

Management

Organization / Changes

Within the UK, the Space Software and Standards Panel handles organization of CCSDS activities, including the discussion of which activities should be supported, by having people attend working group meetings and contribute to the development of CCSDS recommendations, as well as the organization of the review of draft ISO standards. This panel has been formed by merging the BSi ACE/68/-/7 panel and the Software Strategy Group (SSG) of the BNSC Space Technology Advisory Board (STAB).

SSSP reports to both the BSi technical committee ACE/68, which deals with all space related standards activities including liaison with bodies such as ECSS, and to STAB. Peter Allan remains as the chair of the new panel although it is the chair of ACE/68 who signs off new BSi standards.

Part of the CCSDS and BSi standards work is funded by BNSC. John Davey at BNSC has the responsibility of overseeing international standards development. He attends the meetings of the technical panels and so has a good view of where funding is needed.

The Electronic Document system used by BSi (<http://ecommittees.bsi-global.com/>) is now the sole means of distributing internal panel documents.

Meetings of the SSSP are typically held two times a year and meeting of the technical committee ACE/68 are held approximately four times per year.

Areas of Agency Involvement

Funding for SC13 activities in the current financial year is provided by BNSC. The funding for the larger CCSDS activities in the UK is provided by BNSC, by industrial self funding, and through the EC Framework 6 project CASPAR.

Manpower Allotted

The manpower allotted specifically to SC13 and ACE/68 activities amounts to approximately 8 days per year.

Implementation Activities

Spacecraft Utilizing SC13 Standards

Most spacecraft that have a UK involvement are part of international consortia. Hence it is difficult to highlight ones that might be considered UK spacecraft. However, in recent years, the UK has started to fund small satellite missions through the Mosaic programme.

TOPSAT is the first such satellite, jointly funded by BNSC and the Ministry of Defense. It is a technology demonstrator for low cost imaging (2.5m resolution, £15M total cost, including one year of operations). It was successfully launched on 27 October 2005 and is now in regular operation.

Ground Facilities Utilizing SC13 Standards

RAL ground station
 QinetiQ ground station
 Surrey Satellites Ltd (partial)

The above do not use all of the available standards, although the usage is increasing with time.

Documentation Activities

All of the draft standards from SC13, are reviewed by SSSP and have been approved and passed on for issue as BSi Standards.

The ISO standards currently issued as BSi standards are as follows:

ISO	BS Z	Document
11103	1	Radio metric and orbit data
11104		Time code formats
11754		Telemetry channel coding
12171		Telecommand – Channel service
12172		Telecommand – Data routing service
12173		Telecommand – Command operations procedures
12174		Telecommand – Architectural specification for the data management service
12175	4	SFDUs Structure and construction rules
13419		Packet telemetry
13420	9	AOS Network and data links – Architectural specification
13764	5	SFDUs Control authority procedures
14721		Open archival information systems – Reference model
14961		Parameter value language specification
14962	7	ASCII encoded English
15395	10	SFDUs Control authority data structures
15396	11	Cross Support Reference Model – SLE
15887	17	Data systems – Lossless data compression
15888	18	Standard formatted data units – Referencing environment
15889		Data description language. EAST specification.
15891		Protocol specification for space communications. Network protocol
15892		Protocol specification for space communications. Security protocol
15893		Protocol specification for space communications. Transport protocol

15894		Protocol specification for space communications. File protocol
17355		CCSDS file delivery protocol
17433		Packet telemetry services
20652		Producer-archive interface - Methodology abstract standard
21459		Proximity-1 space link protocol. Coding and synchronization sublayer.
21961		Data entity dictionary specification language (DEDSL). Abstract syntax.
21962		Data entity dictionary specification language (DEDSL). PVL syntax.
22641		TM (telemetry) synchronization and channel coding
22642		TC (telecommand) synchronization and channel coding
22643		Data entity dictionary specification language (DEDSL). XML/DTD syntax
22644		Orbit data messages
22645		TM (telemetry) space data link protocol
22646		Space packet protocol
22647		Space Link Identifiers
22663		Proximity-1 space link protocol. Data link.
22664		TC space data link protocol
22666		AOS space data link protocol
22667		Communication operations – Procedure 1
22669		Space Link Extension (SLE) – Return all frames service
22670		Space Link Extension (SLE) – Return channel frames service
22671		Space Link Extension (SLE) — Forward command link transmission unit (CLTU)
22672		Space Link Extension (SLE) – Forward space packet service.

Note that BSi no longer gives ISO documents additional BS Z numbers as is indicated in the above table. As time goes by, old BS Z documents will be replaced by updated ISO ones.

Technical Activities

Status of Action Items

There are no action items that currently apply.

Status of On-Going Assignments

The on-going assignment is to receive documents through the British Standards Institute and to ensure that it is reviewed for BSi and to then approve it (or not) for issuance as a British Standard.

Status of Liaison Activities

The chair of SSSP (Peter Allan) attends meetings of ACE/68, which processes standards relating to space systems and operations. In addition, ACE/68 shadows the work of the European Co-operation for Space Standardization (ECSS) committees.