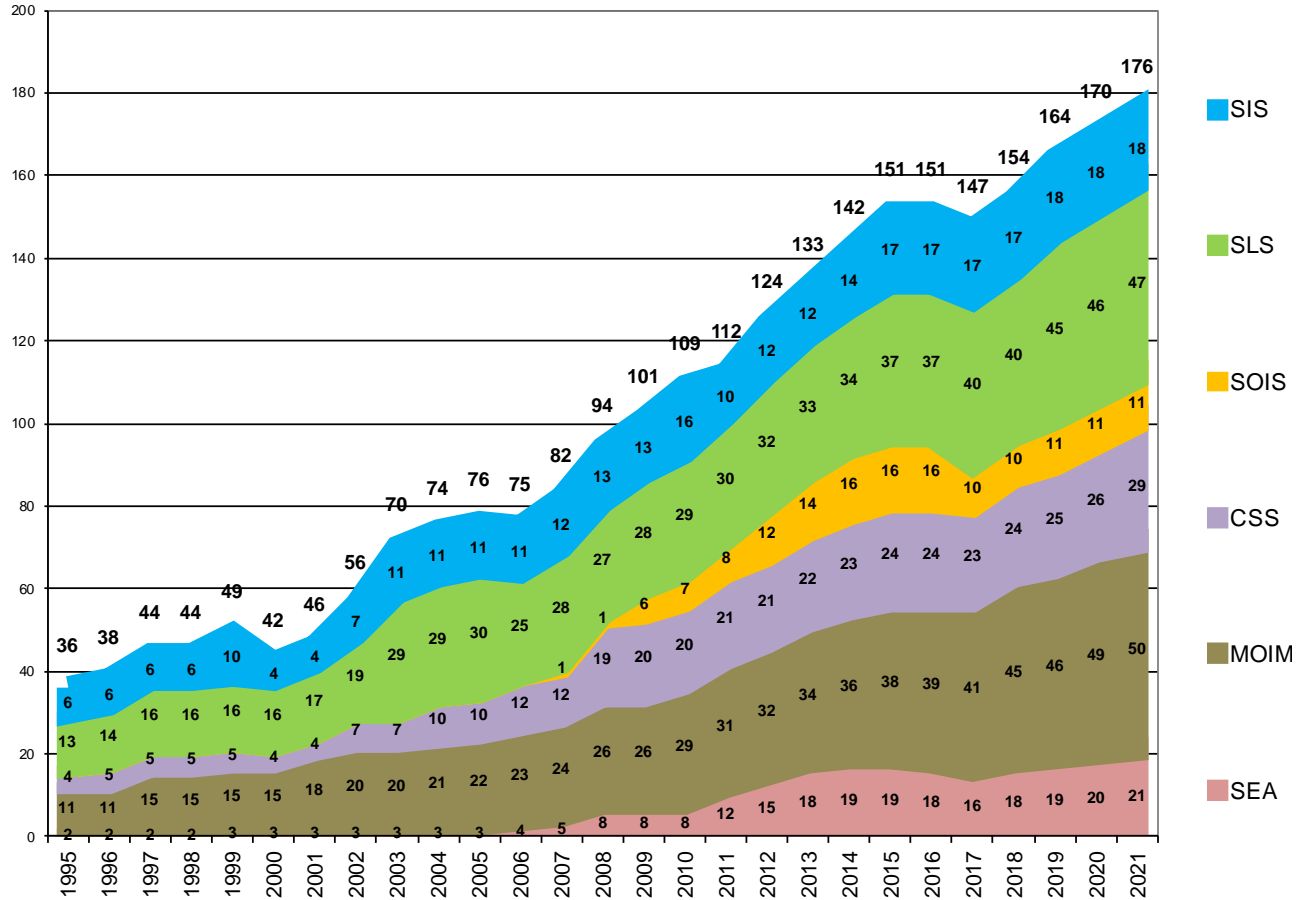
- **Novotel Toulouse Centre Compans Caffarelli**
- 4 Stars Hôtel - 5 place Alfonse Jourdain, 31000 Toulouse

- **Room rates (2020):**
- Week days 110 € including breakfast
- Friday ~ Sunday 90 € including breakfast
- Public parking 13 € / day.

Future Meetings

Date	WG/CMC	Host	Location	Date	Comments
Fall 2021	WG/CESG	CNES	Toulouse, France	18-25 October 2021	
	CMC/SC13	CNES	Toulouse, France	26-28 October 2021	
Spring 2022	WG/CESG	NASA	Huntsville, Alabama, USA	9-13 May 2022	
	CMC/SC13	JAXA	Tokyo, Japan	TBD Date	
Fall 2022	WG/CESG	ESA	TBD, hosted by ESTEC	TBD Date	
	CMC/SC13	ESA	TBD	TBD Date	
Spring 2023	WG/CESG	NASA	USA	TBD Date	
	CMC/SC13	INPE	Sao Jose dos Campos, Brazil	TBD Date	
Fall 2023	WG/CESG	UKSA	USA	TBD Date	
	CMC/SC13	UKSA	TBD	TBD Date	
Spring 2024	WG/CESG	NASA	TBD	TBD Date	
	CMC/SC13	ROSCOSMOS	TBD	TBD Date	
Fall 2024	WG/CESG	ESA	TBD	TBD Date	
	CMC/SC13	ESA	TBD	TBD Date	

Active Publications



Currently Active
Publications: **176**

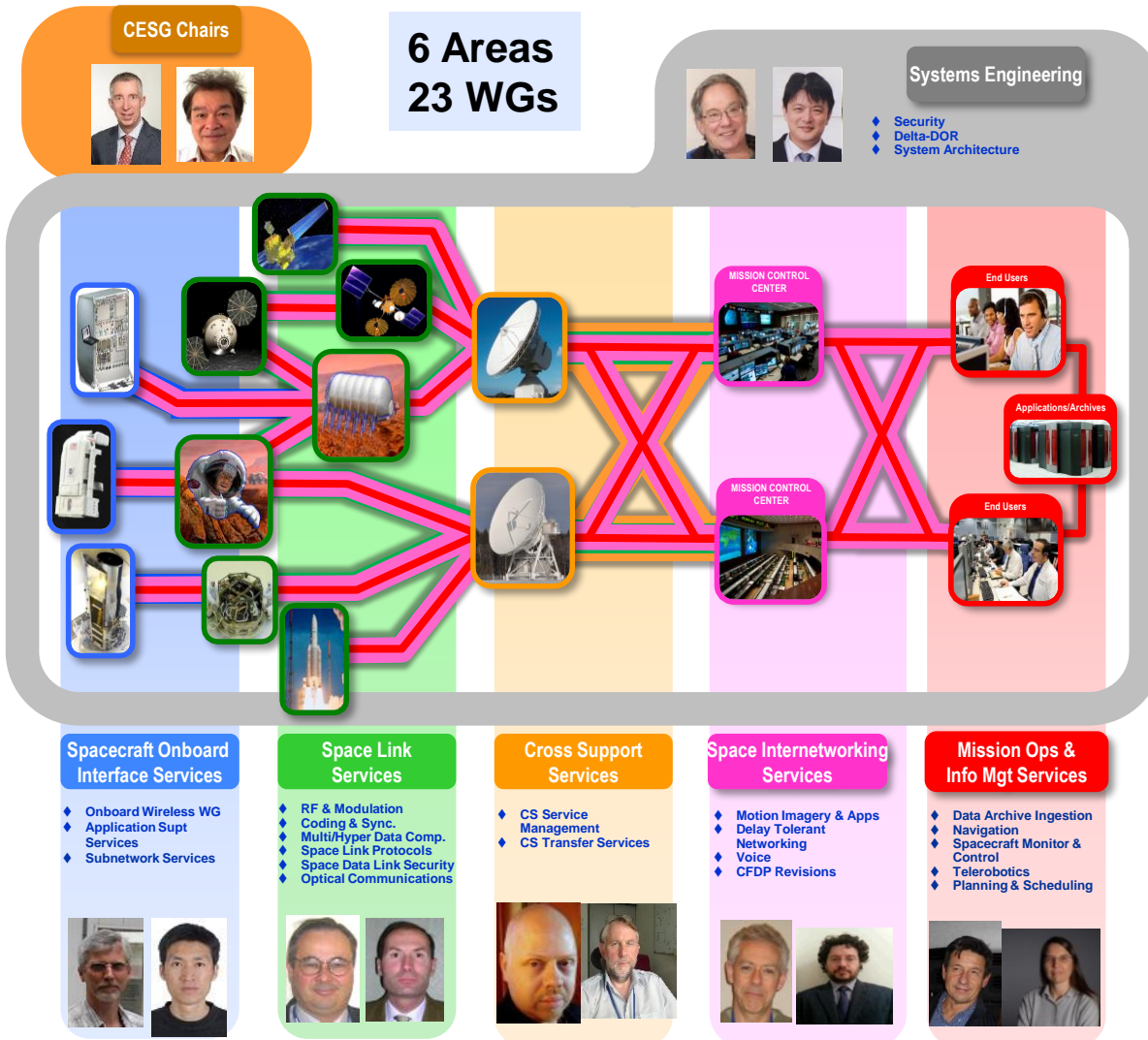
Normative (Blue & Magenta): **113**

Informative (Green): **63**

Downloadable for free from www.ccsds.org

All major pubs since 1982: **~392**
(Some were historical mission needs
or superseded technologies)

Members of the CESG



CESG Chair
Deputy

K.-J. Schulz
*Wallace Tai / **Nom.***

SE Area Director
Deputy

Peter Shames
Hiroshi Takeuchi

MOIMS Area Director
Deputy

Mario Merri
Marc Duhaze

CSS Area Director
Deputy

Erik Barkley
Colin Haddow

SLS Area Director
Deputy

G-P Calzolari / **Nom.**
Gilles Moury

SIS Area Director
Deputy

Scott Burleigh / **Nom.**
Tomaso de Cola

SOIS Area Director
Deputy

J. Wilmot
X. He

Blue Books – Recommended Standards

- **CCSDS 766.1-B-3, Digital Motion Imagery (Blue Book, Issue 3)**
- **CCSDS 922.3-B-1, Cross Support Transfer Service—Forward Frame Service (Blue Book, Issue 1)**
- **CCSDS 123.0-B-2 Cor. 3, Technical Corrigendum 3 to CCSDS 123.0-B-2, Issued February 2019**
- **CCSDS 401.0-B-31, Radio Frequency and Modulation Systems—Part 1: Earth Stations and Spacecraft (Blue Book, Issue 31)**
- **CCSDS 431.1-B-1, Variable Coded Modulation Protocol (Blue Book, Issue 1)**
- **CCSDS 921.1-B-2, Cross Support Transfer Service—Specification Framework (Blue Book, Issue 2)**

Magenta Books – Recommended Practices

- **CCSDS 902.12-M-1, Cross Support Service Management—Common Data Entities (Magenta Book, Issue 1)**
- **CCSDS 902.13-M-1, Abstract Event Definition (Magenta Book, Issue 1)**

Orange Books

- None

Green Books – Informational Reports

- **CCSDS 660.0-G-2, XML Telemetry and Command Exchange (XTCE) (Green Book, Issue 2)**

CMC Poll Statistics since CMC Mtg Fall 2020

Agency Review (split by B,M,G)

- **CCSDS 131.3-P-1.1, CCSDS Space Link Protocols over ETSI DVB-S2 Standard (Pink Sheets, Issue 1.1)**
- **CCSDS 132.0-P-2.1, TM Space Data Link Protocol (Pink Sheets, Issue 2.1)**
- **CCSDS 232.0-P-3.1, TC Space Data Link Protocol (Pink Sheets, Issue 3.1)**
- **CCSDS 732.0-P-3.1, AOS Space Data Link Protocol (Proposed Pink Sheets, Issue 3.1)**
- **CCSDS 732.1-P-1.1, Unified Space Data Link Protocol (Pink Sheets, Issue 1.1)**
- **CCSDS 883.0-R-1, Spacecraft Onboard Interface Services—High Data Rate Wireless Proximity Network Communications (Red Book, Issue 1)**
- **CCSDS 401.0-P-31.1, Radio Frequency and Modulation Systems—Part 1: Earth Stations and Spacecraft (Red/Pink Sheets, Issue 31.1)**

Approval of new Projects (1)

New Projects of the SEA Area

- Reference Architecture for Space Data Systems (RASDS), revision 2 - Magenta Book
- Space Communication Cross Support Architecture Requirements Document, version 2 - Magenta Book

New Projects of the CSS Area

- **SPACE LINK EXTENSION - Space Link Extension - Forward Space Packet Service Specification Issue 4 - Blue Book**
- **SPACE LINK EXTENSION— FORWARD CLTU SERVICE SPECIFICATION Issue 5 - Blue Book**
- **SPACE LINK EXTENSION—RETURN ALL FRAMES SERVICE SPECIFICATION Issue 5 - Blue Book**
- **SPACE LINK EXTENSION—RETURN CHANNEL FRAMES SERVICE SPECIFICATION Issue 4 - Blue Book**
- **SPACE LINK EXTENSION—RETURN OPERATIONAL CONTROL FIELDS SERVICE SPECIFICATION Issue 4 - Blue Book**

Approval of new Projects (2)

New Projects of the SLS Area

- TC Space Data Link protocol, Issue 4 - Blue Book
- Unified Space Data Link Protocol Blue Book Issue 2 - Blue Book
- USLP Green Book Version 2 - Green Book
- Image Data Compression - Issue 3 - Green Book

Other

- SEA Charter Modification

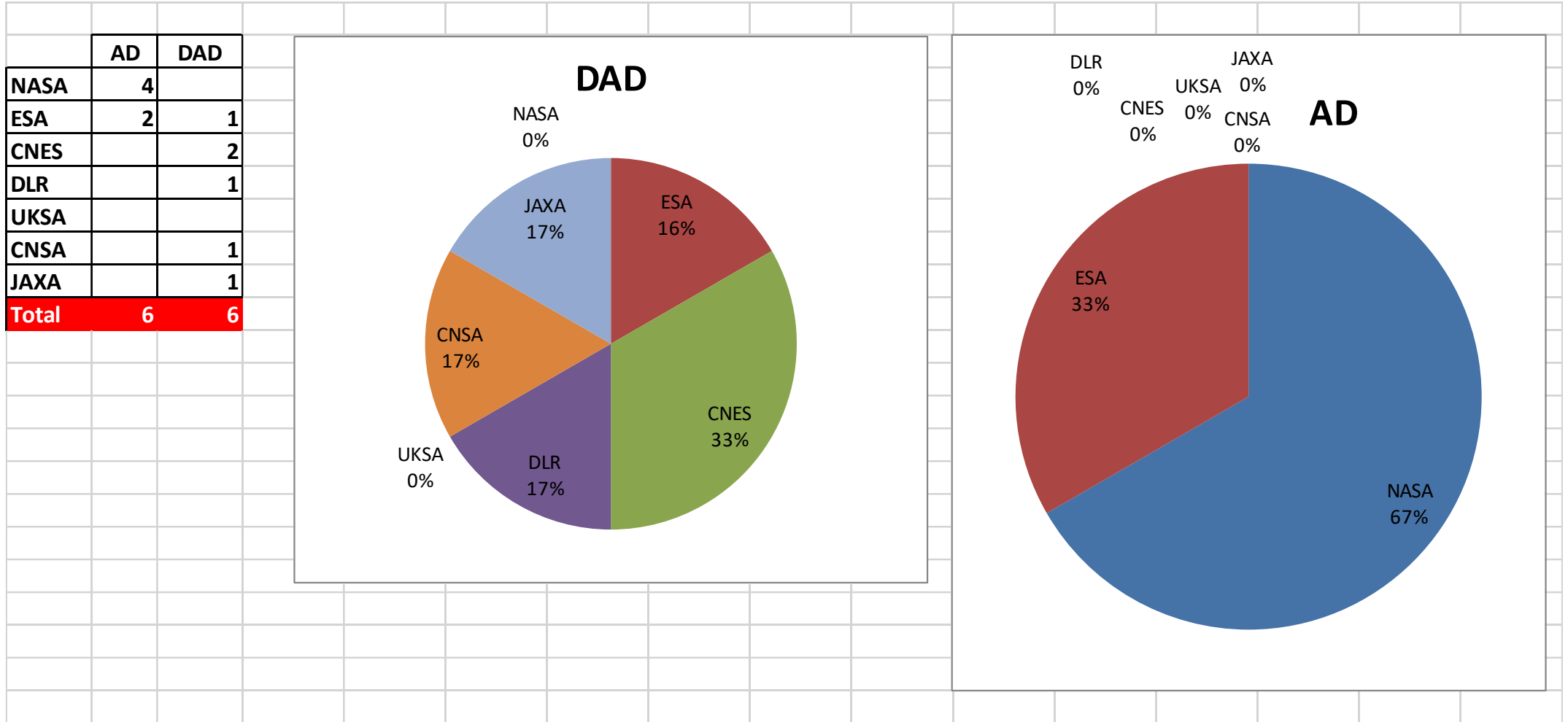
New Appointments

- Appointment of New Chair for the Coding and Synchronization Working Group (SLS-C&S):
Andrea Modenini (ESA)
- Approval a new Deputy WG Chair for SLS-OPT Working Group: Clemens Heese (ESA)
- Approval a new WG Chair & Deputy WG Chair for the Spacecraft Monitor & Control Working Group: WG Chair: Mehran Sarakati, Deputy WG Chair: Scott Reeves (NASA)
- Approval of a new WG Chair for DELTA-DIFFERENTIAL ONE WAY RANGING (DELTA-DOR):
Javier de Vicente (ESA)

CCSDS Resources

				NASA					ESA					CNES					DLR					OTHER																																		
Area	WG	C	Co	BB	P1	P2	GB	MB	YB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	OB																												
SEA	SA	NASA						2																																																		
SEA	Security	NASA	ESA		1		2	1					1	1			1																																									
SEA	Time	NASA	ESA				1																																																			
SEA	D-DOR	ESA				1		2		1	1																1					P3=JAXA																										
MOIMS	DAI	UKSA	NASA					2											1										2			MBs=UKSA																										
MOIMS	NAV	NASA	ESA	3	2	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					3	1	2				1					1	1					1						P2=CNSA																									
CSS	CSTS	ESA		1	1	1				5													1				1						P2=CCSDS 911.2-B-3 ; P3=CCSDS 911.2-B-3																									
SOIS	APP	NASA	UKSA																									1	1	2			MB=AFRL (USA), OBs NASA / CNSA																									
SOIS	WIR	NASA	FSA	1	1											1										1							OB=NASA, P2=CSA																									
SOIS	SNW	NASA	ESA					5																																																		
SLS	RFM	ESA	NASA			1				1	1																																															
SLS	C&S	ESA	NASA	3	2					2	1	3	1		1	1											1							OB=CNES, OB=ESA, P2=JAXA																								
SLS	MHDC	NASA	NASA			1	1			2	2		2				1																	P3=CNES																								
SLS	SLP	NASA	UKSA	4			3	1																																																		
SLS	SDLS	CNES	NASA				1								1																			OBs=NASA, MB=Other																								
SLS	OPT	NASA	ESA	2								2	1								2																																					
SIS	MIA	NASA	DLR	1		1															1																																					
SIS	DTN	NASA	JAXA	2	1	1	1															1				1								P1=JAXA																								
SIS	VOICE	DLR	FSA																																																							
SIS	CFDP	NASA					2	1																																																		
				18	9	7	12	13	1	17	10	11	6	1	4	4	3	0	1	0	5	4	1	1	1	1	1	5	1	4	6		146																									
				60					45					12					11					18																																		
				%					41.10					30.82					8.22					7.53					12.33																													
				146																												CNES, CNSA, UKSA, AFRL, FSA, Japan, JAXA, NASA																										

Area Directors / Area Directors Overview

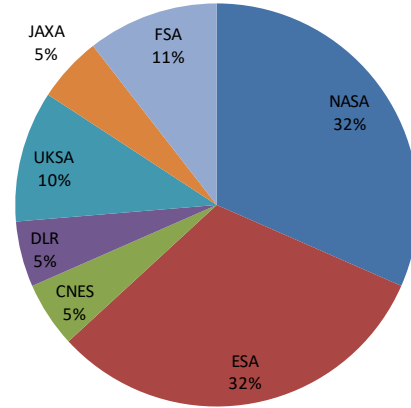


WG Chair / Deputy Chair Overview

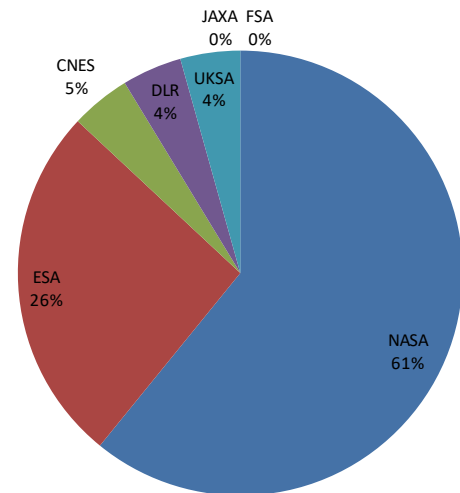
Area	WG	C	Co
SEA	SA	NASA	0
SEA	Security	NASA	ESA
SEA	Time	NASA	ESA
SEA	D-DOR	ESA	0
MOIMS	DAI	UKSA	NASA
MOIMS	NAV	NASA	ESA
MOIMS	SM&C	ESA	NASA
MOIMS	MP&S	ESA	CNES
CSS	SM	NASA	ESA
CSS	CSTS	ESA	
SOIS	APP	NASA	UKSA
SOIS	WIR	NASA	FSA
SOIS	SNW	NASA	ESA
SLS	RFM	ESA	NASA
SLS	C&S	ESA	NASA
SLS	MHDC	NASA	NASA
SLS	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	NASA	0

	WG Chair	WG Deputy Chair
NASA	14	6
ESA	6	6
CNES	1	1
DLR	1	1
UKSA	1	2
JAXA	0	1
FSA	0	2
Total	23	19

WG Deputy Chair



WG Chair



Working Group Agendas and Additional Resources

All information about the CCSDS Spring 2021 Meetings can be found on the CCSDS Public Website page: <https://public.ccsds.org/meetings/2021Spring/default.aspx>

Individual Working Group Agendas may be found on the CCSDS Public Website at: <https://public.ccsds.org/meetings/2021Spring/2021SpringAgendas.aspx>

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.

Acknowledgements

The Secretariat wishes to thank CNES for providing the information on the location of the Fall 2021 CCSDS Meetings.