

Need for Common Interfaces in EO satellites

Presenter: Josep Rosello (ESA)

The need for common electrical (data, power, software) interfaces within the platform and also between different platform sub-systems (e.g. on-board computer, mass memories) and payload sub-systems is a recurring problem, not only technically, but also between industrial teams. In principle, data interfaces should be standard, and the main design effort should go into the development of higher performance payloads. The presentation will build up from the experience called Common Instrument Interfaces (CII) led by NASA in collaboration with ESA (D/EOP and D/TEC), and will also address examples of proposed data architectures for upcoming earth observation missions like MetOp-SG, Jason-CS, TangoSat, and the new Earth Explorers under definition. The availability of higher downlink capacity, either via optical links to EDRS or via higher RF (26 GHz) data downlinks, also results in the need of higher capacity on-board data links like SpaceFibre.