

Towards a HW/SW reference architecture for payloads

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Standardization and harmonization of interfaces and protocols between Platform (OBC and Mass Memory) and Payloads will make possible the identification and development of Software and Hardware services and resources for the Payload Avionics. The result will be a catalogue of 'standard' building blocks that are capable to adapt quickly to different platform and payload interfaces (discrete, digital, power) while providing a common set of services (drivers, PUS library, OBCP engine, ...). This common HW/SW approach will provide an overall saving in terms of integration effort to the hosting spacecraft and of development efforts to the payloads.

ESA, alongside with SAVOIR efforts, is working on a strategy with the overall aim of streamlining and standardizing interfaces for general avionic boxes and this specific use case can be seen as the perfect playground where all those concepts can be quickly used for everybody's benefit.