

# ECSS

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## Standardization policy

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## Foreword

This document (ECSS-P-00) presents the policy and organization of the ECSS standardization system, and the architecture of its documents.

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## Introduction

Standardization is an important tool to reduce cost and improve both quality and communication during the preparation and execution of programmes. Space Agencies in Europe and the main contractors have in the past individually developed standards and applied them to their projects. The European Cooperation for Space Standardization (ECSS) was initiated to harmonize existing European Standards for space projects, and to provide a single, coherent set of standards for use in all European space projects.

The goal of the ECSS Standardization System is to minimize life cycle cost, while continually improving the quality, functional integrity and compatibility of all elements of a project, by applying common standards for hardware, software, information and activities in projects.

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# Scope

## 1.1 General

This document states the objectives, policy, management and documentation architecture for the establishment of a coherent set of standards for space application, created through the European Cooperation for Space Standardization (ECSS system).

It further defines the process of establishing, implementing, maintaining and withdrawal of this set of standards referred to as ECSS Standards.

ECSS Standards covered by this document may be prepared for space projects and applications, within the following categories:

- project management requirements;
- requirements for design, development, manufacturing, verification and operational activities applied to space systems and their constituent parts;
- Product Assurance requirements and methods;
- interface requirements, for information relating to space systems and activities, transmitted between organizations.

ECSS Standards include specifications, guidelines, manuals, handbooks and procedures. In general, all documents released by ECSS are referred to as standards.

## 1.2 Applicability

This document, being the top level document in the ECSS system, is applicable to all work and output from this system.

The ECSS Standards shall serve as reference to all categories of space projects and constitute the baseline for managing the various space projects in Europe.

The standards shall be tailorable to different project requirements and apply to all phases and activities from start to finish of a project, including mission analysis and disposal. They are intended to be applied, as relevant, to any party participating in any element of any space mission.

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## Normative references

None.

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## Terms, definitions and abbreviated terms

### 3.1 Terms and definitions

General rules for the standardized definition of terms for the ECSS Standards shall be as defined in the ECSS Glossary of terms (ECSS-P-001) and shall be applied to all ECSS Standards.

Internationally agreed terms and definitions shall be used, where feasible.

### 3.2 Abbreviated terms

The following abbreviated terms are used in this document:

<b>Abbreviation</b>	<b>Meaning</b>
<b>AECMA</b>	European Association of Aerospace Industries
<b>CEN</b>	European Committee for Standardization
<b>CENELEC</b>	European Committee for Electrotechnical Standardization
<b>ECSS</b>	European Cooperation for Space Standardization
<b>EN</b>	European Standard
<b>ETSI</b>	European Telecommunications Standards Institute
<b>ISO</b>	International Organization for Standardization

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## Objectives and policy

### 4.1 Objectives

The overall objectives of the standards within the European Cooperation for Space Standardization (ECSS) are to:

- a. achieve more cost effective space programmes in Europe;
- b. promote improvement in quality, safety, health, and protection of the environment;
- c. promote clear and unambiguous communication between all interested parties, in a form suitable for reference or quotation in legally binding documents;
- d. organize and manage the development of a common and coherent single set of standards for the European space community, thus avoiding unnecessary duplication of standards;
- e. promote the application of the standards by encouraging organizations developing or using items to achieve space missions to use the ECSS Standards;
- f. achieve a formal status of a selected part of the standards (as appropriate) as European Standards (EN) by the European Committee for Standardization (CEN), European Committee for Electrotechnical Standardization (CENELEC) and European Telecommunications Standards Institute (ETSI), and by so doing increase the efficiency of the European space industry and strengthen its international competitiveness;
- g. achieve a formal status of a selected part of the standards (as appropriate) as ISO Standards by the International Organization for Standardization (ISO).

### 4.2 Policy

#### 4.2.1 General

ECSS policy is:

- to promote the continual improvement of methods and techniques, and the avoidance of unnecessary work;
- to systematically incorporate experience from past projects and other appropriate sources into the ECSS system;

- to improve industrial efficiency and competitiveness through limiting the variety of products and processes;
- to define requirements in such a way that they bear on the need to be fulfilled, rather than on the means to be used to fulfil that particular need, whenever possible;
- to evaluate the benefits resulting from the use of a standard prior to its initiation;
- to incorporate, where possible, standards applied by the participating member agencies, and not to duplicate the standards established by international standards organizations. The use of other standards may consist of direct copying, with permission, in an ECSS document, referencing a standard from another authority in an ECSS document, or direct use of the standard from another authority;
- to be consistent with international standards or working practices where they have been or are in the course of being generally adopted in European space industry;
- to take into account all valid sources of information and the opinions of all interested parties in the preparation of ECSS Standards to ensure rapid availability of standards at a reasonable cost when they are needed.

#### **4.2.2 Attributes of ECSS Standards**

ECSS standards shall:

- respond to a need clearly expressed by the space community, taking full account of the state of the art;
- be designed for ease of application by their users and in particular, they shall be as complete as necessary, concise, consistent, accurate and unambiguous;
- be comprehensible to qualified persons who have not participated in their preparation and be structured in a way that facilitates essential tailoring for application to specific projects;
- contain requirements which benefit the whole community, and which do not give exclusive advantage to any individual organisation;
- where practicable, not overlap with the contents of other ECSS Standards;
- be written and structured in such a way to ease the transfer to CEN, CENELEC, ETSI and ISO.

Uniformity of structure, of style and of terminology shall be maintained not only within each standard, but also within a series of associated standards. Analogous wording shall be used to express analogous provisions and identical wording shall be used to express identical provisions.

#### **4.2.3 Language**

ECSS Standards shall be drafted, approved and published in English.

Any ECSS participant wishing to translate, at its own expense, an ECSS Standard into another language may do so provided that such intent is made known to the ECSS Secretariat. Such translated documents are not part of the ECSS system. They shall bear a different identification number than the original ECSS Standard and shall separately identify which ECSS Standard has been used. In no way shall approval of the ECSS Steering Board, nor any duty of distribution by the ECSS Secretariat, be stated or implied for such translations, nor may such documents be sold.

The ECSS Steering Board may, at its discretion, authorize translations of ECSS Standards to be part of the ECSS system if a member commits to translate the relevant documents and to provide updated translations whenever the original document is revised. In this case, the translated document shall bear the same identification number as the original, and shall separately identify that it is an authorized translation of the ECSS Standard.



In any case of conflict between an ECSS Standard and its translation, whether the translation has been authorized by the ECSS Steering Board or not, the original ECSS Standard shall be considered to state the official ECSS position.

## 4.3 Implementation

### 4.3.1 Authority

The Steering Board of the ECSS is the ultimate authority for ECSS Standards. It approves and authorizes the release of all ECSS Standards.

ECSS Standards are publicly available documents agreed as a result of consultation processes with Space Agencies and Industry in Europe, designed to secure acceptance by users. However, the publication of a standard by ECSS does not automatically ensure its use. Application of the standard depends on the voluntary action of interested parties. It becomes binding if a party is contracted to work to it or by a claim of compliance with it.

The European Space Agency, on behalf of the participating members, holds copyright for all ECSS documents. No ECSS document may be reproduced in any form without the explicit consent of ESA. However, this consent is granted to organizations participating in ECSS for their own use, for their contractors and subcontractors.

### 4.3.2 Distribution access

Requests for documents or other correspondence may be addressed to:

ECSS Secretariat  
ESTEC - QR Division  
P.O. Box 299  
2200 AG Noordwijk  
The Netherlands

### 4.3.3 Application and monitoring

The ECSS Standards shall only be made applicable to a project through a legal document such as a contract. A specific ECSS Standard, or a part thereof, shall be referenced by the complete document identification.

The party imposing the use of a standard, or a part thereof, is responsible for monitoring and assuring the correct use and application of that standard.

All users of ECSS Standards are invited to inform the ECSS Secretariat about experience gained from application of ECSS Standards, so that inadequacies in the standards can be corrected.

### 4.3.4 Responsibility of the user

It is the responsibility of the party imposing a particular standard to ensure that it meets the intended need. All parties using a standard are advised to acquaint themselves with the intended scope and applicability of the standard to prevent inappropriate usage.

### 4.3.5 Drafting and presentation of ECSS Standards

ECSS Standards shall be drafted to conform to an approved procedure which defines the structure, style, layout, editorial and availability details.

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## Organization

### 5.1 Participation

#### 5.1.1 General

ECSS is open to participation from all European space industries, through Eurospace, European space agencies and other European space organizations. Participating organizations in ECSS can be Members, Observers or Associates. Agreement to work in the interest of ECSS, to pursue the ECSS objectives and policies and to follow rules as set out in the basic ECSS Operating Documents (ECSS-P-00 and ECSS-Procedures) shall be required from all participating organizations.

#### 5.1.2 Members

ECSS Members are the European space industry represented by Eurospace and those Space Agencies and organizations that indicate their intention to actively participate in ECSS and provide an adequate level of support. They shall make their best effort to ensure the adherence of their internal procedures to the applicable ECSS Standards.

Only Members take part in the consensus process within ECSS.

#### 5.1.3 Observers

ECSS Observers are those space agencies and organizations that indicate a desire to participate in ECSS activities but at a reduced level of effort. Observers are encouraged to derive their internal standards from the respective ECSS Standards.

Observers do not directly contribute to the consensus but may indicate their concurrence with a standard during the consensus process.

#### 5.1.4 Associates

Associates are those industrial and scientific organizations desiring a formal tie with the ECSS through which they can observe the development process of technical documentation and through which they can contribute to the ECSS system.

Associates are encouraged to participate actively and directly in the document development process.

### 5.1.5 Accession by new participating organizations

ECSS shall be open for participation for all European space industries, through Eurospace, and European space agencies and other European space organizations. Request for participation shall be sent in writing to the ECSS Secretariat, stating the formal acceptance of the conditions under 5.1.1. The Steering Board shall decide on such requests by simple majority of its member representatives present. Accession shall take place on the date of notification to the ECSS Secretariat that the conditions are complied with.

### 5.1.6 Termination of participation

- a. A participating organization may terminate its participation in ECSS by written notification to ECSS Secretariat, who shall inform the ECSS Steering Board. The termination becomes effective three months after receipt of the notification in the ECSS Secretariat. Such participating organization shall endeavour to minimize the effects of the termination on ECSS.
- b. If, in the opinion of two thirds of all members, a participant no longer complies with 5.1.1, a participation shall be terminated.

## 5.2 Structure

ECSS shall comprise four organizational entities:

- Steering Board
- Technical Panel
- Working Groups
- Secretariat

### 5.2.1 Steering Board

The ultimate responsibility for ECSS resides with the Steering Board (SB). The Steering Board comprises the official representatives of the Members. Nominated members may be accompanied by advisors and may designate a proxy to act for them.

The Steering Board is responsible for:

- elaborating the main objectives and defining the overall strategy of the European standardization process;
- approving annually the work plan and priorities;
- approving formally all ECSS Standards;
- surveying regularly the work of the Technical Panel;
- settling technical disputes raised by the Technical Panel;
- ensuring the assessment of the effectiveness of the utilization of the ECSS Standards and taking action on problems encountered;
- assuring the application of the standards within their own establishment;
- establishing, approving and maintaining all procedures necessary for the efficient operation of the ECSS system.

Every member of ECSS has one representative in the Steering Board. Eurospace however, as participating member for the European space industry, has four representatives. To properly reflect its role in ECSS, the representatives of Eurospace shall ensure that consolidated opinions of the European industry are fully reflected. Participants to the Steering Board shall be from large and small companies, from large and small countries, thus reflecting prime and subcontractor positions during the Steering Board meeting sessions. Each official representative of a member on the Steering Board has one vote. A simple majority of members shall be present to constitute a quorum for the approval of documents. Approval of the content of ECSS Standards by consensus is the aim, but ultimately a qualifying majority of two thirds of the members present is sufficient.

Members, who cast a negative vote, shall identify all the changes that if made, would allow them to cast a positive vote. If no agreement is reached, the document shall be passed back to the Technical Panel for rework. For issues other than the content of an ECSS Standard, a simple majority of members present shall suffice.

The Steering Board may invite a representative of a standardization organization as associate.

The ECSS Secretariat shall provide general secretarial functions for the Steering Board.

### 5.2.2 Technical Panel

Every member of ECSS has one representative in the Technical Panel. Eurospace however, as the participating member for the European space industry, has four representatives. To properly reflect its role in ECSS, the representatives of Eurospace shall ensure that consolidated opinions of the European industry is fully reflected. Participants to the Technical Panel shall be from large and small companies, from large and small countries, thus reflecting prime and subcontractor positions during the Technical Panel meeting sessions. Advisors, who may speak with their agreement, may accompany official delegates.

The Technical Panel may invite a representative of a standardization organization as associate.

The Technical Panel is responsible for:

- reporting periodically the progress of the different Working Groups to the Steering Board;
- assisting the Steering Board by drafting annually the overall work plan and priorities;
- creating Working Groups as necessary and agreeing on the terms of reference;
- dissolving Working Groups when their tasks have finished;
- utilizing and integrating the resources provided for the formation of a Working Group in accordance with the rules for Working Groups in the most effective way;
- nominating a provisional convenor for each new Working Group;
- settling technical disputes raised by Working Groups;
- reviewing from time to time the terms of reference given to the Working Groups;
- meeting not less than four times a year to review and coordinate the progress of the Working Groups;
- commenting, reviewing and discussing draft Working Group documents;
- issuing a finalized Working Group draft document for approval by the Steering Board;
- liaising with Standardization organizations as appropriate;
- the Technical Panel may delegate part of its activities to ad-hoc groups set up for a defined or undefined duration, but remains accountable to the Steering Board;
- updating of ECSS Standards based on experience reports and feedback on released standards.

All participants have the right to vote on draft documents. Each official representative of a member on the Technical Panel has one vote. A simple majority of members shall be present to constitute a quorum for the approval of documents.

Approval of the content of ECSS Standards by consensus is the aim, but ultimately a qualifying majority of two thirds of the members present is sufficient. Members, who cast a negative vote, shall identify all the changes that if made, would allow them to cast a positive vote. If no agreement is reached, the document

shall be passed back to the WG with directives for rework. For issues other than the content of an ECSS Standard, a simple majority of members present shall suffice.

The ECSS Secretariat shall provide general secretarial functions for the Technical Panel.

### 5.2.3 Working Group

The Technical Panel shall nominate a provisional convenor and shall call for the first meeting of the Working Group. On behalf of the Technical Panel, the Secretariat of the ECSS shall inform all members that the Working Group has been established and shall ask for nomination for active and effective membership. It is emphasized that the participation of associates is an essential element of the standardization process.

The Working Group is responsible for:

- making use to the maximum possible extent of available documents, whether from ESA, National Space Agencies or Industry. Those documents which are suitable as is, shall be used without change;
- elaborating draft documents in a well regulated way;
- formulating its final draft document in English and passing it to the Technical Panel for review;
- setting its own planning and working practices;
- deciding on the need to create a specialist group for deeper discussions of problem areas;
- providing regular reports on its achievements to the Technical Panel;
- checking when new documents are proposed, to ensure that no suitable international standard exists.

Any technical issue which cannot be solved by consensus within a Working Group are passed onto the Technical Panel for resolution.

Each Working Group shall perform its own secretarial duties.

Unless specifically decided otherwise by the Technical Panel, membership in any Working Group is open to any expert nominated by European industry or organization participating in the Steering Board or Technical Panel. Participants in a Working Group should possess expertise in the subject of the standard or in a related subject which is addressed by the ECSS Standards.

### 5.2.4 Secretariat

The ECSS Secretariat, provided by the European Space Agency, will carry out general secretarial and administrative duties as necessary for the operation of the ECSS System. The duties of the ECSS Secretariat include:

- supporting the Steering Board and the Technical Panel;
- registering and disseminating documents;
- maintaining status lists for membership, ECSS Standards and other documentation;
- editing, publishing and distributing ECSS Standards;
- maintaining the ECSS System configuration, which includes assigning document codes and controlling the numbering of all ECSS Standards and other documents.

## 5.3 Liaison with standardization organizations

The Technical Panel shall liaise with standardization organizations as appropriate and in particular with AECMA, CEN, CENELEC, ETSI and ISO.

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## Documentation system

### 6.1 Documentation architecture

The architecture of the ECSS Standards shall ease the task of organizing and retrieving information within the ECSS Standards system and is illustrated in annex A. This architecture is defined in broad terms as:

- Level 0 (ECSS-P-00) - The document at Level 0 describes the policy and objectives of the ECSS system and its architecture together with the principle rule for the creation, validation and maintenance of documents.
- Level 1 - The documents at Level 1 describe the policy and principles in the specific domain. They give a global view of the requirements and outline the interfaces between the elements (and the documents) at Level 2.
- Level 2 - The documents at Level 2 describe the requirements and functions (“what to do” and expected output) for all aspects in the individual domain.
- Level 3 - The documents at Level 3 describe the methods, procedures and tools to achieve the requirements of Level 2 documents (“how to do”).

The architectural level of a given document has no implication on the applicability to a project. The applicability is defined through a legal document, such as a contract.

The ECSS Documentation Architecture is illustrated in annex A. This architecture is defined to the level of detail necessary to differentiate major functions, disciplines and activities within space projects. The scope, purpose and location of every ECSS Standard shall conform to the documentation architecture approved by the Steering Board. Subordinate standards, below those identified in annex A, shall be organized in a manner approved by the Technical Panel. The document architecture may be modified, if required, by the Technical Panel and authorized by the Steering Board.

It should be noted that the architectural level is only to facilitate retrieving information. However, the actual status of a given document applied by a project is defined through a legal document, such as a contract.

### 6.2 Life cycle of an ECSS Standard

This section describes the evolution of a standard from initiation to formal release for use, and the role of the groups involved in the management of ECSS Standards. The policies defined in this document shall be implemented through approved procedures.

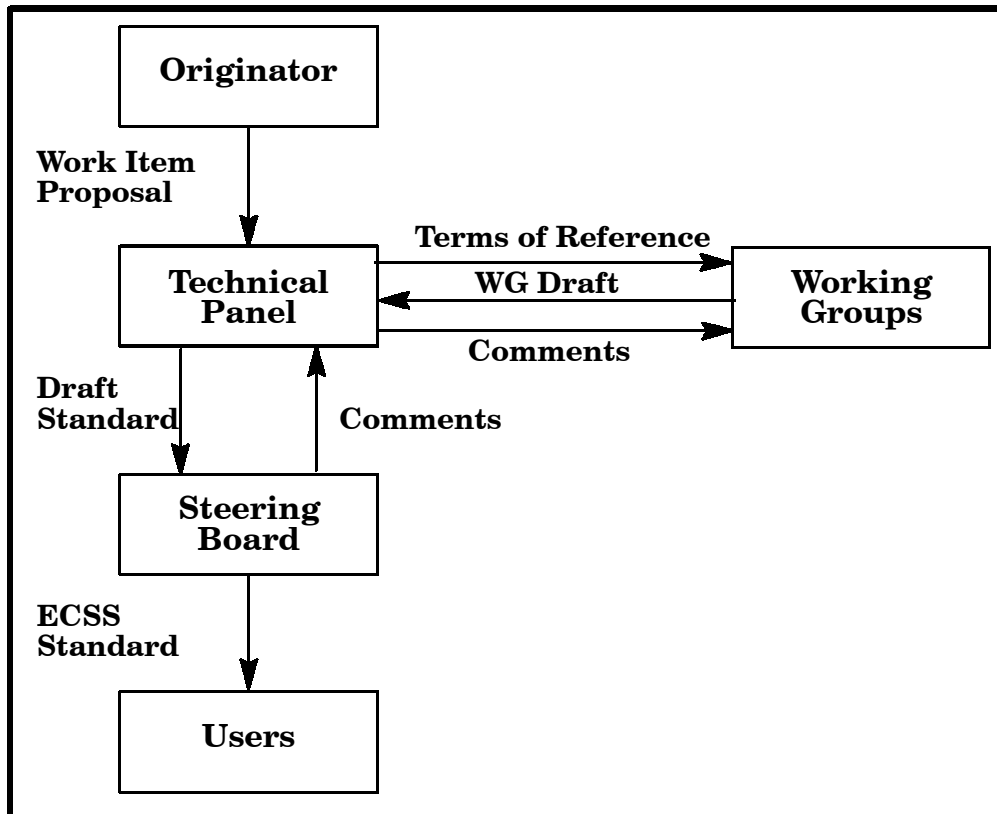
An ECSS Standard shall typically progress through the five stages shown in Table 1.

**Table 1: Life cycle of ECSS Standard**

Stage	Product	Activity
1	Work Item Proposal	A proposal for a new or revised standard or a group of standards is submitted to the Technical Panel.
2	Working Group Draft	A draft of a proposed standard is generated for internal review and discussion by the Working Group. When consensus is achieved, the Working Group Draft shall be submitted to the Technical Panel for public review and disposition.
3	Draft Standard	A draft of the proposed standard is submitted to the Steering Board for approval.
4	ECSS Standard	A standard is formally released by the Steering Board for use in European space programmes.
5	Change Notice or Withdrawal Notice	A standard is periodically subject to review for its applicability and will be suitably enhanced as required. A standard with no further need will be withdrawn.

The information flow during the document preparation is shown in Figure 1. If an existing standard is proposed for use in the ECSS system, the Working Group Draft stage may be eliminated.





**Figure 1: Information flow for preparation of ECSS Standards**

### **6.2.1 Proposal**

A Work Item Proposal may be submitted by anyone. The proposal shall be reviewed and either accepted or rejected by the Technical Panel. If the proposal is accepted, it shall be added to the work plan and a Working Group shall be assigned the task of preparing a Working Group Draft of the standard.

### **6.2.2 Working Group Draft**

The Working Group shall prepare a Working Group Draft of an ECSS Standard according to its Terms of Reference. The Working Group shall review and revise the Working Group Draft until the members agree that the document is ready to be submitted for formal approval. It shall then be submitted to the Technical Panel.

The Technical Panel shall arrange the public review and dispose of the document in one of the following two ways:

- prepare a Draft Standard and submit it to:
  - Steering Board;
  - CEN, CENELEC or ETSI for those which are candidate for European Standard.
- return the document with comments to the Working Group, requiring that a new Working Group Draft be prepared for review.

### **6.2.3 ECSS draft standard**

The draft standard shall be distributed to the Steering Board for review and disposition. The disposition shall be either to:

- publish the existing document as an ECSS Standard;
- return the document to the Technical Panel for revision;
- withdraw the ECSS draft standard as not meeting the needs of the European space community.

### **6.2.4 ECSS Standard**

The approved document shall be logged into the Index of ECSS Standards and published as an ECSS Standard for use by the European space community. This document is then available for use in existing or future projects.

### **6.2.5 prEN draft standard**

For those documents which are submitted for parallel vote to Steering Board and CEN, CENELEC or ETSI, the review rules of the recipient organization shall be followed and the comments shall be assessed and dispositioned. Accepted comments shall be implemented into the final prEN draft.

### **6.2.6 Periodic review**

Every ECSS Standard shall be reviewed at least every five years by the Technical Panel. The Technical Panel shall recommend to the Steering Board whether the standard under review should be confirmed, revised or withdrawn.

## **6.3 Configuration management**

Configuration Management of the ECSS Standards shall be performed according to an approved procedure which defines the organization, structure and responsibility for all activities.

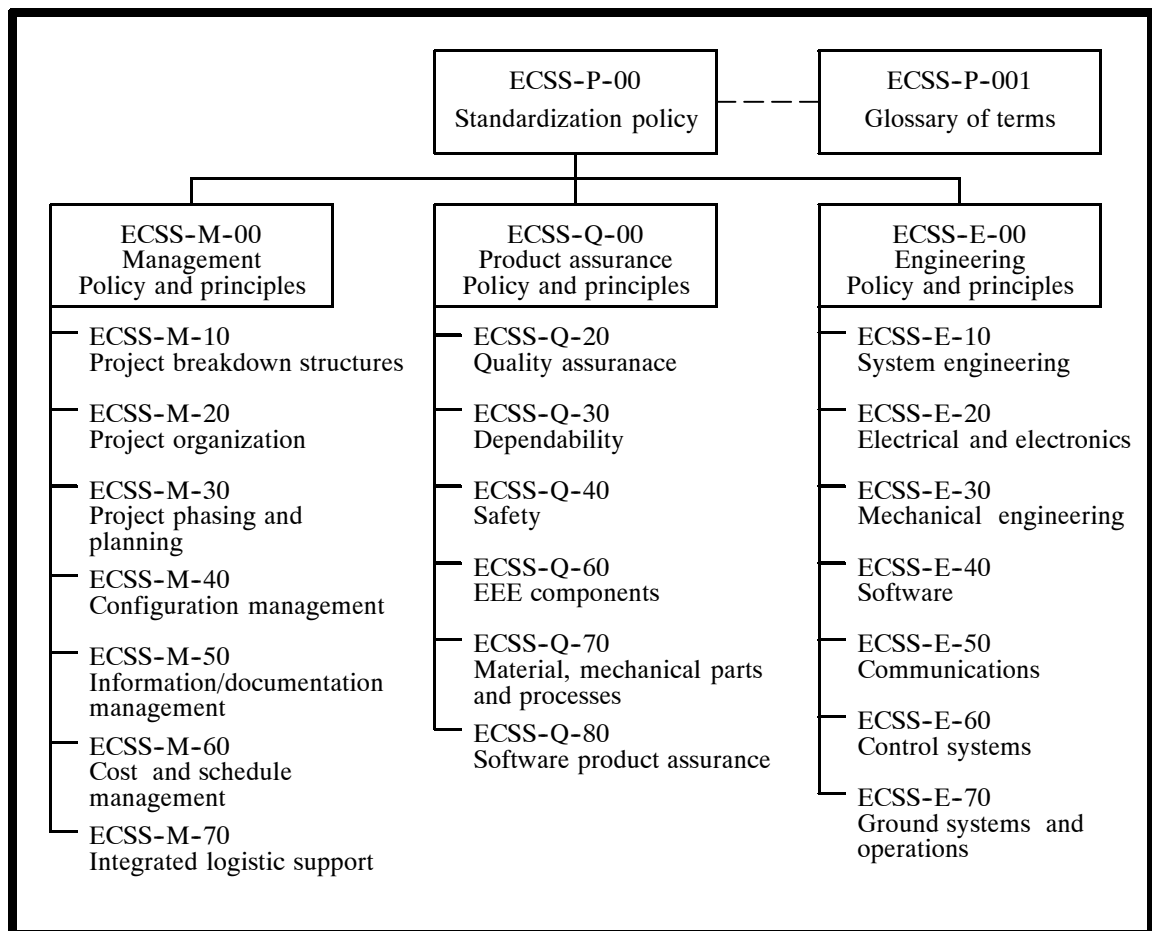
If revisions to an existing ECSS Document are desired, the document change shall be processed according to an approved procedure which defines the documentation, classification, review and implementation requirements.

The Index of ECSS Standards shall be continuously maintained and made available to all interested parties by the ECSS Secretariat

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## Annex A (normative)

# ECSS documentation architecture



**Figure 2: Documentation architecture**

**Table 2: Management standards**

Number	Title	Scope
ECSS-M-00	Project management Policy and principles	Basic principles of project management and integration with other programme PA and technical elements in all programme phases from Request for Proposal to end of service.
ECSS-M-10	Project breakdown structures	Defines the principles to be respected for setting up, using and adapting the breakdown structures and implementing them in a project.
ECSS-M-20	Project organization	Rules for industrial programme organization, customer organization, and internal/external interfaces. Model of programme organization according to responsibilities and level of participation.
ECSS-M-30	Project phasing and planning	Defines the principles and requirements to be observed during the management of the project phasing and planning.
ECSS-M-40	Configuration management	Defines all the rules for a proper configuration management. Identification, control, status accounting and verification for hardware, software and all documentation.
ECSS-M-50	Information/documentation management	Describes the management of project information (including documentation) irrespective of the media used.
ECSS-M-60	Cost and schedule management	Cost and schedule planning/control. Progress reporting. Financial planning/control.
ECSS-M-70	Integrated logistics support	Organization and management of ILS activities within the project life cycle. Relationship of ILS elements with overall programme management. Logistic Support Analysis.

**Table 3: Product assurance**

Number	Title	Scope
ECSS-Q-00	Product assurance Policy and principles	Basic PA policy and principles, addressing integration with all other programme management and technical elements.
ECSS-Q-20	Quality assurance	Quality Assurance requirements and Quality Control techniques. Consideration given to reflect the content of ISO 9001. For software quality assurance ECSS-Q-80 is applicable.
ECSS-Q-30	Dependability	Defines the dependability requirements for the complete space product including system functions implemented in software and the interaction between hardware and software.
ECSS-Q-40	Safety	Safety programme models and techniques, with interfaces to the quality system. Additional safety reviews and reporting.
ECSS-Q-60	Electrical, electronic and electromechanical (EEE) components	This standard defines the requirements for selection, control and procurement of EEE components for European space projects.
ECSS-Q-70	Materials, mechanical parts and processes	Programme for selection, approval and control of materials, mechanical parts and processes, with interfaces to the quality system.
ECSS-Q-80	Software product assurance	Application of Quality assurance, dependability, safety and maintainability principles, methods and techniques to software with interfaces to the quality system.

**Table 4: Engineering**

Number	Title	Scope
ECSS-E-00	Engineering Policy and principles	Basic Policy and overall objectives for all engineering functions in system development, verification and operations.
ECSS-E-10	System engineering	System engineering process. System requirements definition and analysis; verification; environments; human factors and ergonomics.
ECSS-E-20	Electrical and electronics	Electrical power and electromagnetics, including optics.
ECSS-E-30	Mechanical engineering	Thermal control; structures; mechanisms; environmental control and life support; propulsion and pyrotechnics.
ECSS-E-40	Software engineering	Software development models and requirements for software management and activities.
ECSS-E-50	Communications	Ground communications; space links (telemetry, telecommand and data) and data interfaces between on-board equipment.
ECSS-E-60	Control systems	Rendezvous and docking; attitude and orbit control; robotics.
ECSS-E-70	Ground systems and operations	Definition of mission operations requirements; ground system development and validation; pre-flight operations; mission control; in-orbit operations; mission data description and utilization; post-flight operations.



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## Annex B (informative)

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### Informative references

The following documents, annexed to this document, amplify or clarify its contents:

- |            |                        |   |
|------------|------------------------|---|
| <b>B.1</b> | AECMA-CEN-ECSS         | Standardization protocol (19.06.97)   |
| <b>B.2</b> | ISO TC20/SC14 and ECSS | TC20/SC14 N131E Resolution 76 - Co-operation agreement between ISO TC20/SC14 and ECSS (15.05.98)  |
| <b>B.3</b> | ETSI and ECSS          | Co-operation agreement between ETSI and ECSS, Version 1.2 (14.01.99)  |
| <b>B.4</b> | ECSS and CENELEC       | Agreement on co-operation between CENELEC and ECSS in the field of standardization of Electro Technical Subjects covered by the scope of CENELEC (06.06.97) |

## B.1 AECMA-CNE-ECSS Standardization protocol (19.06.1997)

### Protocol between CEN, ECSS and AECMA

19 JUNE 1997

The European Committee for Standardization (CEN) being registered as an international non-profit making association under Belgian law on the one hand, the European Cooperation for Space Standardization (ECSS) an initiative established to develop a coherent, single set of standards for use in all European spaces activities and the European Association of Aerospace Industries (AECMA) on the other hand:

- considering the urgent need for close coordination of standardization activities in Europe in the field of space,
- considering that for the benefit of the European economy all overlapping of standardization activities in Europe should be avoided,
- considering the status of European Standards recognized in Europe and world-wide,
- considering the broader use of European Standards in the European policies and in the European legislation as a consequence of the new approach to the technical harmonization and standards and of the results of the EC Council dated 18 June 1992,
- considering the intentions of the European Commission to support standardization in the space field through the European Standardization organizations, following the recommendation of the High Level Group of industrialists representing Europe's main space companies convened by the European Commission in September 1995 that space standardization should be supported by the EC,
- considering the existence of a Protocol between CEN and AECMA
- considering the existence of a Memorandum Of Understanding between AECMA and ECSS

agree among themselves the following:

#### **ARTICLE 1**

CEN herewith accepts requests to launch procedures addressed in Article 5 on documents prepared by ECSS in the following categories:

- project management requirements
- product assurance and safety requirements which are in addition and complementary to the ISO 9000 standards of requirements for quality management system, as specifically required for space programmes.

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- requirements for design, development, manufacturing, verification, operation and safe disposal at the end of the useful life, of space systems.
- technical requirements for equipments, mechanisms, assemblies, sub-systems, systems, the application of materials and components in space missions,
- interface requirements for information relating to space systems and activities and transmitted between organizations,

The documents concerning standards and technical specifications related to parts and materials, for the needs of space or for the common needs of space and aeronautics are not part of this protocol and shall be processed by ECSS and AECMA-CN and submitted to CEN by AECMA following the existing protocol between CEN and AECMA.

Also excluded from this protocol are electrical, electromechanical and electronic components which are within the domain of CENELEC.

## **ARTICLE 2**

ECSS will assure that the bodies preparing the standards will be adequately representative of all parties concerned in the ECSS countries and will make available at the request of CEN, lists of participation in its relevant working bodies.

## **ARTICLE 3**

ECSS members will work in close liaison with their corresponding national members of CEN during the preparation of standards in order to facilitate the acceptance and implementation of these standards by them once approved.

## **ARTICLE 4**

ECSS agrees that the standards it developed will be presented in accordance with the CEN/CENELEC PNE Rules and with the CEN/CENELEC Memorandum 8 on IPR Rules. Deviations to these rules requested in order to accommodate special needs of ECSS shall be subject of agreement between CEN and ECSS.

## **ARTICLE 5**

CEN submits to the "Primary Questionnaire Procedure" (see clause 4.2 of the CEN/CENELEC IR part 2) or to the "Unique Acceptance Procedure" (see clause 4.6 of CEN/CENELEC IR part 2) the documents prepared by ECSS in the categories defined in Article 1. Further processing regarding final vote and implementation of the standards will be conducted according to the CEN/CENELEC IR.

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**ARTICLE 6**

CEN and ECSS agree to resolve in common Working Groups any technical comments received during the "Primary Questionnaire Procedure". The secretariat of such common groups will be under the responsibility of ECSS.

CEN members having made comments will have the possibility to attend the meeting of these Working Groups if they so wish.

**ARTICLE 7**

ECSS may publish drafts in advance. These documents will be clearly marked as advanced information not yet approved by CEN.

**ARTICLE 8**

The protection of the copyright on European Standards originating from ECSS shall be the joint responsibility of CEN and ECSS. In the event the copyright is challenged in court, ECSS and CEN will assume the defense of the copyright jointly and will share 50/50 the costs of the defense.

ECSS agrees that, for European Standards originating from ECSS as is the case for other European Standards, the exploitation rights of the copyright do belong to the CEN national members.

**ARTICLE 9**

ECSS representatives will be invited to participate in CEN General Assemblies and CEN/BT meetings.

Reciprocal arrangements will be made for participation of CEN representatives in ECSS Steering Board and Technical Panel meetings.

Subject to reciprocal arrangements being made for ECSS representation to participate in meetings of AECMA-CN Standardization Committees and their related bodies, AECMA representatives will be invited to participate in ECSS Technical Panel and Steering Board meetings.

Once a year a common meeting will be organized between CEN, ECSS and AECMA to review the functioning of this protocol.

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**ARTICLE 10**

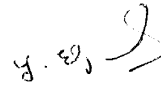
This protocol is agreed for an undetermined period of time. It may be revised by agreement between the parties. However, ECSS and CEN may terminate it and AECMA may withdraw from it by letter which should be sent to the other party at least 12 months before the termination date.



Signed on  
for CEN



Signed on  
for AECMA



Signed on  
for ECSS

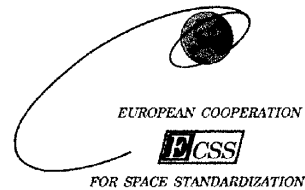
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## **B.2 TC20/SC14 N131E Resolution 76 - Co-operation agreement between ISO TC20/SC14 and ECSS (15.05.98)**

### **Resolution 76**

TC20/SC14 resolves to reinforce cooperation with ECSS in the field of space standardization. The objective is to avoid duplication, improve harmonization, and to achieve the benefit of reciprocal (mutual) expertise. Proposals for New Work Items shall be exchanged and, where appropriate, one lead shall be designated (ECSS or ISO TC20/SC14). Working Group representatives will be invited from both ECSS and ISO TC20/SC14 members. For ongoing activities in either organization, where there is common interest, emphasis shall be placed on cooperation. Each project shall be treated individually. Regular meetings shall take place between ECSS and ISO TC20/SC14 to harmonize work plans and prepare reports on coordinated activities for distribution to all parties.

## B.3 Co-operation agreement between ETSI and ECSS, Version 1.2



### CO-OPERATION AGREEMENT BETWEEN ECSS AND ETSI

#### Considering that:

- The European Cooperation for Space Standardization ("ECSS") is an initiative established by the European space community (industry and space agencies) to develop a coherent, single set of user-friendly standards for use in all European space activities;
- Until now there has been no uniform system of space standards and requirements in Europe;
- ECSS intends to ensure that all ECSS standards which have been, or are in the course of being, generally adopted by the European space industry shall be harmonised with international standards or working practices;
- ECSS intends to achieve a formal status on a selected part of the ECSS standards as European Standards (EN) through the European Committee for Standardization (CEN), European Committee for Electrotechnical Standardization (CENELEC), and European Telecommunications Standards Institute (ETSI), and by so doing increase the efficiency of the European space industry and strengthen its international competitiveness;
- ECSS is a non-profit co-operation activity with its Secretariat hosted by the European Space Agency (ESA);
- the European Telecommunications Standards Institute ("ETSI") produces European standards in the field of telecommunications and undertakes pre-standardization and standardization activities in areas common to telecommunications, information technology, sound and television broadcasting;
- ETSI is the recognized European Standardization Organization for telecommunications;
- ETSI co-operates with CEN, CENELEC and EBU, as well as with other bodies concerned with standardization at the European level in fields of common interest, and also with organizations within Europe and outside which have an interest in telecommunications standardization;
- The European Commission has Mandated work (M/237) to be performed by CEN, CENELEC and ETSI, in co-operation with ECSS.

#### The parties agree therefore to the following:

- 1 For the purposes of the present agreement, it is understood that ECSS and ETSI/SES are separate entities and that neither is the agent nor the representative of the other. The present agreement shall only provide for matters related to satellite communications systems.
- 2 Copies of working documents and drafts from either party shall be made available royalty-free to the other on request. The dissemination by one party of the documents received from the other party will be strictly limited to the full Members of that party, and solely for the purpose of technical activities relating to the party's work program.



- 3 All information delivered pursuant to this Agreement is being exchanged and delivered "as is". Both parties disclaim all warranties of any kind, whether expressed or implied written or oral, including, without limitation all warranties of title and implied warranties of merchantability and fitness for a particular purpose, provided that such disclaimers shall only be effective with respect to third parties to the extent allowed by applicable law.
- 4 ECSS and ETSI undertake to make every endeavour to electronically exchange and transfer all appropriate documents.
- 5 The copyright on contributions submitted by one party to the other party of the present agreement, remains with the originating party which retains an exclusive right to publish, distribute and sell its documents to third parties to the present agreement, as well as the right to amend them, except as otherwise provided herein.

Once a document of one party is incorporated into a document of the other party, the originating party of the document incorporated by the other party waives its rights on the reproduction, publication, distribution and sale on the newly formed document, subject to the provisions of this Agreement and such other agreements as may exist between the parties. The originating party of the document incorporated by the other party also waives its right of inspection on further amendments to the new formed document.

- 6 ETSI documents may be incorporated in ECSS industry standards. ECSS documents incorporating ETSI documents shall bear the following notice:

"The present document includes ETSI SES standardization documents or parts thereof which are the exclusive property of ETSI. ETSI has granted a royalty-free license to ECSS to copy, sell, publish, distribute, otherwise commercialise and amend ETSI work and documentation incorporated in ECSS Standards. Original versions of ETSI documents can be obtained from the ETSI publication office. © European Telecommunications Standards Institute".

- 7 ETSI may incorporate, ECSS satellite communications documents in ETSI/SES standards. ETSI/SES standards incorporating ECSS documents shall bear the following notice:

"The present document includes ECSS standardization documents or parts thereof which are the exclusive property of ECSS. ECSS has granted a royalty-free license to ETSI/SES to copy, sell, publish, distribute, otherwise commercialise and amend ECSS work and documentation incorporated in ETSI/SES Standards. Original versions of ECSS documents can be obtained from ESA".

- 8 Any information or other material incorporated by one party shall include all notices and other legends requested by the originating party, including, without limitation, notices and legends related to the inclusion of patented information with the exchanged information.
- 9 Each party shall endeavour to inform the other of intellectual property rights other than copyright, which have been brought to its attention as being essential for its documents. In respect of intellectual property rights essential to ETSI documents, reference to ETR 314 is particularly recommended.
- 10 This Agreement shall last for three years and may be renewed by mutual consent, it may be amended in the light of experience and technical developments.

Notwithstanding the foregoing, this Agreement may be terminated by either party upon 60 days written notice to the other. Upon any termination or expiration of this Agreement, all the rights granted pursuant to this Agreement shall cease immediately and the parties shall cease from distributing any information received pursuant to this Agreement. Notwithstanding anything in this Agreement or





otherwise to the contrary, the provisions of this Agreement related to ownership of rights shall survive any termination or expiration of this Agreement.


- 11 The Agreement shall not be deemed or construed to be modified, amended or waived, in whole or in part, except by written agreement of both parties. Neither party may assign this Agreement, or any of its rights, obligations or duties hereunder, without the prior written consent of the other party.

All disputes arising in connection with the present agreement, which cannot be solved amicably, shall be finally settled by arbitration in accordance with the Rules of the International Chamber of Commerce (Paris), by one or more arbitrators appointed under the said Rules.

Dated: *15 Jan. 1999*

Dated: *4.3.99.*

signed: *K. H. Rosenbrock*

Signed: 

Karl Heinz Rosenbrock  
Director-General  
ETSI  
650, Route des Lucioles  
F-06921 SOPHIA ANTIPOLIS Cedex

Mr. David C. Dale  
Chairman, ECSS Steering Board  
ESTEC  
Keplerlaan 1, Postbus 299  
NL- 2200 AG NOORDWIJK

**B.4 Agreement on co-operation between CENELEC and ECSS in the field of standardization of Electro Technical Subjects covered by the scope of CENELEC (06.06.97)**

**Agreement on Co-operation  
between the  
European Committee for  
Electrotechnical Standardization  
(CENELEC)  
and the  
European Co-operation For Space  
Standardization  
(E.C.S.S.)  
in the field of Standardization of  
Electrotechnical Subjects Covered  
by the Scope of CENELEC**

CENELEC

6 June 1997

## A G R E E M E N T

\* \* \* \* \*

Agreement between the European Committee for Electrotechnical Standardization (CENELEC) and European Co-operation for Space Standardization (ECSS) on co-operation in the field of Electrotechnical Standardization covered by the scope of CENELEC.

## WHEREAS :

- \* The proceedings leading to the achievement of the single European market early 1993 draw heavily on the availability and timely development, adoption and implementation of voluntary European standards (EN) and European Pre-standards (ENV);
- \* The technical activities organized by CENELEC in the field of products and services used in European space oriented activities cover for a more than substantial part the standards applicable to these fields;
- \* The action and technical activities of ECSS are a guarantee for the consensus building process;
- \* In consequence of this agreement, CENELEC invites ECSS to assist and to contribute to the activities of CENELEC's technical bodies in full conformity with the CEN/CENELEC Internal Regulations and with the principles applicable to such co-operation agreements.

- \* CENELEC, having the institutional responsibility and authority in application of the European Commission Directive 83/189/EEC for proposing, adopting and editing the European Electrotechnical Standards for products and services brought on the European market, has at its disposal all adequate and experienced procedures and structures for the adoption of these European Standards (EN) for the editing of technical reports and for the rapid publication of European Pre-standards (ENV).
- \* The CENELEC General Assembly has defined the basic principles covering the concept of co-operation agreements with European organizations (Doc. CLC(PERM)006 is an integral part this agreement).

**Both CENELEC and ECSS have agreed upon the following :**

1. Both organizations agree to co-operate in all fields of electrotechnical standardization within the scope of CENELEC and ECSS and directly or indirectly related to space standardization

Contributions by ECSS to establish and to guarantee consensus on proposed draft specifications is seen as a direct benefit for the subsequent European standardization process.

2. ECSS is in particular invited to :
  - \* formulate advice on current and future standards programmes, e.g by stating needs and by proposing priorities;

- \* propose to the CENELEC BT drafts with a view to their possible incorporation in the body of CENELEC standards (and when appropriate as IEC standards) through the normal approval procedures;
  - \* deliver expert advice where necessary on the implementation dates and legislative consequences of the adopted European standards;
  - \* assist CENELEC with advisory status on difficulties encountered during the standardization process.
3. All ECSS proposals and contributions will be introduced to the CENELEC BT.
  4. In consequence of the introduction to the CENELEC BT of the drafts and proposals delivered by ECSS, the latter may be invited by the CENELEC technical body in charge of the subject to introduce, clarify and where necessary, after discussion, to amend its initial proposals.
  5. Should the CENELEC procedures for approval of the ECSS proposals lead to technical comments, the required follow up will be undertaken in an ad hoc working group set up to that effect. The convenorship will be assured by a member of staff of the CENELEC Central Secretariat. ECSS will participate in this ad hoc WG.

The ECSS Secretariat will in due time receive a copy of all the technical comments in question.

6. ECSS fully recognizes the application to the standards work in its field of competence of the existing and forthcoming agreements between the International Electrotechnical Commission (IEC) and CENELEC.

7. ECSS releases all copyright on its contributions when they are incorporated in ENs or ENVs. Unpublished or unadopted contributions remain fully under copyright of ECSS

The Standards resulting from a ECSS proposal shall identify this fact by the following statement in their introduction :

"This standard has been drafted with the help of ECSS and was adopted by CENELEC after public enquiry and formal vote according to the CENELEC Rules of Procedure".

ECSS may reproduce parts of ENs with full mention of the origin and references in its publications. Maintenance and alignment will be guaranteed by a suitable procedure.

8. ECSS Members and their experts will continue as before to contribute fully to all technical consultations and preparation activities, at national level, of the relevant bodies of the National Electrotechnical Committees Members of CENELEC.

9. In exceptional cases where technical work would be assigned to CENELEC pursuant to a specific mandate from the European Commission and/or EFTA Secretariat and for which mandate funding would be made available, it is agreed that if the mandate requires additional and/or related technical work such as testing, statistical evaluation of tests and tolerances, one of the ECSS members will be allowed to benefit from this funding on the

basis of an agreed sub-contract with CENELEC through one of the national committees. Such a sub-contract would fully respect all contractual obligations of CENELEC.

10. Both parties agree to consult regularly at secretariat level on the operation and possible improvement/amendment of this agreement.
  
11. Both parties confirm that this agreement can be terminated after consultation and following the receipt of an official letter stating the reasons for termination with six months' notice.

Both parties, however, shall at such event take the required measures to duly finalize the existing work and contracts.

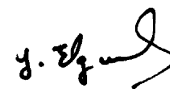
Brussels, 6 June 1997

For CENELEC,

For ECSS,



Mr H. WANDA  
President



Dr. Y. EL Gammal  
Chairman ECSS Technical Panel

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## Annex C (informative)

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### List of participants (Status March 2000)

#### C.1 Members

##### Association of the European Space Industry

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## C.2 Observer

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