



ECSS

DOORS Database version 0.8 Release Note

ECSS Secretariat
ESA-ESTEC
Requirements & Standards Division
Noordwijk, The Netherlands

Change log

ECSS-RN-004 Issue 1 9 June 2015	First issue of Release Note for DOORS Database Version 0.4.
ECSS-RN-004 Issue 2 12 October 2016	Release Note for DOORS Database Version 0.5.
ECSS-RN-004 Issue 3 17 October 2017	Release Note for DOORS Database Version 0.6.
ECSS-RN-004 Issue 4 16 September 2019	Release Note for DOORS Database Version 0.7.
ECSS-RN-004 Issue 5 31 July 2020	Release Note for DOORS Database Version 0.8. <ul style="list-style-type: none">• Changes to the modules of Version 0.7 listed in section 7.• Updated list of Standards to be imported in section 10. Updated list of limitations and known issues in section 8

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1 Introduction

This document provides information **concerning** the structure and content of the ECSS DOORS database version 0.8, dated May 2019.

The DOORS Modules were created with a simple structure so that users can easily adapt the information to their needs and the content was properly identified to allow manipulation of information using DOORS functionalities (e.g. filtering by content type or section; cross-references between content).

2 Metrics

The size of the complete ECSS DOORS database archive is 436,746 Mbytes in size (unzipped) containing 155 ECSS Standard Modules in total, and 2 additional modules for the ECSS Standard List and ECSS DPR List.

Number of formal modules per DOORS folder/project:

ECSS v0.8

- ECSS Current v0.8
 - o E – Space Engineering – 61 Modules
 - o M - Space Project Management – 5 Modules
 - o Q - Space Product Assurance – 60 Modules
 - o S - ECSS System – 2 Modules
 - o U – Space Sustainability – 1 Module
- ECSS Superseded v0.8
 - o E - Space Engineering – 18 Modules
 - o Q - Space Product Assurance – 20 Modules
 - o S – ECSS System – 1 Module
- ECSS Standard List
- ECSS DPR List

Database File MD5 checksum (ECSS_v.0.8_1October2020.dpa) =
3596D0FB821EAC4316592A17586C96DD

3 Database Generation Environment

The database has been generated under the following environment:

1. IBM Rational® DOORS® 9.1 and 9.6
2. Microsoft Office 2010 / 2013 / 2016 with Microsoft Word, Excel and Visio.

4 User Instructions

To install the DOORS database:

1. Download the zipped ECSS DOORS archive file from the ECSS website.
2. Unzip the archive with the password: DOORSDB08
3. Login into your DOORS database.
4. Click on the top menu in File -> Restore -> Project.

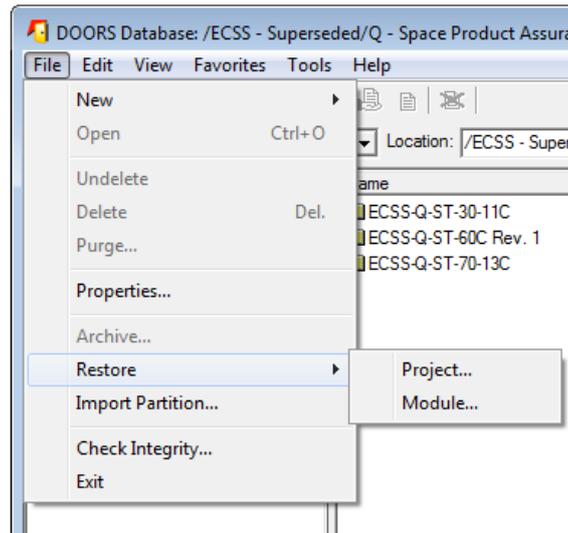


Figure 4-1: View Restore function in DOORS

5. Select the DOORS archive file and click OK to start the DOORS archive import.
 - NOTE If you don't have database permissions to do this operation, request your DOORS Database Administrator to do this operation or to give you the right permissions.
6. Define local access rights according to receiver policy (initial access rights are inherited from the parent of the restored project).
7. Rename the project according to receiver policy
 - NOTE The project can be renamed without impact on restored data and links.

5 Database Structure

5.1 Overview

Using DOORS terminology, the ECSS database is organized in a Project named “ECSS v0.8” including 2 sub-projects, “ECSS – Current v0.8” and “ECSS – Superseded v0.8”, which are subdivided in Folders:

- E - Space Engineering
- M - Space Project Management
- Q - Space Product Assurance
- S - ECSS System
- U – Space Sustainability

Each Folder contains a list of sub-folders that themselves includes one formal Module and one link module.

Each formal Module contains the whole content of a published ECSS standard. The link Module handles the cross-references within the formal Module.

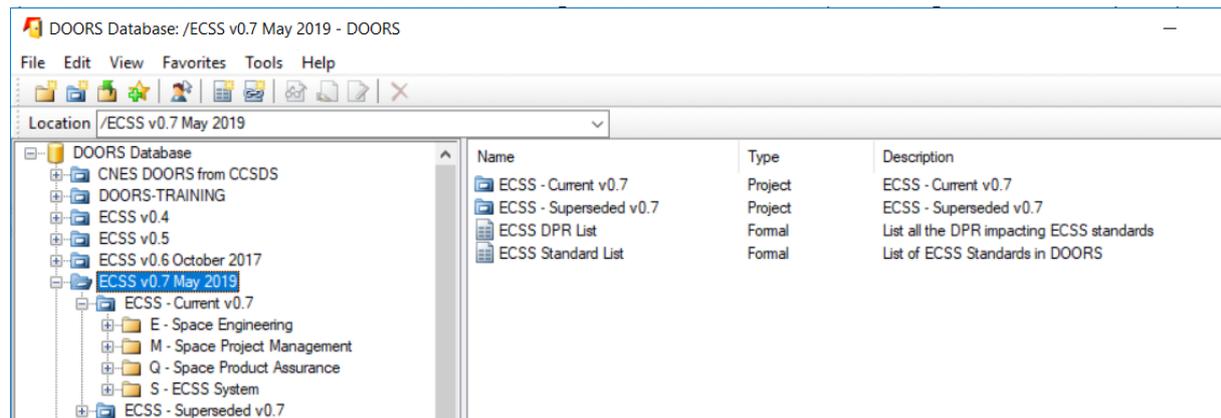


Figure 5-1: Structure of ECSS DOORS database (example)

A Module, in its main view (02 – Overview), is organized in two areas, on the left side there is the Table of Content (TOC) of the document in the form of a tree structure and on the right side the content of the different pieces of information (see Figure 5-2 showing E-ST-10-02C – TOC and partial content).

NOTE The TOC can be collapsed or expended (i.e. clicking on “plus” or “minus” icons). By clicking on any clause, its content is displayed on the right side.



ECSS Section	ECSS Source Id	IE PUID	Object Text	ECSS Notes	ECSS Object Type						
ECSS-E-01-01-01	ECSS-E-01-01-01-01	1.1	 <p>Space engineering - Verification</p> <p>ECSS-E-01-01-01-01-01</p> <p>Requirements in Standards Document (Standard), The Netherlands</p> <p>Approved</p> <p>This Standard is one of the series of ECSS Standards intended to be applied together for the management, engineering and product assurance in space products and applications. ECSS is a cooperative effort of the European Space Agency, national space agencies and industrial PRIMARY associations for the purpose of developing and maintaining common standards. Requirements in this Standard are defined in terms of what shall be accomplished, rather than in terms of how to organize and perform the necessary work. The above wording of organizational structures and methods to be applied where they are effective, and for the structures and methods to evolve as necessary without violating the standards.</p> <p>This Standard has been prepared by the ECSS-E-01-01-01-01-01 Working Group, reviewed by the ECSS Executive Secretariat and approved by the ECSS Technical Authority.</p> <p>Disclaimer</p> <p>ECSS does not provide any warranty whatsoever, whether expressed, implied, or statutory, including, but not limited to, any warranty of merchantability or fitness for a particular purpose or any warranty that the contents of the files are error-free. In no respect shall ECSS incur any liability for any damages, including, but not limited to, direct, indirect, special, or consequential damages arising out of, resulting from, or in any way connected to the use of the Standard, whether or not based upon warranty, business agreement, tort, or otherwise, whether or not liability was assumed by persons or property or otherwise, and whether or not loss was sustained from, or arose out of, the results of the files, or any services that may be provided by ECSS.</p> <p>Published by</p> <p>ESA Requirements and Standards Division ES/SC, P.O. Box 299, 2200 AG Noordwijk, The Netherlands</p> <p>Copyright</p> <p>ECSS © by The European Space Agency for the members of ECSS</p> <p>Change log</p> <table border="1"> <tr> <td>ECSS-E-01-01-01-01-01</td> <td>First issue</td> </tr> <tr> <td>ECSS-E-01-01-01-01-01</td> <td>Revised issue</td> </tr> <tr> <td>ECSS-E-01-01-01-01-01</td> <td>Revised issue</td> </tr> </table>	ECSS-E-01-01-01-01-01	First issue	ECSS-E-01-01-01-01-01	Revised issue	ECSS-E-01-01-01-01-01	Revised issue		Heading Information Heading Information Heading Information Heading Information
ECSS-E-01-01-01-01-01	First issue										
ECSS-E-01-01-01-01-01	Revised issue										
ECSS-E-01-01-01-01-01	Revised issue										

Figure 5-2: Main view of DOORS Module

In this selected view, the content of the standards is organized and displayed in columns:

- **ECSS Section**, showing the clause identifier,
- **ECSS Source Id**, which is a reference to identify information that can be referenced in the ECSS text. It contains the following information:
 - for a header: the same information as the ECSS section,
 - for a requirement: the requirement number (aggregation of section number and letter)
 - for an enumerated table (resp. figure, equation): the table (resp. figure, equation) number,
 - for a footnote: the footnote number
- **IE PUID**, showing the unique requirement identifier,
- **OID**, showing the unique object identifier (same as the IE PUID if it exists),
- **RCM Version**, showing as numerical value the version of the requirement (1 = first version),
- **Object Text**, which contains the different content, i.e. text (descriptive and normative), tables, figures and equations of the standard organized per content type,

Note This column does not only contain the text of the Requirements.
- **ECSS Notes**, contains informative text (Notes) related to normative text,
- **ECSS Object Type**, which defines the content type to allow identifying and filtering the different pieces of information. The different types defined are:

- **Bibliography** for bibliographic references,
- **Cover** for the cover page information (i.e. ECSS logo, title of the standard and reference to ECSS secretariat),
- **Heading** for a clause title,
- **Information** for a descriptive text,
- **Requirement** for a requirement (i.e. text using “shall” verbal form),
- **Recommendation** for a recommendation (i.e. text using “should” verbal form),
- **Permission** for a permission (i.e. text using “may” verbal form),
- **Acronym** for an abbreviated term,
- **Normative Reference** for a document listed in Normative Reference,
- **Definition** for a term defined in the standard,
- **Definition Content**, the content of the **Definition**,
- **Figure** for a figure,
- **Table** for a table,
- **Footnote** for the footnote text referenced in some part of the text.
- **Cross-reference**, showing cross-references within the document where "calling" identifying outgoing references, and "called by" incoming references.
- **ECSS OLE Counter**, number of OLE elements in the attribute Object Text.

The other views include columns relevant to change tracking and cross referencing inside the Module:

- **ECSS Change Status**, identifies the kind of change from the last version of the Standard added to DOORS: “Created”, “Normative Change”, “Informative Change”, “Deleted” and “Unchanged”.
- **Reason for Update**, contains the reason why the requirement was updated “DPR” for a Database Change Request and “CR” for a Change Request. The field can have both values selected.
- **Correction Number**, reference number of the DPR or CR if known.
- **ECSS Referenced ID** contains the list of DOORS “Absolute Numbers” of the referenced requirements, tables or figures.

Concerning the column **Object Text**, it has to be noted that:

- Notes and Expected Output are kept inside the requirements if they are interleaved with the normative text in at least one requirement of the Standard. Although it is informative text, it has to be kept inside the requirements for the understanding of the context (e.g. if a requirement has 3

bullets and there is a note bellow bullet 1 and another bellow bullet 2, if these notes are separate from the requirement, they lose the context);

- Tables and Figures are in separate objects whenever they have a caption and reference, in all other cases they are kept with the text (else the context would be lost);
- Tables and Figures come as OLE Objects;
- Equations are editable.

The standard reference code (e.g. ECSS-M-ST-10C) is kept in a column in case there is a need to merge the content of different standards in a single Module.

6 List of Modules

Table 6-1 lists the standards imported into the DOORS DB. This table can be found in the Module ECSS Standard List.

The latest Issue is located in the “ECSS – Current v0.8” project, previous issues (when on the table the columns First Issue and Latest version are different) are located in the “ECSS – Superseded v0.8” project.

Some lines represent Standards that are not in DOORS but had Rank Number allocated in the past.

Table 6-1: ECSS Standards imported into DOORS

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
1.	System engineering general requirements	ECSS-E-ST-10	79	C Rev.1	C	C Rev.1		
2.	Verification	ECSS-E-ST-10-02	74	C Rev.1	C	C Rev.1		
3.	Testing	ECSS-E-ST-10-03	75	C	C	C		
4.	Space environment	ECSS-E-ST-10-04	76	C Rev.1	C	C Rev.1		
5.	Technical specification	ECSS-E-ST-10-06	77	C	C	C		
6.	Reference coordinate system	ECSS-E-ST-10-09	23	C	C	C		
7.	Human factors engineering	ECSS-E-ST-10-11	78	C	C	C		
8.	Methods for the calculation of radiation received and its effects, and a policy for design margins	ECSS-E-ST-10-12	98	C	C	C		
9.	Interface management	ECSS-E-ST-10-24	129	C	C	C		
10.	Electrical and electronic	ECSS-E-ST-20	2	C Rev.1	C	C Rev.1		
11.	Multipactor design and test	ECSS-E-ST-20-01	145	C	C	C		
12.	Spacecraft charging	ECSS-E-ST-20-06	7	C Rev.1	C	C Rev.1		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
13.	Electromagnetic compatibility	ECSS-E-ST-20-07	8	C Rev.1	C	C Rev.1		
14.	Photovoltaic assemblies and component	ECSS-E-ST-20-08	9	C Rev.1	C	C Rev.1		
15.	Electrical design and interface requirements for power supply	ECSS-E-ST-20-20	132	C	C	C		
16.	Electrical design and interface requirements for actuators	ECSS-E-ST-20-21	140	C	C	C		
17.	Thermal control general requirements	ECSS-E-ST-31	80	C	C	C		
18.	Two-phase heat transport equipment	ECSS-E-ST-31-02	119	C Rev.1	C	C Rev.1		
19.	Exchange of thermal analysis data	ECSS-E-ST-31-04C	137	C	C	C		
20.	Structural general requirements	ECSS-E-ST-32	5	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
21.	Fracture control	ECSS-E-ST-32-01	81	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
22.	Structural design and verification of pressurized hardware	ECSS-E-ST-32-02	26	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
23.	Structural finite element models	ECSS-E-ST-32-03	10	C	C	C		
24.	Materials	ECSS-E-ST-32-08	22	C Rev.1	C	C Rev.1		
25.	Structural factors of safety for spaceflight hardware	ECSS-E-ST-32-10	11	C Rev.2 Corr.1	C Rev.1	C Rev.2 Corr.1		Error in Table 4-4, corrected in Corr.1, was already corrected in the module of Rev.2. Now number of module aligned with last published version and only Change log in module updated. C Rev.1 was first version in DOORS
26.	Modal survey assessment	ECSS-E-ST-32-11	25	C	C	C		
27.	Mechanisms	ECSS-E-ST-33-01	82	C Rev.2	C	C Rev.2		
28.	Explosive systems and devices	ECSS-E-ST-33-11	28	C Rev.1	C	C Rev.1		
29.	Environmental control and life support (ECLS)	ECSS-E-ST-34	83	C	C	C		
30.	Propulsion general requirements	ECSS-E-ST-35	85	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
31.	Liquid and electric propulsion for spacecraft	ECSS-E-ST-35-01	84	C	C	C		
32.	Solid propulsion for spacecrafts and launchers	ECSS-E-ST-35-02	110	C	C	C		
33.	Liquid propulsion for launchers	ECSS-E-ST-35-03	111	C	C	C		
34.	Cleanliness requirements for spacecraft propulsion hardware	ECSS-E-ST-35-06	20	C Rev.2	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
35.	Compatibility testing for liquid propulsion systems	ECSS-E-ST-35-10	105	C	C	C		
36.	Software	ECSS-E-ST-40	86	C	C	C		
37.	Silumlaton modelling platform	ECSS-E-ST-40-07	144	C	C	C		
38.	Communications	ECSS-E-ST-50	97	C	C	C		
39.	Space data links - Telemetry synchronization and channel coding	ECSS-E-ST-50-01	24	C	C	C		
40.	Ranging and Doppler tracking	ECSS-E-ST-50-02	87	C	C	C		
41.	Space data links - Telemetry transfer frame protocol	ECSS-E-ST-50-03	88	C	C	C		
42.	Space data links - Telecommand protocols, synchronization and channel coding	ECSS-E-ST-50-04	89	C	C	C		
43.	Radio frequency and modulation	ECSS-E-ST-50-05	90	C Rev.2	C Rev.1	C Rev.2		C Rev.1 was first version in DOORS
44.	SpaceFibre - Very high-speed serial link	ECSS-E-ST-50-11	141	C	C	C		
45.	SpaceWire - Links, nodes, routers and networks	ECSS-E-ST-50-12	142	C Rev.1	C Rev.1	C Rev.1		Complete new module with no link to former module of Issue C (module had rank number 91)
46.	Interface and communication protocol for MIL-STD-1553B data bus onboard spacecraft	ECSS-E-ST-50-13	101	C	C	C		
47.	Spacecraft discrete interfaces	ECSS-E-ST-50-14	94	C	C	C		
48.	CANbus extension protocol	ECSS-E-ST-50-15	127	C	C	C		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
49.	SpaceWire protocol identification	ECSS-E-ST-50-51	107	C	C	C		
50.	SpaceWire - Remote memory access protocol	ECSS-E-ST-50-52	108	C	C	C		
51.	SpaceWire - CCSDS packet transfer protocol	ECSS-E-ST-50-53	109	C	C	C		
52.	Control performances	ECSS-E-ST-60-10	102	C	C	C		
53.	Star sensor terminology and performance specification	ECSS-E-ST-60-20	92	C Rev.2	C Rev.1	C Rev.2		C Rev.1 was first version in DOORS
54.	Gyro terminology and performance specification	ECSS-E-ST-60-21	135	C	C	C		
55.	Attitude and orbit control systems (AOCS)	ECSS-E-ST-60-30	116	C	C	C		
56.	Ground systems and operations	ECSS-E-ST-70	6	C	C	C		
57.	Spacecraft on-board control procedures	ECSS-E-ST-70-01	106	C	C	C		
58.	Space segment operability	ECSS-E-ST-70-11	29	C	C	C		
59.	Ground systems and operations - Monitoring and control data definition	ECSS-E-ST-70-31	27	C	C	C		
60.	Test and operations procedure language	ECSS-E-ST-70-32	95	C	C	C		
61.	Telemetry and telecommand packet utilization	ECSS-E-ST-70-41	133	C	C	C		
1.	Project planning and implementation	ECSS-M-ST-10	1	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
2.	Organization and conduct of reviews	ECSS-M-ST-10-01	31	C	C	C		
3.	Configuration and information management	ECSS-M-ST-40	32	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
4.	Cost and schedule management	ECSS-M-ST-60	30	C	C	C		
5.	Risk management	ECSS-M-ST-80	34	C	C	C		
1.	Product assurance management	ECSS-Q-ST-10	36	C Rev.1	C	C Rev.1		
2.	Critical-item control	ECSS-Q-ST-10-04	18	C	C	C		
3.	Nonconformance control system	ECSS-Q-ST-10-09	35	C Rev.1	C	C Rev.1		
4.	Quality assurance	ECSS-Q-ST-20	38	C Rev.2	C	C Rev.2		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
5.	Quality assurance for test centres	ECSS-Q-ST-20-07	37	C	C	C		
6.	Storage, handling and transportation of spacecraft hardware	ECSS-Q-ST-20-08	117	C	C	C		
7.	Off the shelf items utilization in space systems	ECSS-Q-ST-20-10	112	C	C	C		
8.	Dependability	ECSS-Q-ST-30	41	C Rev.1	C	C Rev.1		
9.	Failure modes, effects (and criticality) analysis (FMEA/FMECA)	ECSS-Q-ST-30-02	39	C	C	C		
10.	Availability analysis	ECSS-Q-ST-30-09	40	C	C	C		
11.	Derating - EEE components	ECSS-Q-ST-30-11	14	C Rev.1	C Rev.1	C Rev.1		The DOORS TF decided in May 2014 that "Issue C Rev.1" is considered as the initial import for the first released DOORS database v0.4 (June2015).
12.	Safety	ECSS-Q-ST-40	44	C Rev.1	C	C Rev.1		
13.	Hazard analysis	ECSS-Q-ST-40-02	42	C	C	C		
14.	Fault tree analysis - Adoption notice ECSS/IEC 61025	ECSS-Q-ST-40-12	43	C	C	C		
15.	Electrical, electronic and electromechanical (EEE)	ECSS-Q-ST-60	48	C Rev.2	C Rev.1	C Rev.2		C Rev.1 was first version in DOORS
16.	ASIC and FPGA development	ECSS-Q-ST-60-02	45	C	C	C		
17.	Generic requirements for hybrids	ECSS-Q-ST-60-05	16	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
18.	Design, selection, procurement and use of die form monolithic microwave integrated circuits MMICs	ECSS-Q-ST-60-12	19	C	C	C		
19.	Requirements for the use of COTS components	ECSS-Q-ST-60-13	46	C	C	C		Based on Q-ST-60C Rev 2.
20.	Relifing requirements	ECSS-Q-ST-60-14	47	C Rev.1 Corr.1	C	C Rev.1 Corr.1		No module of C Rev.1 created
21.	Radiation hardness assurance - EEE components	ECSS-Q-ST-60-15	115	C	C	C		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
22.	Materials, mechanical parts and processes	ECSS-Q-ST-70	49	C Rev.2	C	C Rev.2		
23.	Cleanliness and contamination control	ECSS-Q-ST-70-01	50	C	C	C		
24.	Thermal vacuum outgassing test for the screening of space materials	ECSS-Q-ST-70-02	51	C	C	C		
25.	Black-anodizing of metals with inorganic dyes	ECSS-Q-ST-70-03	52	C	C	C		
26.	Thermal testing for the evaluation of space materials, processes, mechanical parts and assemblies	ECSS-Q-ST-70-04	53	C	C	C		
27.	Detection of organic contamination surfaces by IR spectroscopy	ECSS-Q-ST-70-05	54	C Rev.1	C	C Rev.1		
28.	Particle and UV radiation testing for space materials First issue	ECSS-Q-ST-70-06	55	C	C	C		
29.	Verification and approval of automatic machine wave soldering	ECSS-Q-ST-70-07	56	C	C	C		
30.	Manual soldering of high-reliability electrical connections	ECSS-Q-ST-70-08	57	C	C	C		
31.	Measurements of thermo-optical properties of thermal control materials	ECSS-Q-ST-70-09	58	C	C	C		
32.	Design rules for printed circuit boards	ECSS-Q-ST-70-12	120	C	C	C		
33.	Measurements of the peel and pull-off strength of coatings and finishes using pressure-sensitive tapes	ECSS-Q-ST-70-13	61	C Rev.1	C	C Rev.1		
34.	Corrosion	ECSS-Q-ST-70-14	134	C	C	C		
35.	Durability testing of coatings	ECSS-Q-ST-70-17	138	C	C	C		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
36.	Preparation, assembly and mounting of RF coaxial cables	ECSS-Q-ST-70-18	62	C	C	C		
37.	Determination of the susceptibility of silver-plated copper wire and cable to "red-plague" corrosion	ECSS-Q-ST-70-20	63	C	C	C		
38.	Flammability testing for the screening of space materials	ECSS-Q-ST-70-21	64	C	C	C		
39.	Control of limited shelf-life materials	ECSS-Q-ST-70-22	17	C	C	C		
40.	Crimping of high-reliability electrical connections	ECSS-Q-ST-70-26	13	C Rev.1 Corr.1	C	C Rev.1 Corr.1		
41.	Repair and modification of printed circuit board assemblies for space use	ECSS-Q-ST-70-28	15	C	C	C		
42.	Determination of offgassing products from materials and assembled articles to be used in a manned space vehicle crew compartment	ECSS-Q-ST-70-29	65	C	C	C		
43.	Wire wrapping of high-reliability electrical connections	ECSS-Q-ST-70-30	12	C	C	C		
44.	Application of paints and coatings on space hardware	ECSS-Q-ST-70-31	66	C Rev.1	C	C Rev.1		
45.	Material selection for controlling stress corrosion cracking	ECSS-Q-ST-70-36	67	C	C	C		
46.	Determination of the susceptibility of metals to stress-corrosion cracking	ECSS-Q-ST-70-37	68	C	C	C		
47.	High-reliability soldering for surface mount and mixed technology	ECSS-Q-ST-70-38	21	C Rev.1 Corr.1	C	C Rev.1 Corr.1		
48.	Welding of metallic materials for flight hardware	ECSS-Q-ST-70-39	128	C	C	C		
49.	Mechanical testing of metallic materials	ECSS-Q-ST-70-45	69	C	C	C		

#	ECSS standard title	ECSS document prefix	ECSS document rank	Latest ECSS version published	First issue imported in DOORS	Latest ECSS version in DOORS	ECSS latest correction ID	Note for ECSS Std list
50.	Requirements for manufacturing and procurement of threaded fasteners	ECSS-Q-ST-70-46	70	C Rev.1	C Rev.1	C Rev.1		C Rev.1 was first version in DOORS
51.	Particle contamination monitoring for spacecraft systems and cleanrooms	ECSS-Q-ST-70-50	114	C	C	C		
52.	Materials and hardware compatibility tests for sterilization processes	ECSS-Q-ST-70-53	99	C	C	C		
53.	Ultracleaning of flight hardware	ECSS-Q-ST-70-54	136	C	C	C		
54.	Microbial examination of flight hardware and cleanrooms	ECSS-Q-ST-70-55	103	C	C	C		
55.	Vapour phase bioburden reduction for flight hardware	ECSS-Q-ST-70-56	123	C	C	C		
56.	Dry heat bioburden reduction for flight hardware	ECSS-Q-ST-70-57	124	C	C	C		
57.	Bioburden control in clean rooms	ECSS-Q-ST-70-58	104	C	C	C		
58.	Qualification and procurement of printed circuit boards	ECSS-Q-ST-70-60C	139	C Corr.1	C Corr.1	C Corr.1		Superseded ECSS-Q-ST-70-10C and ECSS-Q-ST-70-11C
59.	Materials, processes and their data selection	ECSS-Q-ST-70-71	126	C Rev.1	C	C Rev.1		
60.	Software product assurance	ECSS-Q-ST-80	72	C Rev.1	C	C Rev.1		
1.	Description, implementation and general requirements	ECSS-S-ST-00	100	C Rev.1	C	C Rev.1		
2.	Glossary of terms	ECSS-S-ST-00-01	125	C	C	C		
1.	Planetary protection	ECSS-U-ST-20	143	C	C	C		
			130					Reserved Rank Number for ECSS-U-AS-10C
			131					Reserved Rank Number for ECSS-E-AS-11C

7 List of Changes

The changes listed below correspond to the changes done since the last database delivery v0.6, dated 17 October 2017. The list of changes include changes initiated by a DPR. The complete DPR list can be found in section 9.

Table 7-1: Module changes in DOORS

Standard	Changes
ECSS-E-ST-32-10C Rev. 1	Module moved to "ECSS – Superseded"
ECSS-E-ST-32-10C Rev. 2 Corr.1	Updated module created in "ECSS – Current"
ECSS-U-ST-20	Module created in "ECSS – Current"
ECSS-S-ST-00C	Module moved to "ECSS – Superseded"
ECSS-S-ST-00C Rev.1	Updated module created in "ECSS – Current"
ECSS-E-ST-10-04C	Module moved to "ECSS – Superseded"
ECSS-E-ST-10-04C Rev.1	Updated module created in "ECSS – Current"
ECSS-E-ST-20C	Module moved to "ECSS – Superseded"
ECSS-E-ST-20C Rev.1	Updated module created in "ECSS – Current"
ECSS-E-ST-20-01C	Module created in "ECSS – Current"
ECSS-E-ST-32-10C Rev.2 Corr.1	Error in Table 4-4, corrected in Corr.1, was already corrected in the module of Rev.2. Now number of module aligned with last published version and only Change log in module updated.
ECSS-E-ST-35-06C Rev.1	Module moved to "ECSS – Superseded"
ECSS-E-ST-35-06C Rev.2	Updated module created in "ECSS – Current"
ECSS-E-ST-40-07C	Module created in "ECSS – Current"
ECSS-Q-ST-60-14C	Module moved to "ECSS – Superseded"
ECSS-Q-ST-60-14C Rev.1 Corr.1	Updated module created in "ECSS – Current"
ECSS-Q-ST-70C Rev.1	Module moved to "ECSS – Superseded"
ECSS-Q-ST-70C Rev.2	Updated module created in "ECSS – Current"
ECSS-Q-ST-70-05C	Module moved to "ECSS – Superseded"
ECSS-Q-ST-70-05C Rev.1	Updated module created in "ECSS – Current"
ECSS-Q-ST-70-31C	Module moved to "ECSS – Superseded"
ECSS-Q-ST-70-31C Rev.1	Updated module created in "ECSS – Current"
ECSS-Q-ST-70-71C	Module moved to "ECSS – Superseded"
ECSS-Q-ST-70-71C Rev.1	Updated module created in "ECSS – Current"
ECSS Standard List	Updated with the standards added and updated.
ECSS DPR List	Database Problem Reports recorded and implemented. For details see section 9.

8 Limitations and known issues

- Standards with interleaved notes in one or more requirements didn't have the Notes split from the normative text to a separate attribute. In this case, the Notes can only be moved on a next revision of the Standard if the problem is corrected.
 - NOTE An interleaved note is when there is normative text before and after the note, in which case, if the note is split from the rest of the requirement, it may not be possible to know to which content it was referencing.
- A DOORS script (DXL) created all the links in the Standards automatically.
 - a. If a NOTE is inside the requirement field and the NOTE has a reference to a Requirement / Table / Figure then a link was created by the script. Only after moving these NOTEs to the correct field the links can be corrected as they are created automatically. These Tables / Figures might have an IE PUID without being called by normative text.
 - b. If the requirement have a range of references in the normative text (e.g. Table A-1 to Table A-6), the script only generated links for the cross-references on the text, not for the whole references in the range. This might make some Figures / Tables referenced by a requirement not have an IE PUID, as they won't have any link to them.
 - c. Both cases a and b, interleaved notes and ranges of references, were forbidden on the last version of the ECSS Standard writing guidelines.
- Tables / Figures with a caption were kept at the end of the section for standards imported until 2013 (Module attribute "Created On" before January 2014).
- Whenever there are objects identified as Requirement without shall, the IE PUID was kept because they are identified as Requirements on the Standard and there are Change Requests on these requirements to rewrite the normative text.
- If a requirement exists in an initial revision of a Standard, and it was removed on a following revision and the change was not tracked on the Standard version in Word, then the missing <<deleted>> was added to the DOORS Module to track the requirement deletion.
- As some Standards contain "Empty Headings" a "dot" has been added in the DOORS module to overcome problems when creating Word files from Modules.

9 DPR List

ECSS DPR Reference	ECSS DPR Initiator	ECSS DPR Description	ECSS DPR Origin Standards	ECSS Original DB Version	ECSS Proposed Modification	ECSS DPR Status	ECSS DPR Justification	ECSS DPR Agreed Modification	ECSS Updated DB Version	ECSS Changed Standards
ECSS-DOORS-DPR-001	Filipe Goncalves	Incorrect hierarchy in Annex A - A.2 section.	ECSS-Q-ST-70-39C	0.4	Correct hierarchy	Implemented		Implement proposed modifications.	0.5	ECSS-Q-ST-70-39C
ECSS-DOORS-DPR-002	Filipe Goncalves	Abbreviated terms: emf, GEO and GNSS in wrong column (section 3.3).	ECSS-Q-ST-10-04C	0.4	Move abbreviated term to the Object text column	Implemented		Implement proposed modifications.	0.5	ECSS-Q-ST-10-04C
ECSS-DOORS-DPR-003	Filipe Goncalves	Remove Repeated Figure A-10 and Correct columns "ECSS Section" and "ECSS Source Id"	ECSS-E-ST-20-07C Rev.1	0.4	Corrected Columns and Remove Repeated Figure A-4	Implemented		Implement proposed modifications.	0.5	ECSS-E-ST-20-07C Rev.1
ECSS-DOORS-DPR-004	Filipe Goncalves	Permissions and Recommendations have a RCM Version. RCM Version should be empty.	All Modules in ECSS Superseded	0.4	Removed RCM Version from Permissions and Recommendations	Implemented		Implement proposed modifications.	0.5	All Modules in ECSS Superseded

<p>ECSS-DOORS-DPR-005</p>	<p>Nicolas Deslandres (CNES)</p>	<p>Incomplete Prefix in Module Properties: Rank Number missing</p>	<p>Superseded: ECSS-E-ST-20-07C ECSS-E-ST-20-08C ECSS-E-ST-50-05C Rev.1 ECSS-Q-ST-20C ECSS-Q-ST-30-11C ECSS-Q-ST-60C Rev. 1 ECSS-Q-ST-70-13C</p> <p>Current: ECSS-E-ST-20-07C Rev.1 ECSS-E-ST-20-08C Rev.1 ECSS-E-ST-32-01C Rev.1 ECSS-E-ST-32-02C Rev.1 ECSS-E-ST-32-10C Rev.1 ECSS-E-ST-32C Rev.1 ECSS-E-ST-35-06C Rev.1 ECSS-E-ST-50-05C Rev.2 ECSS-E-ST-60-20C Rev.1 ECSS-M-ST-10C Rev.1 ECSS-M-ST-40C Rev.1 ECSS-Q-ST-20-07C ECSS-Q-ST-20C Rev.1 ECSS-Q-ST-30-11C Rev.1 ECSS-Q-ST-60-05C Rev.1 ECSS-Q-ST-60C Rev.2 ECSS-Q-ST-70-13C Rev.1 ECSS-Q-ST-70-46C Rev.1 ECSS-S-ST-00-01C ECSS-S-ST-00C</p>	<p>0.4</p>	<p>Correct Module Property Prefix</p>	<p>Implemented</p>	<p>Implement proposed modifications.</p>	<p>0.5</p>	<p>Superseded: ECSS-E-ST-20-07C ECSS-E-ST-20-08C ECSS-E-ST-50-05C Rev.1 ECSS-Q-ST-20C ECSS-Q-ST-30-11C ECSS-Q-ST-60C Rev.1 ECSS-Q-ST-70-13C</p> <p>Current: ECSS-E-ST-20-07C Rev.1 ECSS-E-ST-20-08C Rev.1 ECSS-E-ST-32-01C Rev.1 ECSS-E-ST-32-02C Rev.1 ECSS-E-ST-32-10C Rev.1 ECSS-E-ST-32C Rev.1 ECSS-E-ST-35-06C Rev.1 ECSS-E-ST-50-05C Rev.2 ECSS-E-ST-60-20C Rev.1 ECSS-M-ST-10C Rev.1 ECSS-M-ST-40C Rev.1 ECSS-Q-ST-20-07C ECSS-Q-ST-20C Rev.1 ECSS-Q-ST-30-11C Rev.1 ECSS-Q-ST-60-05C Rev.1 ECSS-Q-ST-60C Rev.2 ECSS-Q-ST-70-13C Rev.1 ECSS-Q-ST-70-46C Rev.1 ECSS-S-ST-00-01C ECSS-S-ST-00C</p>
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ECSS DPR Reference	ECSS DPR Initiator	ECSS DPR Description	ECSS DPR Origin Standards	ECSS Original DB Version	ECSS Proposed Modification	ECSS DPR Status	ECSS DPR Justification	ECSS DPR Agreed Modification	ECSS Updated DB Version	ECSS Changed Standards
										ECSS-Q-ST-60C Rev.2 ECSS-Q-ST-70-13C Rev.1 ECSS-Q-ST-70-46C Rev.1 ECSS-S-ST-00-01C ECSS-S-ST-00C
ECSS-DOORS-DPR-006	Wolfram Knorr	IE PUIDs repeated: ECSS-E-ST-20-08_0091030 ECSS-E-ST-20-08_0091031 ECSS-Q-ST-60_0480445	Current: ECSS-E-ST-20-08C Rev.1 ECSS-Q-ST-60C Rev.2	0.5	Correct repeated IE PUIDs	Implemented		Implement proposed modifications.	0.6	Current: ECSS-E-ST-20-08C Rev.1 ECSS-Q-ST-60C Rev.2
ECSS-DOORS-DPR-007	Filipe Goncalves	IE PUIDs repeated: ECSS-Q-ST-70-08_0570389 to ECSS-Q-ST-70-08_0570420 ECSS-Q-ST-60-13_0460338 to ECSS-Q-ST-60-13_0460440 ECSS-Q-ST-60-13_0460446 ECSS-Q-ST-60-13_0460491 ECSS-Q-ST-60_0480338 to ECSS-Q-ST-60_0480441	Current: ECSS-Q-ST-60C Rev.1 ECSS-Q-ST-60-13C ECSS-Q-ST-70-08C Rev.1	0.5	Correct repeated IE PUIDs	Implemented		Implement proposed modifications.	0.6	Current: ECSS-Q-ST-60C Rev.1 ECSS-Q-ST-60-13C ECSS-Q-ST-70-08C Rev.1

ECSS DPR Reference	ECSS DPR Initiator	ECSS DPR Description	ECSS DPR Origin Standards	ECSS Original DB Version	ECSS Proposed Modification	ECSS DPR Status	ECSS DPR Justification	ECSS DPR Agreed Modification	ECSS Updated DB Version	ECSS Changed Standards
ECSS-DOORS-DPR-008	Klaus Ehrlich	Missing Table 5-3. Missing IE PUID in Table 5-7, Table 5-8, Table 5-9.	Current: ECSS-Q-ST-70-26C	0.5	Added missing Table 5-3 with new IE PUID ECSS-Q-ST-70-26_0130221. Added missing IE PUID to Tables 5-7 (ECSS-Q-ST-70-26_0130220), 5-8 (ECSS-Q-ST-70-26_0130200), 5-9 (ECSS-Q-ST-70-26_0130201).	Implemented		Implement proposed modifications.	0.6	Superseded: ECSS-Q-ST-70-26C
ECSS-DOORS-DPR-009	Nicolas Deslandres (CNES)	Incorrect RCM Version in ECSS-Q-ST-20_0380040	Superseded: ECSS-Q-ST-20C Rev.1	0.6	Change RCM Version from 2 to 1	Implemented		Implement proposed modifications.	0.7	Superseded: ECSS-Q-ST-20C Rev.1
ECSS-DOORS-DPR-010	Nicolas Deslandres (CNES)	Note in Deleted Requirement	Current: ECSS-E-ST-10C Rev.1	0.6	Removed Note	Implemented		Implement proposed modifications.	0.7	Current: ECSS-E-ST-10C Rev.1
ECSS-DOORS-DPR-011	Klaus Ehrlich	Incorrect ECSS Object Type in 7.5a.	Current: ECSS-E-ST-20C	0.7	Change ECSS Object Type to "Requirement" and create new PUID ECSS-E-ST-20_0020404.	Implemented		Implement proposed modifications.	0.8	Current: ECSS-E-ST-20C Rev.1
ECSS-DOORS-DPR-012	Klaus Ehrlich	Interleaved Notes exist in normative provisions	Current: ECSS-E-ST-20C	0.7	Interleaved Notes in normative provisions moved from field "Object Text" to field "ECSS Notes". Marked as Informative change without change to RCM Version	Implemented		Implement proposed modifications.	0.8	Current: ECSS-E-ST-20C Rev.1

ECSS DPR Reference	ECSS DPR Initiator	ECSS DPR Description	ECSS DPR Origin Standards	ECSS Original DB Version	ECSS Proposed Modification	ECSS DPR Status	ECSS DPR Justification	ECSS DPR Agreed Modification	ECSS Updated DB Version	ECSS Changed Standards
ECSS-DOORS-DPR-013	Klaus Ehrlich	Interleaved Notes exist in normative provisions	Current: ECSS-Q-ST-70C Rev.1	0.7	Interleaved Notes in normative provisions moved from field "Object Text" to field "ECSS Notes". Marked as Informative change without change to RCM Version. With the exception of Requirements A.2.1<2>a; B.2.1<2>a and C.2.1<2>a	Implemented		Implement proposed modifications.	0.8	Current: ECSS-Q-ST-70C Rev.2
ECSS-DOORS-DPR-014	Klaus Ehrlich	Interleaved Notes exist in normative provisions	Current: ECSS-E-ST-35-06C Rev.1	0.7	Interleaved Notes in normative provisions moved from field "Object Text" to field "ECSS Notes". Marked as Informative change without change to RCM Version	Implemented		Implement proposed modifications.	0.8	Current: ECSS-E-ST-35-06C Rev.2
ECSS-DOORS-DPR-015	Klaus Ehrlich	Interleaved Notes exist in normative provisions	Current: ECSS-E-ST-10-04C	0.7	Interleaved Notes in normative provisions moved from field "Object Text" to field "ECSS Notes". Marked as Informative change without change to RCM Version	Implemented		Implement proposed modifications.	0.8	Current: ECSS-E-ST-10-04C Rev.1
ECSS-DOORS-DPR-016	Klaus Ehrlich	Interleaved Notes exist in normative provisions	Current: ECSS-E-ST-20C	0.7	Unit "db" corrected to "dB"	Implemented		Implement proposed modifications.	0.8	Current: ECSS-E-ST-20C Rev.1

ECSS DPR Reference	ECSS DPR Initiator	ECSS DPR Description	ECSS DPR Origin Standards	ECSS Original DB Version	ECSS Proposed Modification	ECSS DPR Status	ECSS DPR Justification	ECSS DPR Agreed Modification	ECSS Updated DB Version	ECSS Changed Standards
ECSS-DOORS-DPR-017	Klaus Ehrlich	Missing "ECSS Source ID" and "ECSS Object Type" in second object of splitted Tables.	Current: ECSS-E-ST-10-04C	0.7	Merge splitted normative Tables B-9, B-10 and B-11 into object with one PUID and remove obsolete second parts.	Implemented		Implemented. Note due to addition of new Table before these Tables the Table number increased by one.	0.8	Current: ECSS-E-ST-10-04C Rev.1
ECSS-DOORS-DPR-018	Klaus Ehrlich	Permission 6.3.4.3b tagged as Information in Issue C and in Revision 1 tagged as deleted Permission with PUID number 0404.	Current: ECSS-E-ST-20C	0.7	Mark the Permission with the PUID number and put as ECSS Change Status "deleted" and RCM Version "2"	Implemented		Implement proposed modifications	0.8	Current: ECSS-E-ST-20C Rev.1

The current table is also available on the Module ECSS DPR List on the root of the project.

10 List of Standards to be imported

Table 10-1: Standards expected to be released and imported in DOORS

Document ID	Title of Document or Activity	Type of activity
ECSS-E-ST-20C Rev.2	Electrical and electronic	CR implementation (incl. of "Double insulation")
ECSS-E-ST-20-07C Rev.2	Electromagnetic compatibility	CR implementation
ECSS-E-ST-20-08C Rev.2	Photovoltaic assemblies and components	CR implementation
ECSS-E-ST-20-30C	Design, requirements and control of harness	New
ECSS-E-ST-20-40C	ASIC and FPGA engineering	New
ECSS-E-ST-32-01C Rev.2	Fracture control	CR implementation
ECSS-E-ST-40C Rev.1	Software engineering	CR implementation
ECSS-E-ST-50C Rev.1	Communications	CR implementation
ECSS-E-ST-50-16C	Time triggered ethernet	New
ECSS-E-ST-70-71C Rev.1	Telemetry and telecommand packet utilization	CR implementation
ECSS-M-ST-70C	Integrated logistic support	New
ECSS-Q-ST-30-11C Rev.2	Derating – EEE components	CR implementation
ECSS-Q-ST-60-13C Rev.1	Commercial EEE components	CR implementation
ECSS-Q-ST-70-01C Rev.1	Cleanliness and contamination control	CR implementation
ECSS-Q-ST-70-05C Rev.2	Detection of organic contamination surfaces by IR spectroscopy	CR implementation
ECSS-Q-ST-70-15C	Non-destructive inspection	New
ECSS-Q-ST-70-16C	Adhesive bonding for spacecraft and launcher applications	New
ECSS-Q-ST-70-40C	Processing and quality assurance requirements for hard brazing of metallic materials for flight hardware	New
ECSS-Q-ST-70-61C	High reliability soldering for surface mount, mixed technology and hand-mounted electrical connections	Merging of ECSS-Q-ST-70-08C and ECSS-Q-ST-70-38C Rev.1
ECSS-Q-ST-70-80C	Metallic powder bed-fusion technology for space application	New