CAN in SPACE – WORKSHOP 2016

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CAN 2016
ESTEC - 9 March 2016

Why we are here today

- **During ADCSS 2015, in October, need for a dedicated gathering for the growing CAN community was raised.**

- **2015 is the year that has seen all the basic building blocks of CAN reaching maturity**
  - ECSS-E-ST-50-15C Standard
  - Space-grade Transceiver(s)
  - Space Microcontroller(s)
  - Dedicated space GSEs
  - IPs, ASSPs ...

- **Feedback was overwhelming**
  - Crowded room (sorry)
  - We had to trim time for many presentations to give room to everybody

What are today's objectives

- **Set up a large user community**
  - CAN is a "democratic" command and control bus, that allows multimaster
  - CAN will push for a closer interaction between "estabilished" space actors (ESA, Telecom market) and new players (mini/micro sat, academia)
- **Showcase solutions**
  - CAN is new in space but has an impressive solution portfolio for all sort of industrial applications
  - CAN is already an enabler for present and future space missions
  - CAN-able products have a large potential market and may have a quick development cycle

Today's rules of conduct

- **For presenters:**
  - stay on time, allow some space for Q&A
  - Provide presentation files (in pdf or pptx) before your session
    - Upload on indico
    - Email: gianluca.furano@esa.int
    - Mem stick @ coffee break

- **For audience here:**
  - Interact, interrupt, ask questions (but <u>use microphones</u>)
  - Visit exhibition booths outside
    - 2 long coffee breaks !
  - Lunch 13-14h @ ESTEC Canteen

- **For audience on webex**
  - Use onboard.computer.data.handling@esa.int for [CAN-WS] questions
  - Mute your audio

- **Presentations will be uploaded on indico**
  - https://indico.esa.int/indico/event/120/
  - I will try to do it in 'quasi' real-time
  - Presenters: check that there are no restriction labels on your slides.

- **Workshop feedback**
  - Please complete our very brief questionnaire (3 min)
  - https://goo.gl/rnzutB
  - Questionnaire aggregated results are readable to everyone

Last but not least

- **We (TEC-ED, but not only) are finalizing list of new avionic R&D for 2017-2020 in Avionic Harmonization Dossiers**
  - CAN is a top priority already

- **Suggestions in any form are welcome.**
  - use same channels as before

Some thank you words

- To all participants of the WS
- To Milena, Kathleen, Alberto, Giorgio for helping out.
- To Intersil, TI, Cobham, ATMEL, SITAEL, Thales, ASD, TESAT for being pioneers.

09:00		
Welcome and Introduction		*Mr. Gianluca FURANO et al.*
Einstein, ESA/ESTEC		*09:00 - 09:15*
The future of Classical CAN and CAN FD in aerospace applications: Holger Zeltwanger (CAN in Automation)		*Mr. Holger ZELTWANGER*
Einstein, ESA/ESTEC		*09:15 - 09:55*

10:00		
CAN @ Thales - Beyond EXOMARS		*Dr. Maurizio CARAMIA*
Einstein, ESA/ESTEC		*09:55 - 10:20*
CAN bus introduction on SPACEBUS NEO Telecom satellite		*Mr. Stephane CAEL et al.*
Einstein, ESA/ESTEC		*10:20 - 10:50*

11:00		
Coffee Break		
Einstein, ESA/ESTEC		*10:50 - 11:20*
Use of CAN in Airbus Space and Defence Eurostar NEO platform		*Mr. Jean DALENQ et al.*
Einstein, ESA/ESTEC		*11:20 - 11:40*
CAN-based TM/TC interface for payload equipment.		*Mr. Freese JENS*
Einstein, ESA/ESTEC		*11:40 - 12:00*

12:00		
CAN in Cubesats/Minisats - A Survey		*Mr. Johan CARVAJAL GODINEZ*
Einstein, ESA/ESTEC		*12:00 - 12:25*
CAN in Minisatellites - LUXSpace		*Mr. Schwarzenbarth KLAUS*
Einstein, ESA/ESTEC		*12:25 - 12:45*
CAN From Components to Minisatellites - SITAEL		*Mr. Giovanni TUCCIO*
13:00 *Einstein, ESA/ESTEC*		*12:45 - 13:10*
Lunch		

14:00	**CAN in Backplanes and the DPC**	*Mr. Van Humbeeck THIERRY et al.*
	Einstein, ESA/ESTEC	*14:00 - 14:20*
	Can Components: Cobham	*Mrs. De Lellis TEODOLINDA et al.*
	Einstein, ESA/ESTEC	*14:20 - 14:40*
	CAN Transceiver - INTERSIL	*Oscar MANSILLA*
	Einstein, ESA/ESTEC	*14:40 - 15:00*
15:00	**CAN Components - TI**	*Mrs. Beatriz SORIANO*
	Einstein, ESA/ESTEC	*15:00 - 15:20*
	CAN Components - ATMEL	*Mr. Eric TINLOT*
	Einstein, ESA/ESTEC	*15:20 - 15:40*
	Coffee Break	
16:00	*Einstein, ESA/ESTEC*	*15:40 - 16:15*
	CAN Test Equipment: VECTOR	*M. Frédéric VIDY*
	Einstein, ESA/ESTEC	*16:15 - 16:45*
	CAN for Scientific payloads: The DREAMS Experience	*Mr. Luca MARROCCHI*
17:00	*Einstein, ESA/ESTEC*	*16:45 - 17:05*
	CAN in space evolution from an On-board Comm Equipments PoV	*Mr. Franz THALLER*
	Einstein, ESA/ESTEC	*17:05 - 17:25*
	CAN Lab and SavoirSAT testbed	*Mr. Alberto VALVERDE CARRETERO et al.*
	Einstein, ESA/ESTEC	*17:25 - 17:45*
	Panel Discussion	
	Einstein, ESA/ESTEC	*17:45 - 18:00*