# Online strategic Plan

(<http://cwe.ccsds.org/fm/sp/SitePages/SOIS.aspx>)

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SPACECRAFT ONBOARD INTERFACE SERVICES AREA

The objective of the Spacecraft Onboard Interface Services (SOIS) area is to address the services, protocols, and logical interfaces used by onboard communication networks within a spacecraft. These are applicable to both the core spacecraft platform as well as the interfaces to payloads. SOIS also addresses the use of wireless technology for proximity communication both within and in the vicinity of a spacecraft to enable ground support, space, and planetary surface operation.

The long-term goal of the SOIS area is to encourage the standardization of interfaces such that spacecraft building blocks, which may range from individual sensors and actuators to complete units, may be developed and utilized with minimum cost.

As part of this objective, the way in which spacecraft device and interface information is presented is being analyzed and standards are being proposed for specifying such information in electronic, machine-readable format. This aspect is intended to reduce the effort required for spacecraft development and testing by automating the process of code generation and database import. The area will also evaluate other opportunities that may benefit from international standards.

The SOIS area needs to coordinate the following:

* The seamless extension of CCSDS SLS and SIS into the spacecraft by developing and deploying standardized onboard data communication services, protocols, and logical interfaces;
* The use of wireless technology to support sensing and communication within and in the vicinity of a spacecraft;
* The seamless coupling of SOIS with the ground and onboard application-level services defined by the MOIMS area;
* The definition of an architecture interface standard in collaboration with the SEA area, following, in particular, the European initiatives European Coordination for Space Standardization (ECSS) and Space Avionics Open Interface Architecture (SAVOIR), as well as the U.S. Space Universal MOdular Architecture (SUMO) group.
* The adoption of SEA recommended security standards and practices;
* The SANA recommended practices for registries and repositories.

The strategic goals of the SOIS area are presented below.

SOIS GOAL 1

Encourage the standardization of onboard interfaces to enable unit and device reuse across vehicles and missions.

SOIS GOAL 2

Define recommended practices for onboard wireless communications for low, medium and high-rate applications.

SOIS GOAL 3

Define recommended practices for using Electronic Data Sheets (EDS) for onboard devices, including XML schemas and a common dictionary of terms. Promote their use as a means to specify onboard units and transducers.

SOIS Goal 4

To encourage the exploitation of wireless technology wherever applicable.