

SAVOIR PF/PL architecture document

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The Avionics System Reference Architecture (ASRA) study has been focused on detailing and documenting the SAVOIR architecture. One element studied includes the interface between SAVOIR and various payloads that are controlled by or connected to the SAVOIR avionics. The basis for the definition was the possible links available from SAVOIR platforms and how they could be used to connect to different payload architectures.

Three different payload concepts were identified:

- Non-intelligent payload interfacing. The payload is connected to the payload bus through dedicated unit (PLIU) or to the platform RTU. The payload control software is run in the platform OBC
- Intelligent payload interfacing. The payload is connected to the payload bus through dedicated unit(s) (PLMU or ICU) executing payload control software. The platform acts as packet router in between the Ground System and the payload and handles the payload FDIR.
- Hosted payload. The payload is connected to the payload bus and provides no other data interface. The platform acts as a strict packet router. The payload makes no assumption on the available platform resources. In particular, it implements its own memory function.

For these three cases the interfaces for synchronisation, data and monitoring/control were identified. The power interface was not included.