Dependability management - Part 3-12: Application guide - Integrated logistic support

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60300-3-12:2011 sisaldab Euroopa standardi EN 60300-3-12:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 60300-3-12:2011 consists of the English text of the European standard EN 60300-3-12:2011.
Standard on kinnitatud Eesti Standardikeskuse 30.04.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 25.03.2011.	Date of Availability of the European standard text 25.03.2011.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 03.120.30, 21.020

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60300-3-12

March 2011

ICS 03.120.30; 21.020

Supersedes EN 60300-3-12:2004

English version

Dependability management - Part 3-12: Application guide - Integrated logistic support

(IEC 60300-3-12:2011)

Gestion de la sûreté de fonctionnement - Partie 3-12: Guide d'application - Soutien logistique intégré (CEI 60300-3-12:2011)

Zuverlässigkeitsmanagement - Teil 3-12: Anwendungsleitfaden - Integrierte logistische Unterstützung (IEC 60300-3-12:2011)

This European Standard was approved by CENELEC on 2011-03-24. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 56/1398/FDIS, future edition 2 of IEC 60300-3-12, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-3-12 on 2011-03-24.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

This European Standard supersedes EN 60300-3-12:2004.

EN 60300-3-12:2011 includes the following significant technical changes with respect to EN 60300-3-12:2004:

– provision of a better overview of the whole ILS process;

– updating of the document to align with associated dependability standards that were introduced after EN 60300-3-12:2004.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2011-12-24
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-03-24

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60300-3-12:2011 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-191	-	International Electrotechnical Vocabulary (IEV) - Chapter 191: Dependability and quality of service	-	-
IEC 60300-3-1	-	Dependability management - Part 3-1: Application guide - Analysis techniques for dependability - Guide on methodology	EN 60300-3-1	-
IEC 60300-3-2	-	Dependability management - Part 3-2: Application guide - Collection of dependability data from the field	EN 60300-3-2	-
IEC 60300-3-3	-	Dependability management - Part 3-3: Application guide - Life cycle costing	EN 60300-3-3	-
IEC 60300-3-4	-	Dependability management - Part 3-4: Application guide - Guide to the specification of dependability requirements	EN 60300-3-4	-
IEC 60300-3-10	-	Dependability management - Part 3-10: Application guide - Maintainability	-	-
IEC 60300-3-11	-	Dependability management - Part 3-11: Application guide - Reliability centred maintenance	EN 60300-3-11	-
IEC 60300-3-14	-	Dependability management - Part 3-14: Application guide - Maintenance and maintenance support	EN 60300-3-14	-
IEC 60300-3-16	-	Dependability management - Part 3-16: Application guide - Guidelines for specification of maintenance support services	EN 60300-3-16	-
IEC 60706-2	-	Maintainability of equipment - Part 2: Maintainability requirements and studies during the design and development phase	EN 60706-2	-
IEC 60706-3	-	Maintainability of equipment - Part 3: Verification and collection, analysis and presentation of data	EN 60706-3	-
IEC 60706-5	-	Maintainability of equipment - Part 5: Testability and diagnostic testing	EN 60706-5	-
IEC 60812	-	Analysis techniques for system reliability - Procedure for failure mode and effects analysis (FMEA)	EN 60812	-
IEC 61160	-	Design review	EN 61160	-

Publication	Year	Title	EN/HD	Year
IEC 62402	-	Obsolescence management - Application guide	EN 62402	-
IEC 62508	-	Guidance on human aspects of dependability	EN 62508	-

CONTENTS

INTRODUCTION

The successful operation of an item in service depends to a large extent upon the effective acquisition and management of logistic support in order to achieve and sustain the required levels of performance and customer satisfaction over the entire life cycle.

Logistic support encompasses the activities and resources required to permit operation and maintain an item (hardware and software) in service. Logistic support covers maintenance, manpower and personnel, training, spares, technical documentation, packaging, handling, storage and transportation, logistic support resources and disposal. In most cases, maintenance support is considered to be synonymous with logistic support. Logistic support may also include operational tasks but the differentiation between operational and maintenance tasks varies with industry and individual practices.

The cost of logistic support is a major contributor to the life cycle costing (LCC) of an item and increasingly, customers are making purchase decisions based on life cycle cost rather than initial purchase price alone. Logistic support considerations may therefore have a major impact on item sales by ensuring that the item can be operated and supported at an affordable cost and that all the necessary resources have been provided to fully support the item so that it meets the customer requirements.

Quantification of logistic support costs allows the manufacturer to define the logistic support cost elements and evaluate the warranty implications. This provides the opportunity to reduce risk and allows logistic support costs to be set at competitive rates.

Integrated logistic support (ILS) is a management method by which all the logistic support services required by a customer can be brought together in a structured way and in harmony with an item. ILS should be applied to ensure that supportability considerations influence the concept and design of an item and to ensure that logistic support arrangements are consistent with the design and each other throughout the item's life.

The successful application of ILS will result in a number of customer and supplier benefits. For the customer, these can include increased satisfaction, lower logistic support costs, greater availability and lower life cycle costs. For the supplier, benefits can include lower logistic support costs, a better and more saleable item with fewer item modifications due to supportability deficiencies.

This part of IEC 60300 provides guidance on the minimum activities necessary to implement an effective ILS management system for a wide range of commercial suppliers.

DEPENDABILITY MANAGEMENT –

Part 3-12: Application guide – Integrated logistic support

1 Scope

This part of IEC 60300 is an application guide for establishing an integrated logistic support (ILS) management system.

It is intended to be used by a wide range of suppliers including large and small companies wishing to offer a competitive and quality item which is optimized for the purchaser and supplier for the complete life cycle of the item.

It also includes common practices and logistic data analyses that are related to ILS.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-191, *International Electrotechnical Vocabulary – Chapter 191: Dependability and quality of service*

IEC 60300-3-1, *Dependability management – Part 3-1: Application guide – Analysis techniques for dependability - Guide on methodology*

IEC 60300-3-2, *Dependability management – Part 3-2: Application guide – Collection of dependability data from the field*

IEC 60300-3-3, *Dependability management – Part 3-3: Application guide – Life cycle costing*

IEC 60300-3-4 *Dependability management – Part 3-4: Application guide – Guide to the specification of dependability requirements*

IEC 60300-3-10, *Dependability management – Part 3-10: Application guide – Maintainability*

IEC 60300-3-11, *Dependability management – Part 3-11: Application guide – Reliability centred maintenance*

IEC 60300-3-14, *Dependability management – Part 3-14: Application guide – Maintenance and maintenance support*

IEC 60300-3-16, *Dependability management – Part 3-16: Application guide – Guidelines for specification of maintenance support services*

IEC 60706-2, *Maintainability of equipment – Part 2: Maintainability requirements and studies during the design and development phase*

IEC 60706-3, *Maintainability of equipment – Part 3: Verification and collection, analysis and presentation of data*

IEC 60706-5*, Maintainability of equipment – Part 5: Testability and diagnostic testing*

IEC 60812, *Analysis techniques for system reliability – Procedure for failure mode and effects analysis (FMEA)*

IEC 61160, *Design review*

IEC 62402, *Obsolescence management – Application guide*

IEC 62508, *Guidance on human aspects of dependability*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms and definitions given in IEC 60050-191, as well as the following terms and definitions, apply.

3.1 Terms and definitions

3.1.1
design life
period during which an item is expected to perform according to the technical specifications to which it was produced

NOTE The specification should define the environment, usage and level of logistic support. The period may be time related, distance related or number of cycles related.

3.1.2
integrated logistic support
ILS
management method by which all the logistic support services required by a customer can be brought together in a structured way and in harmony with an item

3.1.3
item
part, component, device, functional unit, equipment, subsystem or system that can be individually considered

NOTE 1 An item may consist of hardware, software, people or any combination thereof.

NOTE 2 In French the term "individu" is used mainly in statistics.

NOTE 3 A group of items, e.g. a population of items or a sample, may itself be considered as an item.

3.1.4
line replaceable item
LRI
replaceable hardware or software item which can be replaced directly on the equipment.

NOTE LRI is sometimes referred to as line replaceable unit (LRU).

3.1.5
logistic support
all material and resources required to permit the operation and undertake the maintenance of an item including both hardware and software

3.1.6
logistic support analysis
LSA
selective application of a range of activities undertaken to assist in complying with supportability and other ILS objectives