

European Space Components Coordination

ESCCON 2021 The European Space Component Conference 9. – 11. March 2021

Closing Speech

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ESCCON Went Virtual

- A virtual event cannot replace a face to face conference, but it was important to keep ESCCON as a regular event, especially with the evolution of the EEE landscape moving faster than ever.
- Very pleased the WEBEX event went without any technical problems. Both visual and audio were of a high quality and the chat box was used well to raise questions during each presentation.
- Thanks to all presenters for keeping the time slots and allowing us to maintain good overall programme timings on each of the days.
- 571 Registered participants and 300+ attended some of the sessions. I hope you all got out what you expected, if not feedback would be appreciated to make the next ESCCON even better.
- The proceedings will be available within a few weeks on the ESCIES website <u>https://escies.org</u>







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Some Points Noted from Each of the Sessions

ESCC and Agency reports

 Agencies are reacting to New Space with different approaches like standardization, mission classification (ESA), new budget opportunities (ESA OSIP, CNES), new organization/tools to build national industry building blocks (DLR) and normative evolution in the USA (NASA/JPL).

Testing

• Very interesting topic on radiation testing with alternative technique pro and cons (LASER, board testing), development of machine learning to detect micro latch up and presentation of European facilities including the problem of resources.

Supply Chain

- A very relevant session highlighted the supply chain issues with new regulations coming out of REACH (SCIP).
- The panel session highlighted the potential shortages we are facing due to increase of demand of other industries with potential increase of price.
- Collaboration in the space community needs be reinforced for better forecasting of component needs.
- We have today a very dynamic space market with a lot of new project and we should have a very positive view on the current situation.









Lead / COTS : Clear lead free roadmap with the creation of a dedicated WG.

Lessons Learnt

Challenges

- Good examples for use of COTS e.g.
 - Myriade (CNES platform),
 - good feedback for demonstrated use of COTS in short term mission (Nano Sat).
- Limited test data available, difficult to get data and/or support from manufacturer of EEE parts.
- Use of COTS in long term mission still to be assessed.
- For radiation requirements, good selection of component is key and there is a need to involve multiple competencies early in the project (material and process, EEE part, radiation, RAMS). Proposed new Radiation Hardness Assurance.

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Some Points From Each Of The Sessions

New developments

New interesting developments and roadmaps (GaN Power Mosfets, MRAM technology, Harness vision, GR740, 3D+, the JAXA FinFET 16nm available in 2024-25, Power SiC, Quantum communication and Plastic encapsulated devices....).





Did we meet the ESCCON expected outputs ?



- ... contribute to identify strategic component technologies for future space missions taking into considerations the changing landscape
 - we heard a lot about COTS (as expected) and we saw roadmaps at all levels, from component developers to the CTB. Next step will be to find the red line.
- 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
 - it was good to here quite a few innovative ideas. The JAXA mini wafer machine could be a real game changer for the small niche space market. Good to learn about the development of a new ESCC specification for plastic packages. Finally, the update of the commercial parts standard ECSS-Q-ST-60-13 is reaching a conclusion and acknowledges the passive and automotive parts.
- clearer understanding of the current supply chain issues
 -we have a much better understanding of how space fits into overall competitive demand for EEE parts.
- how we are addressing the introduction of COTS into designs
 -it is clear, that the use of COTS in our designs continues to increase and we still have to work out a mechanism to share data on COTS performance between the stakeholders (ACCEDE 2022).

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ESCCON 2021 – What's Next

- A full debriefing will take place at Space Components Steering Board on the outcome of the conference and necessary actions will be put in place to follow up the key topics.
- Any ideas to evolve the conference in either organization or substance please contact the members of the organizing committee (feedback form will be sent to all participants).
- ACCEDE 2022 (Spring, Seville)

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• ESCCON 2023 (time and venue tbd)











Once again a special thank you to the ESCCON Organising Committee for making this event possible

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Also thanks to the ESA conference bureau, ESA video conferencing, and the IT support team.

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Hope to see all in person at Next ESCCON!

European Space Agency