



SAVOIR - EDS
at SODERN

Migration to electronic ICD exchange file

- Several EDS files have been created to address distinct customer requirements
- These EDS deliveries have been integrated in our software workflow
- It enforced switching from an ICD Word document-based logic to an electronic format approach improving interfaces configuration management

We decided to develop our own tooling suite in 2021

- After a comparison study of existing tools (SECT, EdsLib) a Python-based parser has been developed to manage several input/output formats
- EDS XML format is one of the possible inputs but JSON, .h formats are also used
- Actively used for graphical interface automatic creation and command scripts for TC/TM management
- Parser can also export EDS file to Word document, ASN.1 format, C/C++ headers etc.
- EDS as parameter settings are integrated in an end-to-end equipment configuration management system

Each new contract may bring a new format

- We have to address our customer's requirements and requested formats still differ
- EDS re-use or adaptation between distinct formats is not easy
- Development effort for a toolchain based on an unstable format is not possible

Sharing the same standard

- ESA-supported tooling suite would help to converge on a common EDS format
- Expected functionalities of the tools:
 - Sharing a flexible and coherent digital language for distinct equipment types
 - Controlling the validity of an EDS file,
 - Generating source code for TC/TM emission/reception to be integrated in FSW, test benches, simulators, numerical models etc.
 - SW interfaces: checking that two interfaces defined through two EDS will match



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