



ESCCON 2021

The European Space Component Conference

9. – 11. March 2021

Introduction

Britta Schade

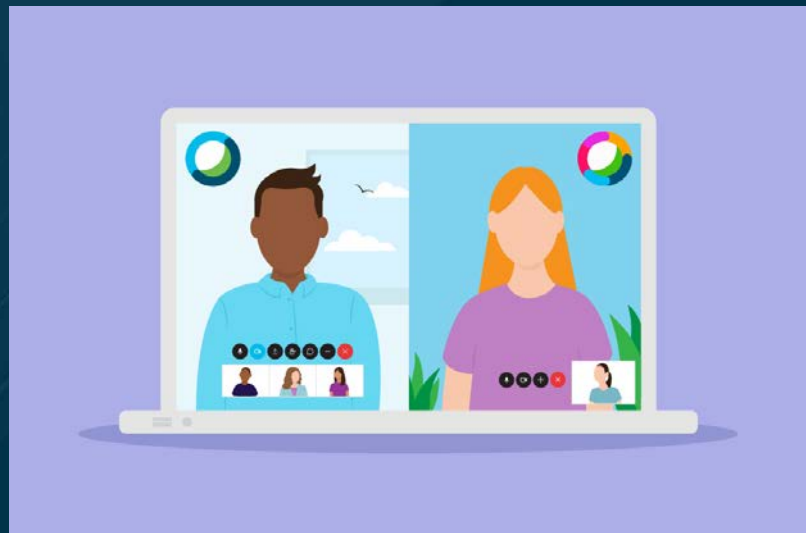
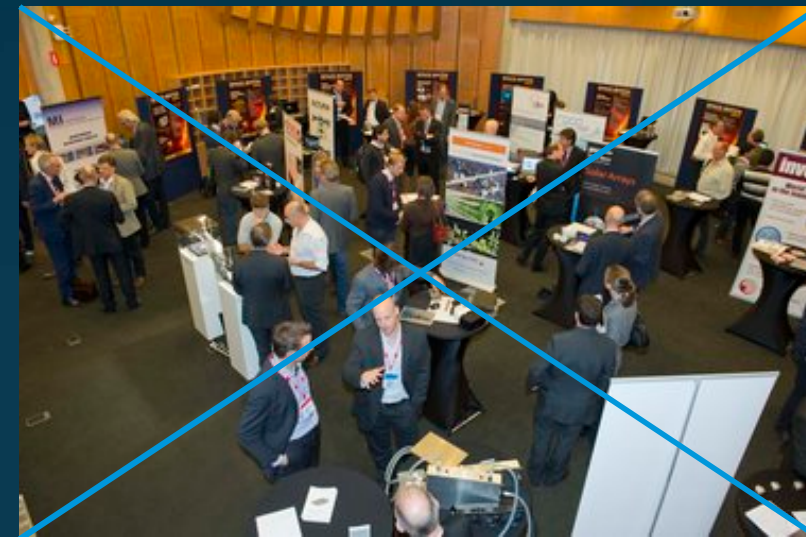
Head of ESA Product Assurance & Safety Department
SCSB Chairwoman



ESCCON goes virtual

Welcome to the European Space Components Conference 2021

- International forum, opened to all specialists involved in the development, selection, procurement and use of EEE (Electrical, Electronic and Electromechanical) components in space systems.
- 400+ registered participants



Please mute all microphones

ESCCON 2021 Program

Mixture of invited speakers and panel sessions

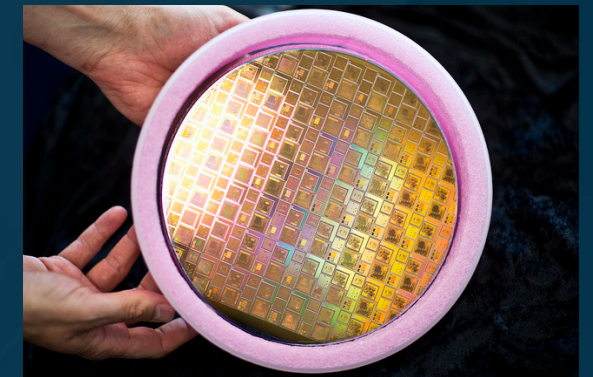
Sessions

- ESCC and Agency reports
- Testing
- Supply chain
- New developments
- Challenges
- Lessons learnt

		day 1	day 2	day 3	
9:30 to 10:50	ESCC and Agencies	Opening Speech (ESA/Britta Schade)	New SCIP Notification Requirement, What does it mean for the European Space Industry and EEE Parts Supply Chain? (Tim Becker - REACHLaw)	ESCC and Agencies Reports	
		JAXA (SHINDOU Hiroyuki)	Lessons Learned for the Space EEE Supply Chain wrt Covid-19 (Dr Jens Haala - TESAT)		PSWG (François Vacher - CNES)
		CNES (Florence Malou - CNES)	Increased digitalisation of the supply chain, including testing, is becoming a key trend for New Space (David Nunez - ALTER)		MPTB (Premysl Janik - ESA)
	testing	Study of latent defects related to SEL induced by laser pulses on COTS and their impacts on long term reliability (Jeremy GUILLERMIN - Trad)	Supercapacitor supply chain development (Gabriel Beulaget - ADS)		CTB (jean Louis Cazaux - TAS)
		pause	pause	pause	
11:10 to 12:30	testing	ESCC 9000P (Gianandri Quadri - CNES)	GaN supply chain (Klaus Beilenhoff - UMS)	new development / new component	
		industry view & approach to ESA specification ESCC 2567000 - ATH capability approval (Juan Bevan - Micross)	NanoXplore Space FPGA supply-chain (Joël Le Mauff - NanoXplore)		GR740 plastic BGA development (Lars Wallhede- Cobham Gaisler)
		ASIC/FPGA ECSS standard evolution (Agustin Fernandez-Leon - ESA)	panel session on supply chain robustness		The design and simulation of lateral SIC power devices for satellite power supply applications (Dr Peter Gammon - University of Warwick)
		radiation testing at system level (Christian Poivey - ESA, Renaud Mangeret - ADS)			From µBGA & QFN to complex Sip ... A turnkey solution for your plastic encapsulation (Manuel Bini - Serma)
12:30 to 13:30		lunch	lunch	lunch	
13:30 to 14:50	testing	Feedback on radiation test on SoC Components which can be very challenging regarding the complexity of such devices (Jérôme Carron - CNES)	OSIP (Mikko Nikulainen and Ferdinando Tonicello - ESA)	lesson learned	
		Qualification Innovative Methodology of Power GaN FET Technology for Space application (Marco Carbone - ADS)	Vision and opportunities for Space Harness Technologies (Marc Malagoli and Simon Liller - ADS)		From MICROSAT to NANOSAT feedback on COTS use part 1 (N.Jaussein Thales Alenia Space France, Charlene Doucet CNES, Thomas Rousselin STEEL ELECTRONIQUE)
		The challenges of Testing at European Irradiation Facilities (Alessandra Costantino and Anastasia Pesce - ESA)	The Next Generation of Passive Component Standards for New Space Electronics (James Spencer - TT Electronics)		From MICROSAT to NANOSAT feedback on COTS use part 2 (Nathalie Jaussein TAS France, Jacky Cerisier SYRLINKS)
		Creation of a database for single events latch-up detection on Atmel SAM3X microcontroller (Adrien Dorise - CNES)	SIC: first attempt of introducing SIC based power device in space application (Silvia Massetti - ESA)		Feedback on in-flight projects using COTS: Introduction to the RHA approach used for "new space"(Françoise Bezerra - CNES)
		pause	pause	pause	
15:10 to 17:30	technical challenges	Pb-free Transition for the European Space Sector (Agustin Coello-Vera - ALTER, Gianni Corocher - ESA)	GR740 qualification results (Francisco Javier Hernandez Suarez- Cobham Gaisler)	lesson learned	
		System on Chip – embedded Flash for Space (Séverine Furic - Microchip)	small factor Wirefree –Die-on-Die (WDoD™) technology used in 3D modules evaluation (Pascal Couderc - 3DPlus)		New Space COTS parts selection for Laser Communication in constellations (Dr Claus Ellinger - TESAT)
	ESCC and Agencies Reports	Components for Optical and Quantum Communications (Juan Barbero and Una Marvet - ALTER)	DLR (Burak Gökgöz- DLR)		Assessment of Automotive EEE Components Suitability For Space Applications (Finbarr Waldron - Tyndall)
			ESCC executive (Anastasia Pesce - ESA)		COTS procurement results Passive component (Tomas Zednicek - EPCI)
		NASA (Shri Agarwal)	Technology Assurance for Space Systems in an Age of Rapid Diversification (Jonathan Pellish - NASA)		
				Closing speech	

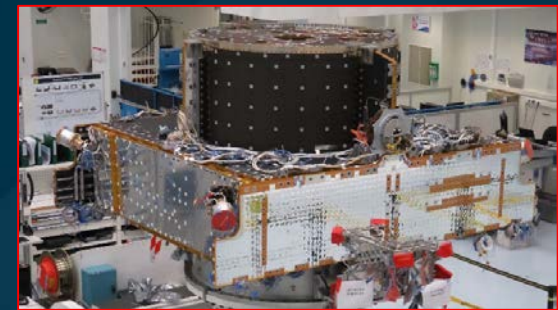
Evolution of the EEE landscape:

- COTS (automotive, new test methods, suitability for space)
- Introducing the latest FPGA/ASICs/Digital Devices/Plastic packages and the latest on the ECSS Q-ST-60-02 update
- Designs making use of the disruptive Gallium Nitride (GaN) and Silicon Carbide (SiC) for RF and Power EEE components
- Maintaining and increasing the supply chain of qualified EEE components (including a panel session on day 2)
- Latest updates on the ESCC standards and specifications



ESCCON expected outputs

- ... contribute to identify strategic component technologies for future space missions taking into considerations the changing landscape
- the definition of new methodologies to make state of the art technologies available for future high end missions while understanding and mitigating risks related to the space environment
- clearer understanding of the current supply chain issues
- how we are addressing the introduction of COTS into designs



Evolution of the ESA PA requirements:

- Introducing the new ESA Mission Classification
- Introducing new test methodologies at component level and at module level
- Completion of the ESA COTS/COTS+ Strategy Roadmap to support use in future missions
- Complete the evaluation of the OSIP call on COTS and placement of contracts



Special thank you to the ESCCON Organising Committee for making this event possible

Denis Lacombe (ESA), Agustin Coello-Vera (Alter technology), Alain Mouton (Airbus), Ana Maria Collado (ESA), Anastasia Pesce (ESA), Andreas Billstrom (Ruag), Burak Gökgöz (DLR), David Nunez Teruel (Alter technology), Demetrio Lopez Molina (Alter technology), Elisabeth Marin-Schmidt (Thales Alenia Space), Fernando Martinez Martin (ESA), Marco Di Clemente (ASI), Francois Vacher (CNES), Frederik Kuechen (Tesat), Jean-Francois Vadrot (STM), Jean-Louis Cazaux (Thales Alenia Space), Jean Vernet (Microchip), Jonathan Pellish (NASA), Juan Bevan (Micross), Julien Mekki (CNES), Klaus Beilenhoff (UMS), Martin Veith (Tesat), Sandi Habinc (Cobham Gaisler)

Proceedings will be available soon after the ESCCON at
<https://escies.org>

Enjoy ESCCON 2021!

