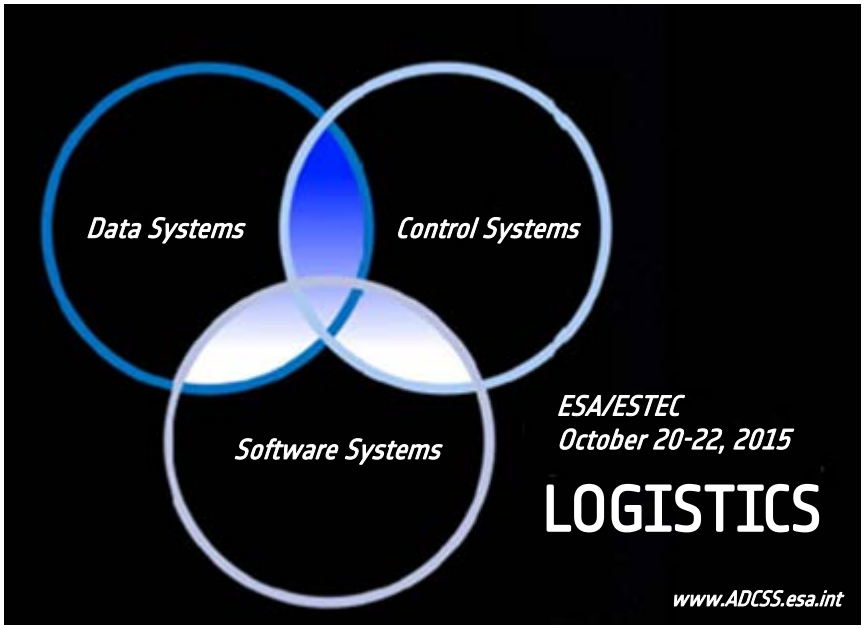
ADCSS 2015

9th ESA Workshop on
Avionics, Data, Control and Software Systems



European Space Agency

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - http://ADCSS.esa.int

9th ESA Workshop on Avionics, Data, Control and Software Systems - ADCSS 2015

20-22 October 2015
European Space Research and Technology Centre (ESTEC)
Europe/Amsterdam timezone

- ADCSS 2015
- Scope & Topics
- Important Dates
- Workshop Committee
- Timetable

The 9th ESA Workshop on Avionics, Data, Control and Software Systems (ADCSS 2015) covers topics related to avionics for space applications, in the form of a set of round tables. The workshop acts as a forum for the presentation of position papers followed by discussion and interaction between ESA and Industry and between participants. Each theme part of ADCSS workshops will be first introduced and then expanded by presentations on related developments from technical and programmatic points of view. A round table discussion may follow, concluded by a synthesis outlining further actions and roadmaps for potential inclusion into ESA's technology R&D plans.

All material presented at the workshop must, before submission, be cleared of any restrictions preventing it from being published on the ADCSS web site

- Philippe Armbruster ~ ESA/ESTEC - Data Systems Division
- Alain Benoit ~ ESA/ESTEC - Control Systems Division
- Kjeld Hjortnaes ~ ESA/ESTEC - Software Systems Division
- Giorgio Magistrati ~ ESA/ESTEC - Data Systems Division
- Davide Oddenino ~ ESA/ESTEC - Control Systems Division
- Jean-Loup Terraillon ~ ESA/ESTEC - Software Systems Division
- Marcel Verhoef ~ ESA/ESTEC - Software Systems Division
- Guillermo Ortega ~ ESA/ESTEC - Control Systems Division
- Alvaro Martinez Barrio ~ ESA/ESTEC - Control Systems Division
- Gianluca Furano ~ ESA/ESTEC - Data Systems Division
- Farid Guettache ~ ESA/ESTEC - Data Systems Division
- Peter Roos ~ ESA/ESTEC - Data Systems Division

Workshop Organisation:
Monique Daniel ~ ESA/ESTEC - Control Systems Division

Scope & Topics
Workshop Committee
Timetable
Abstracts
Exhibitors
Future Events

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Session Timetable

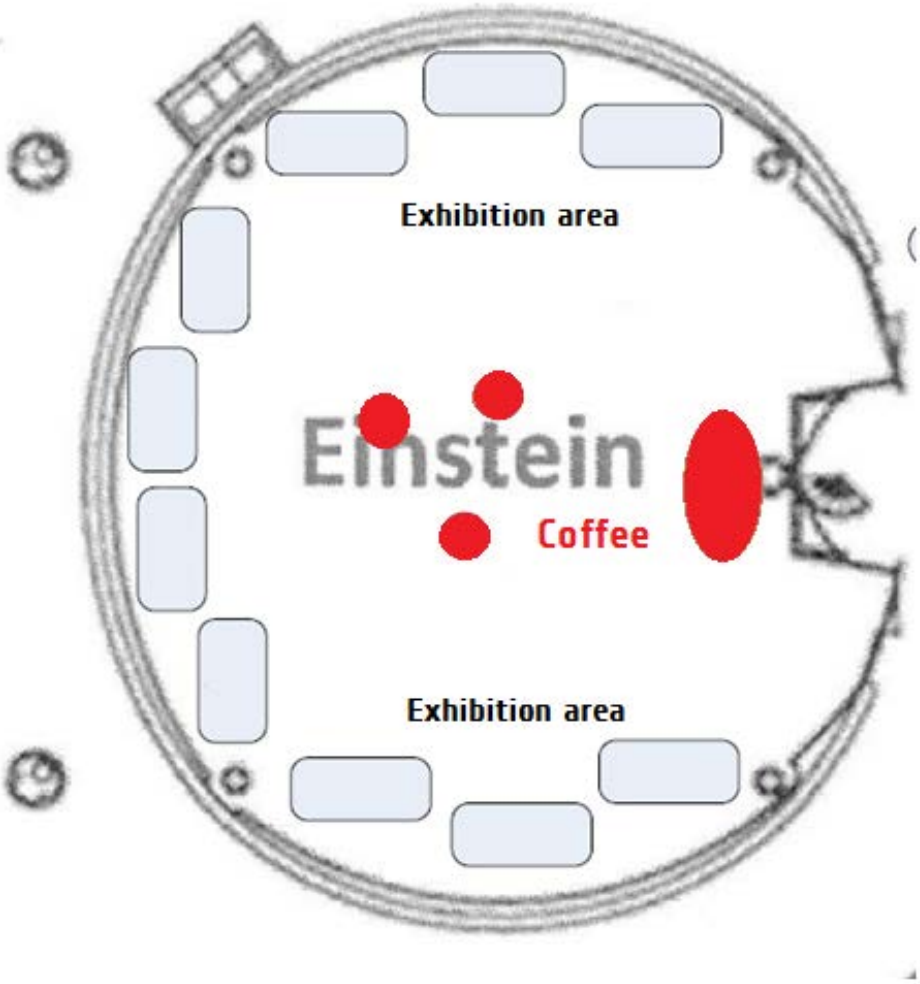
	Tuesday 20-10	Wednesday 21-10	Thursday 22-10
09:00	Registration	Avionics Technology Trend	Operability and Modularity concepts
10:00	Welcome		
	SAVOIR		
13:00-14:00	**Lunch***	**Lunch***	**Lunch***
14:00	SAVOIR	FDIR	SAVOIR RTU specification
18:00	**Cocktail Drink ****		

- ✓ Presenters please be sure to meet your session coordinator to load and try your presentation before the session start (coffee break).
- ✓ The time for presentation is very tight, please be punctual when presenting.
- ✓ During the session of Q&A please introduce yourself and come to microphone for questions

* Lunch is available at the ESTEC Main Cantine. Please be aware that the lunch can be paid by cash only. Receipt can be requested.
** Cocktail drink is served in the Einstein Room

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Exhibition



ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Exhibitors 21-10

TTEthernet is used as single data network on the NASA MPCV and there are currently several studies going on under the auspices of ESA leading to the selection of TTEthernet as single data network in the new Ariane 6 launcher

Presentation of PoL

Texas Instruments supports space applications by providing MIL-PRF-38535 QML Class V and Radiation Hardness Assured (RHA) components. The TI Space Products portfolio is very extensive and includes: Data Converters, Power Components, Digital Signal Processors, Logic, Op Amps, Memory, Clocking, as well as interface components. Our goal is to be a one stop solution for our customers Space design needs.

ATmega8128 and more generally microcontrollers are targeted to be used in space applications like for example RTU. Microcontroller is part of building of blocks of RTU architecture

Cobham Semiconductor Solutions will have information on CAN Transceiver and other products

Cobham Gaisler wishes to promote the GR740 (ESA Next Generation Microprocessor) and AMICSA/ESA DSP day conference

SOC's have an increasing amount of functional units making the job of debugging more difficult for application and IP developers. OCE in cooperation with ESA has developed a debug tool with unique features to address the needs of today's application developers for Space and Aerospace applications

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Exhibitors 22-10

TTTech

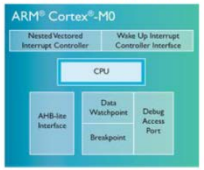
TTEthernet is used as single data network on the NASA MPCV and there are currently several studies going on under the auspices of ESA leading to the selection of TTEthernet as single data network in the new Ariane 6 launcher

ThalesAlenia Space
A Thales / Finmeccanica Company

TAS is now developing a new portfolio of avionics equipment based on the DPC, including next generation RTU's.

TEC-EDD

Presentation of activities around ARM Cortex-M0



Texas Instruments supports space applications by providing MIL-PRF-38535 QML Class V and Radiation Hardness Assured (RHA) components. The TI Space Products portfolio is very extensive and includes: Data Converters, Power Components, Digital Signal Processors, Logic, Op Amps, Memory, Clocking, as well as interface components. Our goal is to be a one stop solution for our customers Space design needs.

SPACE IC

Show the power management related building blocks to RTU/RIU manufacturers. The POL Converter IC SPPL12420RH can be used in modules already now, since the engineering and qualification models are available right now and the flight models are about to be released. The satellite costs and weight can be significantly reduced by use of modular power distribution scheme with POL converters.

Atmel

ATmega8128 and more generally microcontrollers are targeted to be used in space applications like for example RTU. Microcontroller is part of building of blocks of RTU architecture

COBHAM

Cobham Semiconductor Solutions will have information on CAN Transceiver and other products

COBHAM
Cobham Gaisler AB

Cobham Gaisler wishes to promote the GR740 (ESA Next Generation Microprocessor) and AMICSA/ESA DSP day conference

ÅAC Microtec™

The µPOL hybrid, which is a POL DC/DC converter with integrated protection circuits. It targets digital loads which require low voltages and high currents, such as many of the components used in RTUs. In addition to this, ÅAC Microtec AB are currently working on a set of SpaceWire capable computer and mass memory units intended for use in small satellites. These units may be used for RTU applications is small sat/cube sat applications.

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Future Events

2015

2nd ESA International Workshop on GNC for Interplanetary and Small-Body Missions
12-13 November 12 - 13, 2015, ESA/ESTEC, The Netherlands

Software Systems Division & Data Systems Division Final Presentation Days
8-9 December 2015, ESA/ESTEC, The Netherlands

2016

6th International Conference on Astrodynamics Tools and Techniques (ICATT)
14-17 March 2016, ESA/ESOC, Darmstadt, Germany

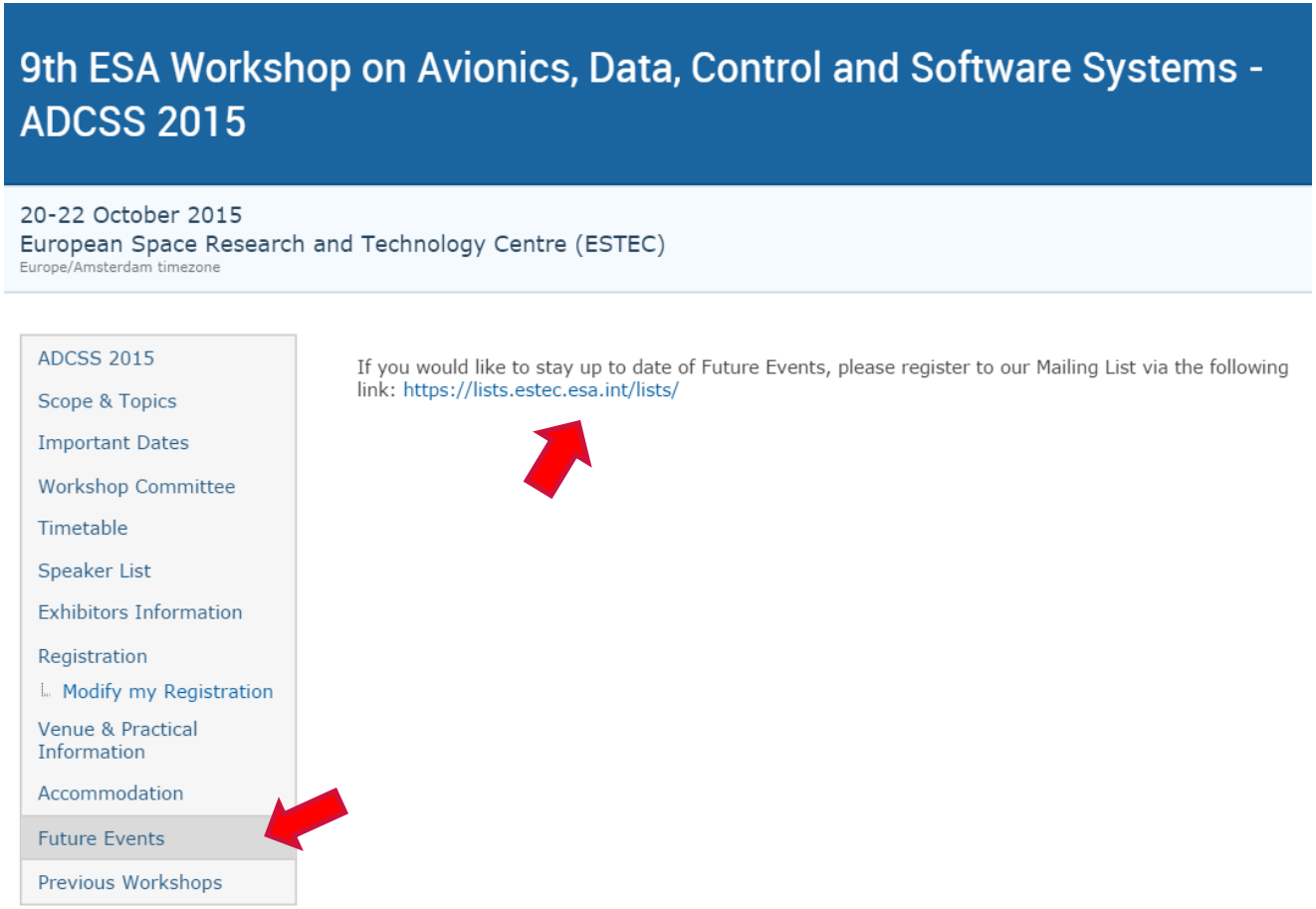
CAN in Space
10 March 2016, ESA/ESTEC, Noordwijk, The Netherlands

Software Systems Division & Data Systems Division Final Presentation Days
9-10 June 2016, ESA/ESTEC, The Netherlands

10th ESA Workshop on Avionics, Data, Control and Software Systems (ADCSS 2016)
18-20 October 2016, ESA/ESTEC, The Netherlands
http://adcss.esa.int

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Future Events



If you would like to stay up to date of Future Events, please register to our Mailing List via the following link: https://lists.estec.esa.int/lists/

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Safety instructions

Visitors have received safety and security leaflet.

In particular be aware of the following:

Emergency procedures

In case of emergency e.g. fire, accident or incident, call:

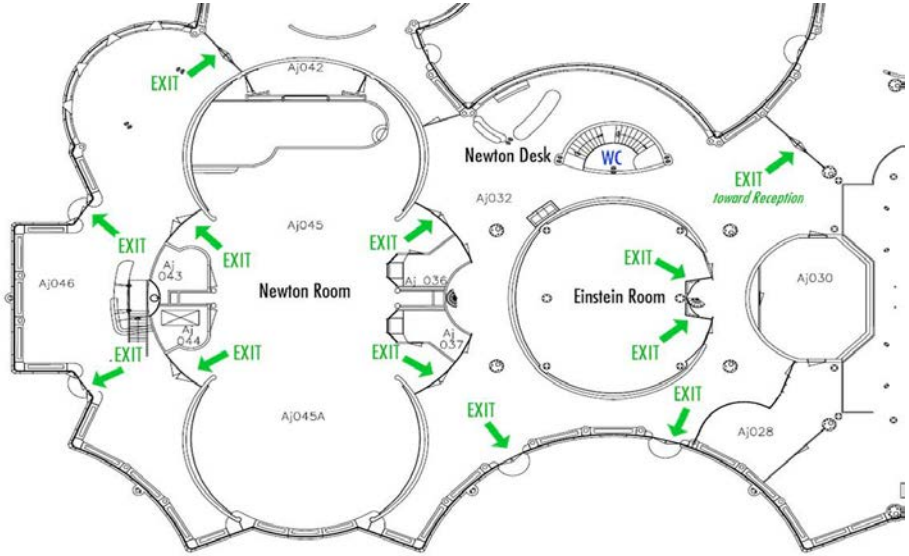
ESTEC emergency number (071-565) 3333

You will be asked to provide the following information: your name, location, the nature of the emergency and number of casualties.

ESA UNCLASSIFIED – For Official Use

In Case of Emergency

Emergency instructions are displayed on the walls in all areas.
In the event of an emergency evacuation, please remain calm and follow your host and the green signs to the nearest exit.
Proceed to the outside assembly area near building Ya (ESCAPE sports centre).



ADCSS 2015 - Safety instructions

Mobile phones

Please set your cell phone to **“silent”** mode during presentations.

Pictures

Recording pictures/video is **strictly forbidden** while visiting the ESTEC premises.

ESA UNCLASSIFIED – For Official Use

ADCSS 2015 - Support during the event

Information & Registration Desk

Tuesday from 9:00 to 18:00
Wednesday from 9:00 to 18:00
Thursday from 9:00 to 17:00

Monique Daniel
Kathleen Gerlo

ESA UNCLASSIFIED – For Official Use