SAVOIR @ Airbus Defence & Space
Status and perspectives

ADCSS, October 2024

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This document has been assessed by the following Technical Rater :
Assessed and classified by: Rémi Roques
Date classification completed: 15/10/2024

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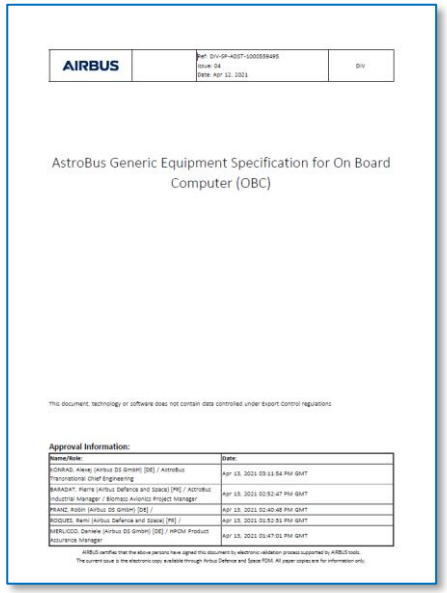
SAVOIR at ADS

- SAVOIR documentation (esp. ref architecture, OBC, boot SW spec, GOIRD) has been deployed at ADS since 2018 – 2019 initially with the generic platform study (GPLF) and continued through Copernicus Extension projects and others.
  - Embedded in AstroBus Neo avionics documentation and flight products (OSCAR Mk4 OBC, OBSW, ecosystem,…)
  - Tangible benefits through harmonization across projects (technical contents and terminology)
  - Better compliance/less ambiguity wrt Customer expectations (esp. Ops)
  - DHS handbook & training material very useful for new DHS architect on-boarding

- SAVOIR compliance reinforced for Unified Avionics (next generation avionics core)
  - Will ultimately deliver benefits beyond EOS (constellations, telecom)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AstroBus Generic Equipment Specification for On Board Computer (OBC)

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Approval Information:

Name/Role:	Date:
KONRAD, Alena [Airbus DS GmbH] [DE] / AstroBus Transitional Chief Engineering	Apr 13, 2021 09:11:54 PM GMT
BARADAT, Pierre [Airbus Defence and Space] [FR] / AstroBus Industrial Manager / Biomass Avionics Project Manager	Apr 13, 2021 03:52:47 PM GMT
FRANZ, Robin [Airbus DS GmbH] [DE] /	Apr 13, 2021 02:40:48 PM GMT
ROQUES, Remi [Airbus Defence and Space] [FR] /	Apr 13, 2021 01:52:51 PM GMT
MERLICCO, Daniele [Airbus DS GmbH] [DE] / HPOM Product Assurance Manager	Apr 13, 2021 01:47:01 PM GMT

AIRBUS certifies that the above persons have signed this document by electronic validation process supported by AIRBUS tools.
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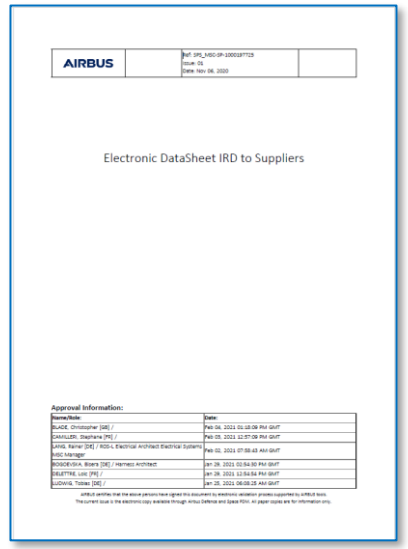
SAVOIR – feedbacks on some on-going streams

- SAVOIR EDS WG
  - Foster pragmatic approach e.g. consider / compare existing EDS formats from European Primes and assess convergence potential
  - Module level case study will be a joint topic with ADHA
- SAVOIR Autocoding Handbook
  - On-going evolution of ADS internal processes/rules to increase compliance (e.g. unit tests, processor-in-the-loop mode)
- SAVOIR Coms WG
  - No ADS involvement in post WG actions so far
  - It would be worth studying the impact on the on-board avionics, on the execution platform software (protocol stack evolutions), on the operations and on the application / execution platform interface.
  - ADS is interested in adding this stack to Unified Avionics 2.0 exec platform / middleware.
- SAVOIR FDIR Handbook
  - ADS internal processes are well aligned with the handbook



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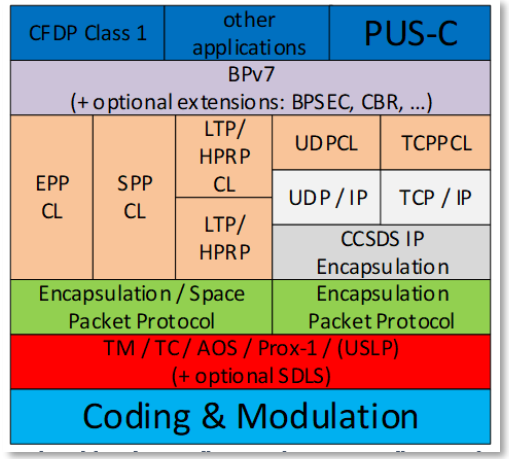
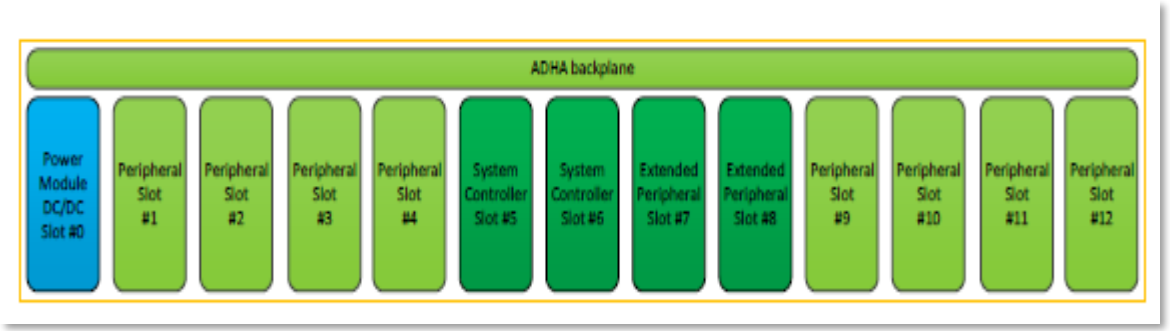


from SAVOIR Comms WG TN-01

SAVOIR – Future topics (1/2)

- SAVOIR & ADHA
  - To push for stronger synergy and to add an OBSW dimension to ADHA (starting with ADHA-3 Slice 1)
  - To further align with / contribute to SAVOIR streams e.g. EDS



from ADHA-UX Generic Design Description ESA-TECEDD-DD-2022-003147

- SAVOIR reference architecture and resulting specs, i.e. ASRA TN-001, OBC spec, RTU spec, Boot SW spec
  - Overall, documents are still valid almost a decade after their initial writing
  - Nevertheless, a review could be initiated, e.g. to
    - include feedback from CXP and G2G
    - include feedback from ADHA, esp. the 1st wave of ADHA module dev and pave the way to ADHA-based ref. architecture
    - extend the Boot SW spec to multicore processors
    - cover a larger number of security use cases
  - Then, possible scope extension to other spacecraft classes : space stations, constellations, rovers ?, launchers ?

SAVOIR space avionics open interface architecture

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SAVOIR – Future topics (2/2)

- Multicore V&V WG
  - Special interest in NG-Ultra based applications

- HW/SW WG ?
  - Significant expected added value on the development of embedded units (“black boxes”) at supplier level
  - A SAVOIR-stamped set of guidelines complementing ECSS would help LSIs to set up risk management plans with suppliers
  - Harmonized guidelines between LSIs would safeguard supplier efficiency).

SAVOIR space avionics open interface architecture

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