

CCSDS LINK

VOLUME 4 ISSUE 1 — AUGUST 2009

Travel and Tourist Information

Read about getting to ESTEC and what there is to do and see in Noordwijk after the meetings
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Meeting Schedule



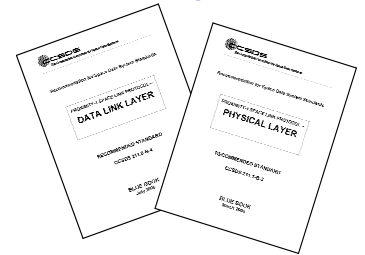
The full schedule of meetings for the technical week.
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SpaceOps 2010

Learn more about the upcoming SpaceOps Meeting in Huntsville, Alabama.
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New and noteworthy

Take a look at the CCSDS documents that have recently been published or released for formal review. [Page 4](#)



Welcome to the CCSDS Link

The *Link* is intended to serve as a communication forum for the CCSDS community. Through content developed by CCSDS technical experts, members of the CMC and CESG, and by secretariat staff we hope to provide readers with a wealth of information about the organization and its work. Information in the *Link* is aimed at CCSDS participants as well as users of CCSDS specifications and technical information.

We are finalizing our preparations for the Fall 2009 Technical and Management Meetings at ESTEC. This issue of the *Link* will be focused on providing you with information on Noordwijk and additional details about the meeting. We'll also provide you with additional information on the upcoming meeting in Portsmouth and SpaceOps 2010.

As always, we hope you find this issue of the *Link* informative and welcome any feedback you may have. Please do not hesitate to contact the [CCSDS Secretariat staff](#) with your comments or suggestions for content.

Have you booked your travel yet?

Hopefully you have, but for those who have not yet finalized their travel arrangements to Noordwijk the following information may be helpful.

The closest airport to ESTEC is Amsterdam Airport Schiphol which is a 30 minute taxi ride from ESTEC. You can also take a train to Leiden Centraal Station (15 minutes) and then take the 32 bus to Katwijk; there is a stop in front of the ESTEC main gate (30 minutes). There are also rental cars available at Schiphol should you chose to drive yourself.

To book a hotel, the ESTEC travel desks requests that you fill out this form and they will take care of making the arrangement for you. The hotels recommended and used by ESTEC are the

Mercure, the Prominent Inn, the Zonne, the Astoria, the Admiral, the Heeren van Noortwyck and the Royal. There are special ESTEC rates at these hotels, however they can only be secured if you use the request form.

For any other questions regarding travel arrangements or logistics, please contact the ESA Conference Bureau.

A draft meeting schedule is included on page 3 of this newsletter.



Noordwijk Tourist Information

The following links provide information on the city of Noordwijk.

Wikipedia: <http://en.wikipedia.org/wiki/Noordwijk>

Noordwijk Tourism Information: www.noordwijk.nl

Noordwijk - Holland's Finest Beach: www.noordwijk.info

A Day In and Around Noordwijk: <http://us.holland.com>

The average high in Noordwijk during November is 52F/11C and the average low is 43F/6C. The skies are typically partly cloudy and it is likely to rain during the course of the meetings.

SpaceOps 2010

The SpaceOps Conference is the chance for you to share your dreams and deliveries with the community and bring the ideas, innovations, and experiences, both exhilarating and painful, from other professionals, back home turf to benefit your program. The SpaceOps community believes that with an enthusiastically communicating operations community, we all become stronger – and mankind's dream to utilize and explore space becomes a reality. The SpaceOps 2010 Conference will bring together space operators from around the world to discuss the current status of and future direction of space operations. For 2010, we are introducing two new tracks to our already successful track disciplines, in keeping with the theme: Delivering on the Dream.



Topics for 2010:

- Mission Design and Mission Management
- Mission Execution: Plan, Train, and Fly
- Data and Communications Systems and Facilities Supporting Operations
- Cross Support, Interoperability, Standards
- Launch Operations NEW FOR 2010!
- Commercial Space Operations NEW FOR 2010!

New Focus Areas for SpaceOps

Launch Operations – Since the Marshall Space Flight Center is the propulsion design center for NASA, the operations teams are focusing on the impact of launch system design on operations. We are bringing our experiences and plans to the forum, and we encourage experienced launch operations professionals from around the globe to share their expertise as well.

Commercial Space Operations – The Space Operations industry has traditionally been dominated by government agencies, but we now see the expanding base of commercial companies involved in spaceflight, some with operational unmanned spacecraft, some with aspirations of routine manned spaceflight operations. We encourage these companies to share with us how they operate with the new commercial environment, and how they plan to deliver on their dreams.

For more information on the SpaceOps 2010 Conference visit: <http://www.spaceops2010.org/>

CCSDS at Space 2009

At the recent AIAA Space 2009 conference held in Pasadena, Erik Barkley, Cross Support Services Area Director and Rob Andzik, Business Area Manager from RT Logic, presented as a part of a panel focusing on how standardization can be successfully be implemented by industry. Together Erik and Rob focused on how CCSDS standards are developed and can be

successfully implemented by a company in order to give them an advantage over their competitors. CCSDS also had a booth in the exhibit hall at this conference which provided staff with an opportunity to educate many more people about the current program of work and future goals of CCSDS.

Spring 2010 Technical Meetings – Portsmouth, Virginia

The next set of technical meetings will be hosted by NASA in Portsmouth, Virginia from 3-7 May 2010 at the Renaissance Portsmouth Hotel & Waterfront Conference Center. This meeting will take place the week following the 2010 SpaceOps meeting in Huntsville, Alabama and there are direct flights available between Huntsville and Norfolk International Airport (approximately 12 miles from the hotel).

Should you or any of your colleagues need a VISA letter to attend a meeting in the United States, please contact Erin Cliggett Kahn as soon as possible.

Help Spread the Word About CCSDS

In an effort to keep the widespread and continued use of CCSDS work in front of the greater space community, we have developed an organization communication plan. Part of this plan calls for issuing periodic press releases coinciding with significant missions, mission milestones, successes, demonstrations in which CCSDS specifications have played a role.

While we on the Secretariat staff can monitor the U.S.-based missions fairly well, we would very much appreciate your help in keeping us apprised of events worthy of further publicity occurring within your local space programs.

Of course an opportunity for publicity does not necessarily have to be directly mission-related. If you feel that ongoing standard development work may be of interest to a broader audience, let us know and we will help you to get the word out.

Please send any and all suggestions you may have at any time to secretariat@mailman.ccsds.org.

CCSDS Fall WG Meeting Schedule - 26-30 October 2009 (24 September 2009)

	Oct 26 - Mon - 08:00 - 09:00	Oct 26 - Mon - 09:00 - 12:00	Oct 26 - Mon - 13:00 - 17:00	Oct 27 - Tue - 08:00 - 12:00	Oct 27 - Tue - 13:00 - 17:00	Oct 28 - Wed - 08:00 - 12:00	Oct 28 - Wed - 13:00 - 17:00	Oct 29 - Thu - 08:00 - 12:00	Oct 29 - Thu - 13:00 - 17:00	Oct 30 - Fri - 08:00 - 12:00	Oct 30 - Fri - 13:00 - 17:00	Oct 17 - Fri - 17:00 - 18:30
CCSDS												
Registration	X	X	X	X	X	X	X	X	X	X	X	
CCSDS Plenary	X											
Systems Engineering Area												
SEA Plenary		X									X	
Security WG				X	X	X	X					
SANA WG											X	
DDOR WG			X	X	X	X	X	X	X	X		
Mission Ops and Info Mgt Svcs Area												
MOIMS Plenary		X										
Data Archive Ingestion WG								X	X	X		
Navigation WG		X	X	X	X	X	X	X	X	X		
SEA IA + IPR Meeting						X	X	X	X	X		
Digital Repository and Audit Certification WG						X	X					
DAI and IPR		X	X	X	X							
PUS BoF								X				
Spacecraft Monitor & Ctrl WG		X	X	X	X	X	X	X	X	X	X	
Cross Support Services Area												
CSS Plenary		X									X	
Service Management WG			X	X	X	X	X	X	X	X	X	
Cross Supt Transver Svcs WG			X	X	X	X	X	X	X	X	X	
Splinter Group					X			X				
Cross Supt Architecture WG				X		X		X		X		
Spacecraft Onboard I/F Svcs Area												
SOIS Plenary			X	X	X	X	X	X	X	X		
Wireless WG		X	X	X	X	X						
Space Link Services Area												
SLS Plenary											X	
Space Link Code/Sync WG						X		X	X			
Space Link Protocols WG				X	X							
Next Generation Uplink WG		X	X									
Ranging WG								X	X			
RF Modulation WG		X	X	X		X						
RFM/C&S/NGU/RNG/OCM							X					
RFM/C&S					X							
Space Data Link Layer Security WG								X	X	X		
PLACOM BoF										X		
Multispectral & Hyperspectral Data Compression WG		X	X	X	X	X	X					
OCM SIG				X								
Space Internetworking Services Area												
SIS Plenary											X	
Async Messaging Service WG		X	X	X	X							
IP Over CCSDS WG						X						
Motion and Imagery Applications										X		
DTN WG							X	X	X	X		
MIA/SM&C/IP/SLP					X							
MIA/SM&C							X					
MIA/IP/SLP								X				

DRAFT

Please note that this schedule is still a draft. Further updates will be posted on the meeting website as they occur.

New and Noteworthy

The following documents have recently been released for formal agency review or have been published.

Documents Under Review (beginning October 2008)

The following draft CCSDS documents are currently open for public review and comment. A "Red Book" denotes a new draft CCSDS document released for review while "Pink Sheets" are proposed change pages to be added to currently published documents.

CCSDS 650.0-P-1.1 (Pink Sheets): Reference Model for an Open Archival Information System (OAIS)

The review document defines the ISO Reference Model for an Open Archival Information System (OAIS). The current draft updates the original issue based on input from the user community as well as working group-internal review.

CCSDS 521.0-R-2 (Red Book): Mission Operations Message Abstraction Layer

This draft Recommended Standard defines the Mission Operations Message Abstraction Layer in conformance with the service framework specified in the Mission Operations Services Concept Green Book (CCSDS 520.0-G-3). The current draft addresses comments received in the course of the first review.

Review instructions and comment deadlines can be found on the [CCSDS document review website](#).

Recently Published Documents

[CCSDS 414.1-B-1, Pseudo-Noise \(PN\) Ranging Systems \(Blue Book, Issue 1, March 2009\)](#)

This Recommended Standard defines both transparent and regenerative PN ranging systems. The specifications for PN code components and generation, on-board spacecraft regenerative/transparent processing, ground station processing, and uplink and downlink signal modulation are defined.

[CCSDS 401.0-B-20, Radio Frequency and Modulation Systems--Part 1: Earth Stations and Spacecraft \(Blue Book, Issue 20, April 2009\)](#)

Numerous concise recommendations appear in the notebook volume bearing the number 401.0-B. Each recommendation is dated, and the most recent revision is shown in the table of contents. These Recommendations are developed for conventional near-Earth and deep-space missions having moderate communications requirements. The current issue updates recommendations 2.4.18 and 3.



The current mission count stands at [419](#)! Please help us to stay on top of this important statistic by informing the Secretariat any time a new program, mission, or vehicle you are working on decides to implement one of our specifications.

CCSDS Leadership

Mike Kearney — CMC Chair and General Secretary
Adrian Hooke — CESG Co-Chair
Nestor Peccia — CESG Co-Chair
Eduardo Bergamini — ISO TC20/SC13 Chair

Secretariat Staff

Tom Gannett — Documentation Support
Erin Cliggett Kahn — CMC/CESG/SC13 Operations
Brian Oliver — Web Design and Engineering Support