

Power interfaces standardisation, a path towards more recurrent space equipment

Presenter: Ferdinando Tonicello (ESA)

Opposite to a number of equipment that can be bought “off the shelf” (e.g. reaction wheels, sensors, S-band transponders, ...), power equipment (PCDU, PCU, PDU...) are in general very much customised to each specific mission.

Also the number of power unit suppliers is quite large, given birth across Europe to a number of units with similar functions and performances but no or very limited reusability.

So the introduction of some rationalisation would be clearly beneficial to all actors, allowing reduction of the non-recurring costs and the delays of each procurement, and a well-defined frame inside which to develop the future products.

The Technical Dossier produced in the frame of the harmonisation process 2013 for Electrical Power Management and Distribution (PMD) identifies the standardisation of Power interfaces as an important target.

At a workshop on this subject organised by TEC-EPM in October 2012, a large consensus was achieved among the participants, representing most of the industrial and institutional actors in the domain, that this standardisation effort should be initiated and that they were willing to contribute.

In 2014, the production of the ECSS-EST-20-20C standard, aimed at providing power interface requirements, started.

The presentation will identify the scope of the standard in development, and give some relevant details and hints, after a generic introduction on the issue of power interface standardisation.