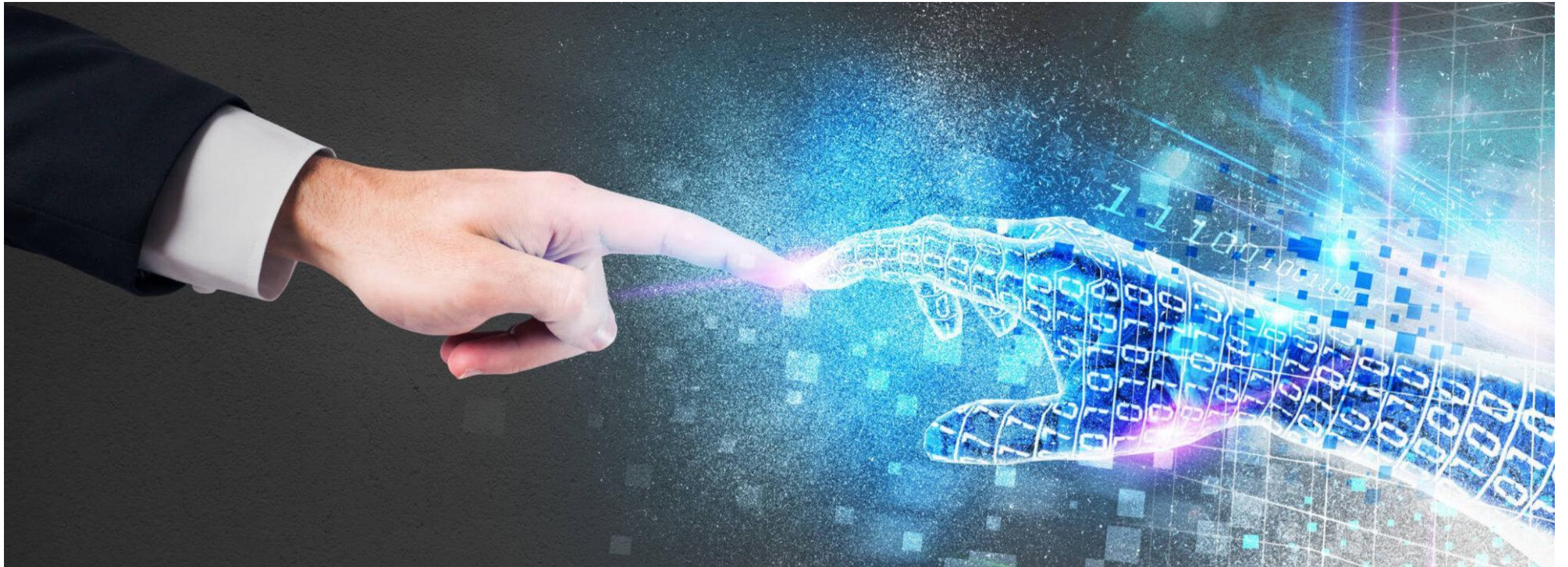
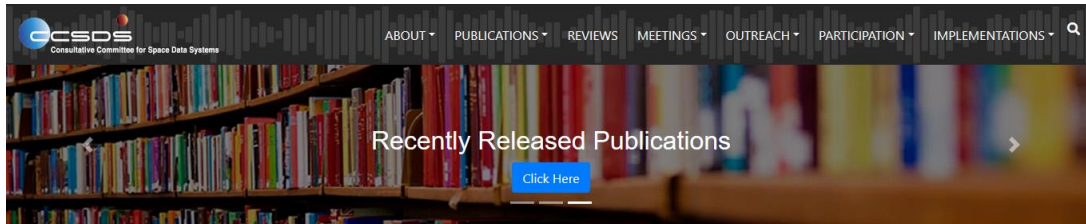


# Fall 2020 Virtual CCSDS Technical and CESG Meetings



# New CCSDS Public Website



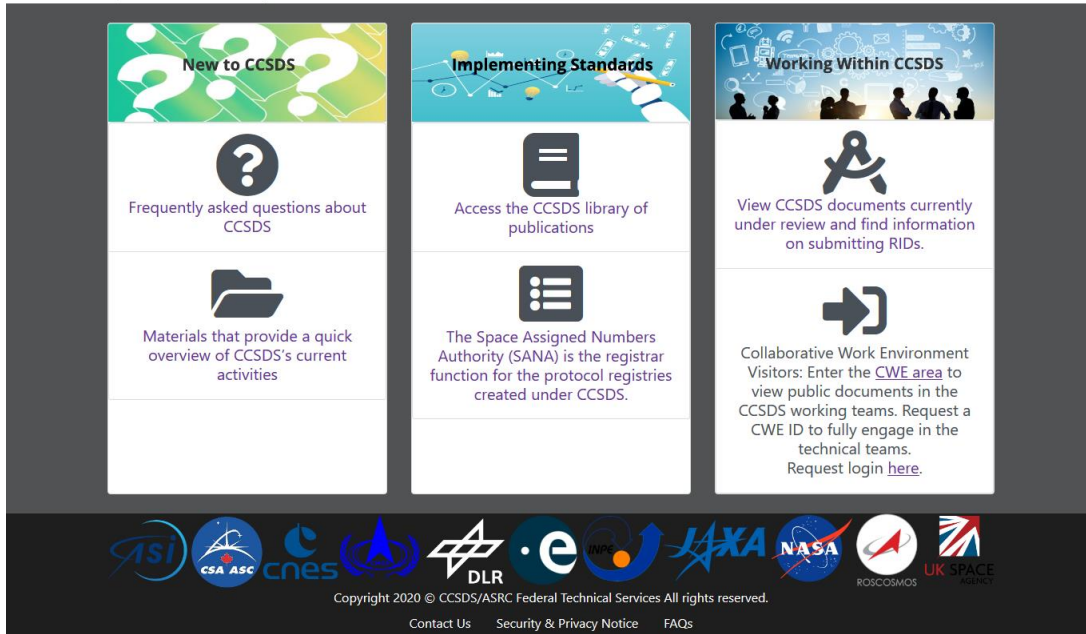
**What is CCSDS?**

- The Consultative Committee for Space Data Systems (CCSDS) is a [multi-national forum](#) for the development of communications & data systems standards for spaceflight.
- Leading space communications experts from 28 nations collaborate in developing the most well-engineered space communications & data handling [standards](#) in the world.
- The goal to enhance governmental & commercial interoperability & cross-support, while also reducing risk, development time & project costs.
- More than [1000 space missions](#) have chosen to fly with CCSDS-developed [standards](#).



With the deployment of the newly redesigned CCSDS public website now complete, the Secretariat would love to hear from you. Let us know what you think of the website by completing a [brief survey](#). Or contact us directly at [secretariat@mailman.ccsds.org](mailto:secretariat@mailman.ccsds.org).

Since the website was announced, CCSDS Tech Support has completed a number of improvements suggested by community members like you. If there any improvements you would like to suggest, please include them in your survey response or send them to us in an email.



A grid of six navigation tiles with icons and text:

- New to CCSDS**: Frequently asked questions about CCSDS.
- Implementing Standards**: Access the CCSDS library of publications.
- Working Within CCSDS**: View CCSDS documents currently under review and find information on submitting RIDs.
- Materials that provide a quick overview of CCSDS's current activities**.
- The Space Assigned Numbers Authority (SANA) is the registrar function for the protocol registries created under CCSDS.**
- Collaborative Work Environment Visitors: Enter the CWE area to view public documents in the CCSDS working teams. Request a CWE ID to fully engage in the technical teams. Request login [here](#).**

At the bottom of the grid is a row of logos for partner organizations: ASI, CSA ASC, CNES, DLR, ESA, ESR, JAXA, NASA, ROSCOSMOS, and UK SPACE AGENCY. Below the logos is the copyright notice: 'Copyright 2020 © CCSDS/ASRC Federal Technical Services All rights reserved.' and links for 'Contact Us', 'Security & Privacy Notice', and 'FAQs'.

## Upcoming Meetings – Spring 2021

The Spring 2021 Technical and CESG Meetings will be hosted by NASA Marshall Space Flight Center in Huntsville, AL.

Dates: 10-14 May 2021

The CESG will meet 17 May 2021

The venue for the meeting is [The Westin Hotel at Bridge Street Town Center](#)

[Bridge Street Town Center](#) offers multiple options for dining and shopping and is central to the Huntsville area.

The CCSDS Management Council (CMC) will continue to assess the impacts of COVID-19 and will make a final decision about holding the Spring 2021 meetings in-person at a later date.



# Upcoming Meetings – Spring 2021

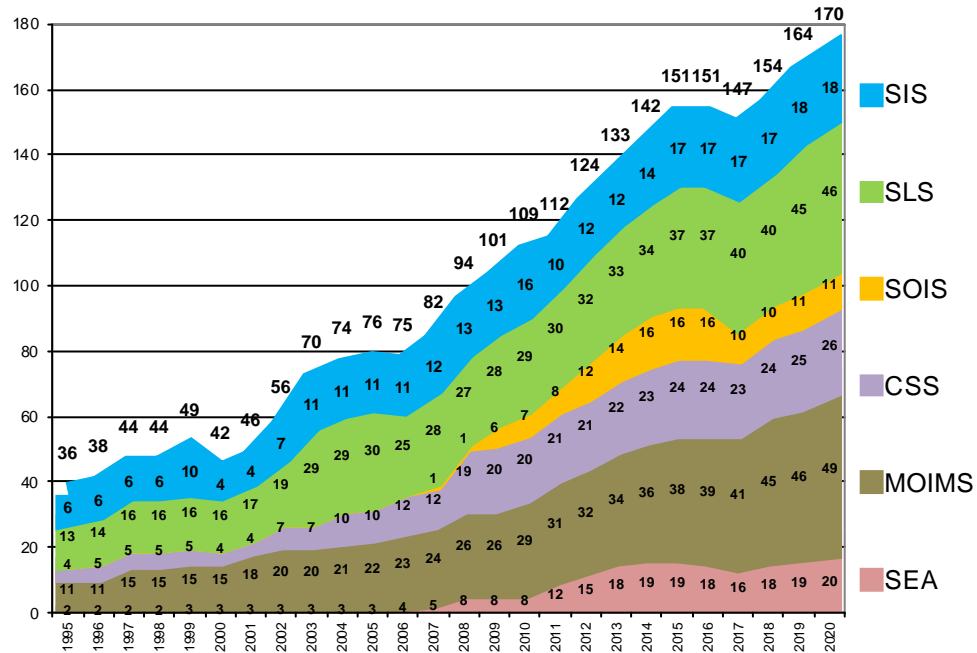
- Huntsville is a city centrally located in the northernmost part of the U.S. state of Alabama.
- It is home to NASA's Marshall Space Flight Center.
  - 10 Best Places for STEM work
  - Home to Boeing, Lockheed, US Army, L3, and Hudson Alpha BioTech
- Bordered by the Smokey Mountains to the east and the Tennessee River on the south.
- Lots to see and do.
  - Art Museums
  - Entertainment Districts
  - Outdoor Spaces/Recreation
- Videos about Huntsville:
  - [Huntsville - We've Got Space](#)
  - [This is Huntsville](#)



# Future Meetings

Date	WG/CMC	Host	Location	Date	Comments
Spring 2021	WG/CESG	NASA	Huntsville, AL, USA	10-17 May 2021	← 5-Day
	CMC/SC13	JAXA	Tokyo, Japan	TBD Date	
Fall 2021	WG/CESG	CNES	Toulouse, France	TBD Date	← 5-Day
	CMC/SC13	CNES	Tokyo, Japan	TBD Date	
Spring 2022	WG/CESG	NASA	USA	TBD Date	
	CMC/SC13	INPE	Brazil	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	ROSCOSMOS	TBD	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	CNSA	TBD	TBD Date	

## Active Publications



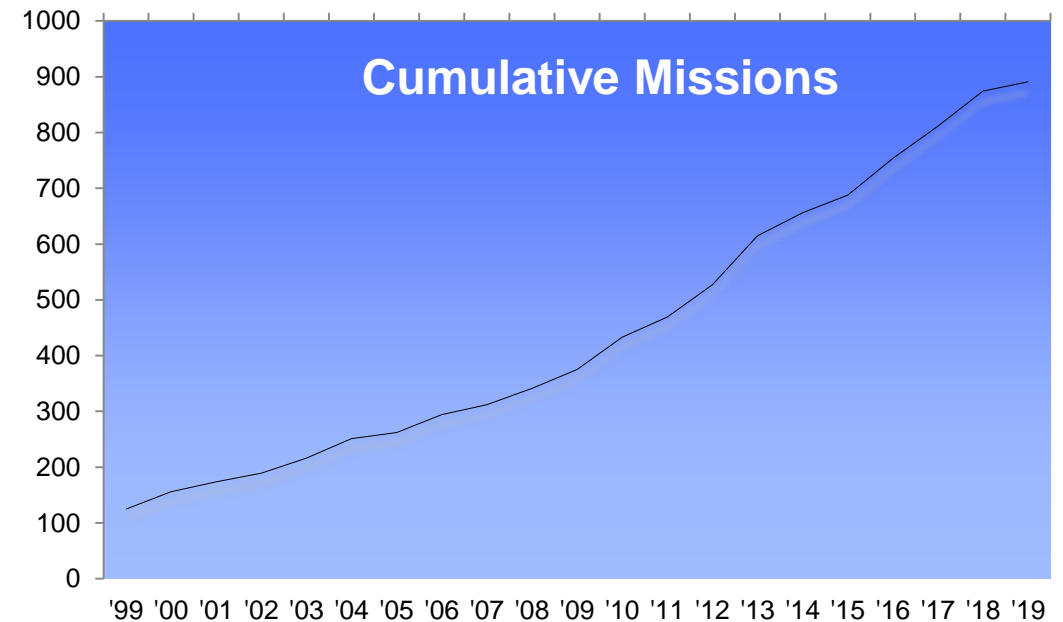
## Currently Active Publications:

**170** Normative (Blue & Magenta): **108**  
 Informative (Green): **67**

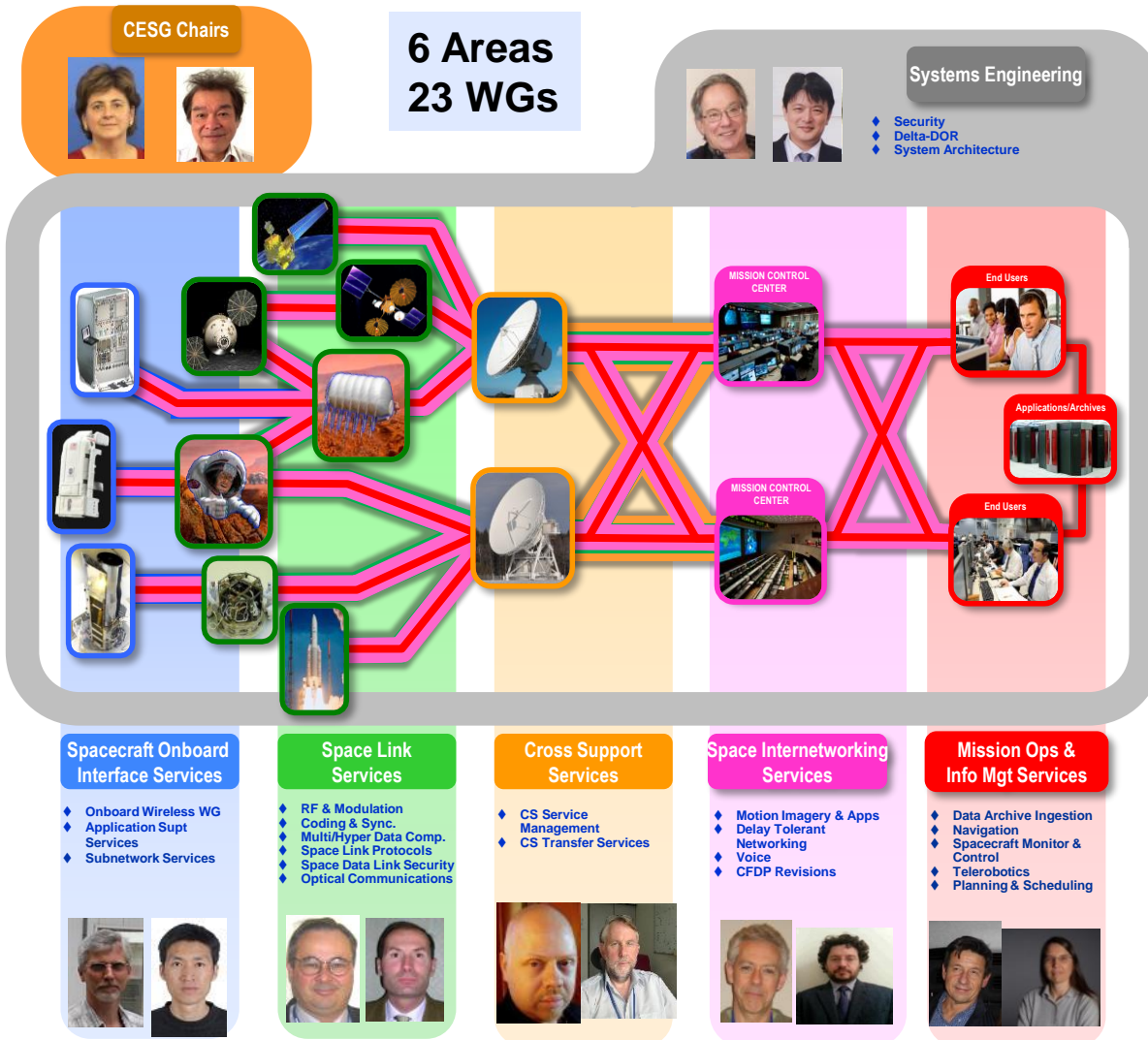
Downloadable for free from [www.ccsds.org](http://www.ccsds.org)

All major pubs since 1982: **~386**  
 (Some were historical mission needs or superseded technologies)

Hundreds of space missions have adopted and used various CCSDS standards



# Members of the CESG



**CESG Chair**  
*Deputy*

**M. di Giulio**  
*Wallace Tai*

**SE Area Director**  
*Deputy*

**Peter Shames**  
*Hiroshi Takeuchi*

**MOIMS Area Director**  
*Deputy*

**Mario Merri**  
*Brigitte Behal*

**CSS Area Director**  
*Deputy*

**Erik Barkley**  
*Colin Haddow*

**SLS Area Director**  
*Deputy*

**G-P Calzolari**  
*Gilles Moury*

**SIS Area Director**  
*Deputy*

**Scott Burleigh**  
*Tomaso de Cola*

**SOIS Area Director**  
*Deputy*

**J. Wilmot**  
*X. He*

## Blue Books – Recommended Standards

- CCSDS 133.0-B-2, Space Packet Protocol (Blue Book, Issue 2)
- CCSDS 503.0-B-2, Tracking Data Message (Blue Book, Issue 2)
- CCSDS 211.0-B-6, Proximity-1 Space Link Protocol—Data Link Layer (Blue Book, Issue 6)
- CCSDS 727.0-B-5, CCSDS File Delivery Protocol (CFDP) (Blue Book, Issue 5)
- CCSDS 141.0-P-1.1, Optical Communications Physical Layer (Pink Sheets, Issue 1.1)
- CCSDS 123.0-B-2 Cor. 2, Technical Corrigendum 1 to CCSDS 123.0-B-2
- CCSDS 121.0-B-3, Lossless Data Compression (Blue Book, Issue 3)

## Magenta Books – Recommended Practices

- CCSDS 921.2-M-1 Cor. 1, Technical Corrigendum 1 to CCSDS 921.2-M-1, Issued March 2019

## Orange Books

- CCSDS 551.1-O-2, Correlated Data Generation (Orange Book, Issue 2)

## Green Books – Informational Reports

- CCSDS 700.1-G-1, Overview of the Unified Space Data Link Protocol (Green Book, Issue 1)
- CCSDS 130.1-G-3, TM Synchronization and Channel Coding—Summary of Concept and Rationale (Green Book, Issue 3)



## Agency Review

### Blue Books – Recommended Standards

- **CCSDS 141.0-P-1.1, Optical Communications Physical Layer (Pink Sheets, Issue 1.1)**
- **CCSDS 766.1-P-2.1, Digital Motion Imagery (Pink Book, Issue 2.1)**
- **CCSDS 401.0-RP-30.1, Radio Frequency and Modulation Systems—Part 1: Earth Stations and Spacecraft (Red/Pink Sheets, Issue 30.1)**
- **CCSDS 141.1-R-1, Atmospheric Characterization and Forecasting for Optical Link Operations (Red Book, Issue 1)**

## Approval of new Projects

### New Projects of the SLS Area

- **Space Data Link Security Protocol, Issue 2 - Blue Book**
- **AOS Space Data Link Protocol, Issue 4 - Blue Book**
- **TM Space Data Link Protocol, Issue 3 - Blue Book**

## Other

- **Charter Modification for the Multispectral Hyperspectral Data Compression (SLS-MHDC) Working Group**
- **CESG Escalation to CMC about Unresolved CESG Poll**
- **Approval of new CCSDS Liasion Wi-Fi Alliance**

# CCSDS Resources

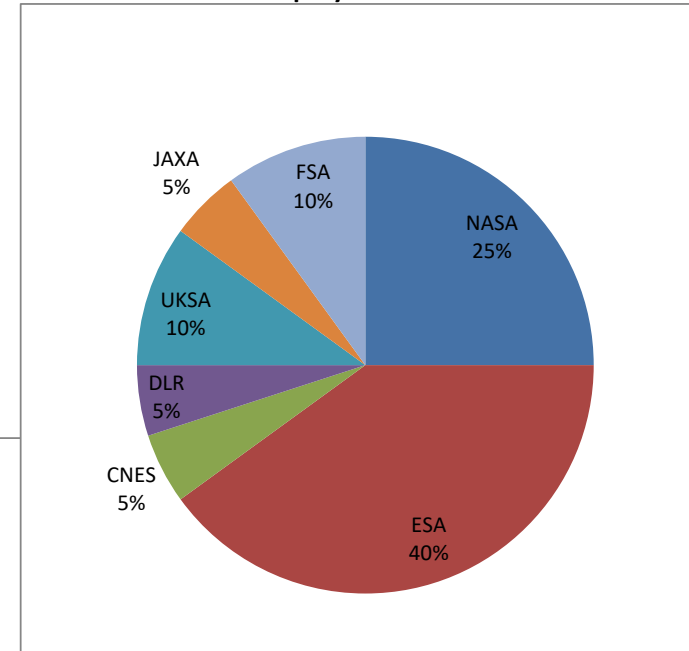
Area	WG	C	Co	NASA					ESA					CNES					DLR					OTHER																																			
				BB	P1	P2	GB	MB	YB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	BB	P1	P2	GB	MB	OB																													
SEA	SA	NASA					1					1																																															
SEA	Security	NASA	ESA	1	1		3	1				1	1	1		1																																											
SEA	Time	NASA	ESA				1																																																				
SEA	D-DOR	NASA	ESA			1	1	1		1	1													1				P3=JAXA																															
MOIMS	DAI	UKSA	NASA					1								1										2	MBs=UKSA																																
MOIMS	NAV	NASA	ESA	4	2	2	1			1	3	4			2	2						1																																					
MOIMS	SM&C	NASA	ESA	1						2	2		1				2						1																																				
MOIMS	MP&S	ESA	CNES							1	1											1																																					
CSS	SM	NASA	ESA	1	1					3	1	2		2		1					1	1			1			P2=CNSA																															
CSS	CSTS	ESA		2	1	2															1		1																																				
SOIS	APP	NASA	UKSA			1				1	1														1	1	2	M3=AFRL (USA), OBs NASA / CNSA, G3=UKSA																															
SOIS	WIR	NASA	FSA																							1	OB=NASA, P2=FSA																																
SOIS	SNW	NASA	ESA					5																																																			
SLS	RFM	ESA	NASA			1				1	1																	OB=CNES, OB=ESA, P2=JAXA																															
SLS	C&S	ESA	NASA	1	2	1				1		2										1			1		2																																
SLS	MHDC	NASA	NASA		1					2	2	1	1				1	1																																									
SLS	SLP	NASA	UKSA	2		1	2														1																																						
SLS	SDLS	CNES	NASA				1			1		1				1																																											
SLS	OPT	NASA	ESA	1	1	1				1		1									1	1				1	1	OBs=NASA, MB=NICT																															
SIS	MIA	NASA	DLR	1		1															1																																						
SIS	DTN	NASA	JAXA	3	2	1	1															1		1	1			P1 and P2=JAXA																															
SIS	VOICE	DLR	FSA																			1																																					
SIS	CFDP	NASA		1	1		2	1																1				P2=KARI (S. Korea) and BITTT (China)																															
				18	12	12	13	8	1	15	12	8	7	3	3	4	4	1	1	0	5	6	2	0	0	1	5	1	4	6																													
				64					45					13					13					17					152																														
				%					42.11					29.61					8.55					8.55					11.18																														
				152																												Japan, JAXA, NASA																											

# WG Chair / Deputy Chair Overview

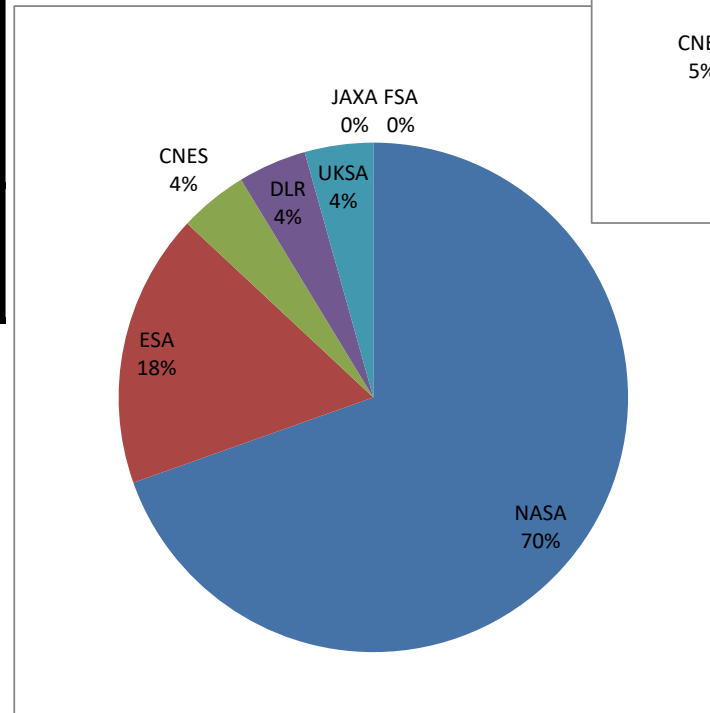
Area	WG	C	Co
SEA	SA	NASA	0
SEA	Security	NASA	ESA
SEA	Time	NASA	ESA
SEA	D-DOR	NASA	ESA
MOIMS	DAI	UKSA	NASA
MOIMS	NAV	NASA	ESA
MOIMS	SM&C	NASA	ESA
MOIMS	MP&S	ESA	CNES
CSS	SM	NASA	ESA
CSS	CSTS	ESA	
SOIS	APP	NASA	UKSA
SOIS	WIR	NASA	FSA
SOIS	SNW	NASA	ESA
SLS	RFM	ESA	NASA
SLS	C&S	ESA	NASA
SLS	MHDC	NASA	NASA
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	16	5
ESA	4	8
CNES	1	1
DLR	1	1
UKSA	1	2
JAXA	0	1
FSA	0	2
<b>Total</b>	<b>23</b>	<b>20</b>

WG Deputy Chair



WG Chair



# Working Group Agendas and Additional Resources

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All information about the CCSDS Fall 2020 Meeting can be found on the CCSDS Public Website page: <https://public.ccsds.org/meetings/2020Fall/default.aspx>.

Individual Working Group Agendas may be found on the CCSDS Public Website at: <https://public.ccsds.org/meetings/2020Fall/2020FallAgendas.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](mailto:secretariat@mailman.ccsds.org).