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# TECHNICAL SPECIFICATION



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**Active assisted living (AAL) use cases**

INTERNATIONAL  
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## Active assisted living (AAL) use cases



## CONTENTS

FOREWORD .....	10
INTRODUCTION .....	12
1 Scope .....	13
2 Normative references .....	13
3 Terms, definitions and abbreviated terms .....	13
3.1 Terms and definitions .....	13
3.2 Abbreviated terms .....	13
4 General .....	14
4.1 Overview .....	14
4.2 Objectives .....	14
4.3 Use case development stages .....	14
4.4 AAL architecture model .....	14
5 Definition of AAL use case template .....	16
5.1 Overview .....	16
5.2 Description of use case .....	16
5.3 AAL levels of criticality .....	16
5.4 Levels of assistance (user domains) .....	17
5.5 Use case categories .....	18
5.6 Context of use .....	19
5.7 System component composition .....	20
5.8 Actors .....	21
5.8.1 General .....	21
5.8.2 Persons .....	21
5.8.3 Technical components .....	21
5.8.4 Organizations .....	21
5.8.5 Relationship between actors .....	22
6 Use case analysis .....	22
6.1 General .....	22
6.2 Overview and representative use cases .....	22
6.2.1 General .....	22
6.2.2 Prevention and management of chronic long-term conditions .....	25
6.2.3 Social interaction .....	26
6.2.4 Mobility .....	26
6.2.5 Health & wellness .....	27
6.2.6 (Self-)management of daily life activities at home .....	27
6.3 Functionalities that appear in each use case .....	28
7 Considerations of user requirements .....	30
7.1 General .....	30
7.2 Definition of user requirements .....	31
7.2.1 General .....	31
7.2.2 Safety .....	31
7.2.3 Security .....	32
7.2.4 Privacy and data protection .....	32
7.2.5 Functional requirements .....	32
8 Summary of standards gap analysis .....	33

9	Conclusions and recommendations.....	33
	Annex A (informative) AAL use case template (version 1.10) .....	35
	A.1 Level of criticality (see 5.3) .....	35
	A.2 Name of use case .....	35
	A.3 AAL function and service layer .....	35
	A.4 AAL system component composition .....	35
	A.5 Version management .....	35
	A.6 Basic information to use case .....	36
	A.7 Scope and objectives of use case .....	36
	A.8 Narrative of use case .....	36
	A.9 Actors: people, components, systems, integrated systems, applications and organizations .....	36
	A.10 Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	36
	A.11 Referenced standards and/or standardization committees.....	37
	A.12 Relation with other known use cases .....	37
	A.13 General remarks .....	37
	A.14 Data security and privacy .....	37
	A.15 Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	37
	A.16 User requirements and interactions with other actors .....	37
	A.17 Drawings or diagrams depicting the use case .....	37
	Annex B (informative) Representative use cases .....	38
	B.1 Use case 1 personal health check.....	38
	B.1.1 Level of criticality (See 5.3) .....	38
	B.1.2 Name of use case .....	38
	B.1.3 AAL function and service layer .....	38
	B.1.4 AAL system component composition.....	38
	B.1.5 Version management.....	39
	B.1.6 Basic information to use case .....	39
	B.1.7 Scope and objectives of use case .....	39
	B.1.8 Narrative of use case.....	40
	B.1.9 Actors: people, components, systems, integrated systems, applications and organizations .....	40
	B.1.10 Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	40
	B.1.11 Referenced standards and/or standardization committees .....	41
	B.1.12 Relation with other known use cases .....	41
	B.1.13 General remarks .....	41
	B.1.14 Data security and privacy .....	41
	B.1.15 Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	41
	B.1.16 User requirements and interactions with other actors.....	41
	B.1.17 Drawings or diagrams depicting the use case .....	42
	B.2 Use case 2 advanced medication monitoring.....	42
	B.2.1 Level of criticality (see 5.3).....	42
	B.2.2 Name of use case .....	42
	B.2.3 AAL function and service layer .....	42
	B.2.4 AAL system component composition.....	43
	B.2.5 Version management.....	43

B.2.6	Basic Information to use case .....	43
B.2.7	Scope and objectives of use case .....	43
B.2.8	Narrative of use case .....	43
B.2.9	Actors: people, components, systems, integrated systems, applications and organizations .....	46
B.2.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	46
B.2.11	Referenced standards and/or standardization committees .....	46
B.2.12	Relation with other known use cases .....	46
B.2.13	General remarks .....	46
B.2.14	Security and privacy .....	47
B.2.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	47
B.2.16	User requirements and interactions with other actors .....	47
B.2.17	Drawings or diagrams depicting the use case .....	48
B.3	Use Case 3 enable social interaction with care provider .....	48
B.3.1	Level of criticality (see 5.3) .....	48
B.3.2	Name of use case .....	49
B.3.3	AAL function and service layer .....	49
B.3.4	AAL system component composition .....	49
B.3.5	Version management .....	49
B.3.6	Basic information to use case .....	50
B.3.7	Scope and objectives of use case .....	50
B.3.8	Narrative of use case .....	51
B.3.9	Actors: people, components, systems, integrated systems, applications and organizations .....	52
B.3.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	52
B.3.11	Standards and/or standardization committees .....	52
B.3.12	Relation with other known use cases .....	53
B.3.13	General remarks .....	53
B.3.14	Data security and privacy .....	53
B.3.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	53
B.3.16	User requirements and interactions with other actors .....	53
B.3.17	Drawings or diagrams depicting the use case .....	54
B.4	Use case 4 social interaction with smart TV .....	55
B.4.1	Level of criticality (see 5.3) .....	55
B.4.2	Name of use case .....	55
B.4.3	AAL function and service layer .....	55
B.4.4	AAL system component composition .....	56
B.4.5	Version management .....	56
B.4.6	Basic information to use case .....	56
B.4.7	Scope and objectives of use case .....	57
B.4.8	Narrative of use case .....	57
B.4.9	Actors: people, components, systems, integrated systems, applications and organizations .....	57
B.4.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	58
B.4.11	Referenced standards and/or standardization Committees .....	58
B.4.12	Relation with other known use cases .....	58

B.4.13	General remarks .....	58
B.4.14	Data security and privacy .....	58
B.4.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	58
B.4.16	User requirements and interactions with other actors.....	59
B.4.17	Drawings or diagrams depicting the use case .....	59
B.5	Use case 5 smart wheeled walker .....	60
B.5.1	Level of criticality (see 5.3).....	60
B.5.2	Name of use case .....	61
B.5.3	AAL function and service layer .....	61
B.5.4	AAL system component composition.....	61
B.5.5	Version management.....	61
B.5.6	Basic information to use case .....	62
B.5.7	Scope and objectives of use case .....	62
B.5.8	Narrative of use case.....	63
B.5.9	Actors: people, components, systems, integrated systems, applications and organizations .....	63
B.5.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	64
B.5.11	Referenced standards and/or standardization committees .....	64
B.5.12	Relation with other known use cases .....	64
B.5.13	General remarks .....	64
B.5.14	Data security and privacy .....	64
B.5.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	65
B.5.16	User requirements and interactions with other actors.....	65
B.5.17	Drawings or diagrams depicting the use case .....	65
B.6	Use Case 6 enhanced terminal accessibility.....	66
B.6.1	Level of criticality (see 5.3).....	66
B.6.2	Name of use case .....	66
B.6.3	AAL function and service layer .....	67
B.6.4	AAL system component composition.....	67
B.6.5	Version management.....	67
B.6.6	Basic information to use case .....	67
B.6.7	Scope and objectives of use case .....	68
B.6.8	Narrative of use case.....	68
B.6.9	Actors: people, components, systems, integrated systems, applications and organizations .....	69
B.6.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	69
B.6.11	Referenced standards and/or standardization committees .....	69
B.6.12	Relation with other known use cases .....	69
B.6.13	General remarks.....	70
B.6.14	Data security and privacy .....	70
B.6.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	70
B.6.16	User requirements and interactions with other actors.....	70
B.6.17	Drawings or diagrams depicting the use case .....	71
B.7	Use case 7 intelligent apartment .....	71
B.7.1	Level of criticality (See 5.3) .....	71

B.7.2	Name of use case .....	71
B.7.3	AAL function and service layer .....	72
B.7.4	BAAL system component composition .....	72
B.7.5	Version management .....	72
B.7.6	Basic information to use case .....	73
B.7.7	Scope and objectives of use case .....	73
B.7.8	Narrative of use case .....	74
B.7.9	Actors: people, components, systems, integrated systems, applications and organizations .....	75
B.7.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	75
B.7.11	Referenced standards and/or standardization committees .....	75
B.7.12	Relation with other known use cases .....	76
B.7.13	General remarks .....	76
B.7.14	Data security and privacy .....	76
B.7.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	76
B.7.16	User requirements and interactions with other actors .....	76
B.7.17	Drawings or diagrams depicting the use case .....	77
B.8	Use case 8 personal trainer .....	77
B.8.1	Level of criticality (see 5.3) .....	77
B.8.2	Name of use case .....	78
B.8.3	AAL function and service layer .....	78
B.8.4	AAL system component composition .....	78
B.8.5	Version management .....	78
B.8.6	Basic information to use case .....	79
B.8.7	Scope and objectives of use case .....	79
B.8.8	Narrative of use case .....	79
B.8.9	Actors: people, components, systems, integrated systems, applications and organizations .....	80
B.8.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	80
B.8.11	Referenced standards and/or standardization committees .....	80
B.8.12	Relation with other known use cases .....	80
B.8.13	General remarks .....	81
B.8.14	Data security and privacy .....	81
B.8.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	81
B.8.16	User requirements and interactions with other actors .....	81
B.8.17	Drawings or diagrams depicting the use case .....	82
B.9	Use case 9 behaviour monitoring .....	84
B.9.1	Level of criticality (see 5.3) .....	84
B.9.2	Name of use case .....	84
B.9.3	AAL function and service layer .....	84
B.9.4	AAL system component composition .....	84
B.9.5	Version Management .....	85
B.9.6	Basic Information to Use Case .....	85
B.9.7	Scope and Objectives of Use Case .....	85
B.9.8	Narrative of use case .....	86

B.9.9	Actors: people, components, systems, integrated systems, applications and organizations .....	86
B.9.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	87
B.9.11	Referenced standards and/or standardization committees .....	87
B.9.12	Relation with other known use cases .....	87
B.9.13	General remarks .....	87
B.9.14	Data security and privacy .....	88
B.9.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	88
B.9.16	User requirements and interactions with other actors.....	88
B.9.17	Drawings or diagrams depicting the use case .....	89
B.10	Use case 10 shopping and nutrition planner.....	90
B.10.1	Level of criticality (see 5.3).....	90
B.10.2	Name of Use Case.....	91
B.10.3	AAL function and service layer .....	91
B.10.4	AAL system component composition.....	91
B.10.5	Version management.....	91
B.10.6	Basic information to use case .....	92
B.10.7	Scope and objectives of use case .....	92
B.10.8	Narrative of use case.....	93
B.10.9	Actors: people, components, systems, integrated systems, applications and organizations .....	93
B.10.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	93
B.10.11	Referenced standards and/or standardization committees .....	94
B.10.12	Relation with other known use cases .....	94
B.10.13	General remarks .....	94
B.10.14	Data security and privacy .....	94
B.10.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	94
B.10.16	User requirements and interactions with other actors.....	94
B.10.17	Drawings or diagrams depicting the use case .....	95
B.11	Use case 11 intelligent lighting fixtures .....	96
B.11.1	Level of criticality (see 5.3).....	96
B.11.2	Name of use case .....	96
B.11.3	AAL function and service layer .....	96
B.11.4	AAL system component composition.....	97
B.11.5	Version management.....	97
B.11.6	Basic information to use case .....	97
B.11.7	Scope and objectives of use case .....	97
B.11.8	Narrative of use case.....	98
B.11.9	Actors: people, components, systems, integrated systems, applications and organizations .....	99
B.11.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	99
B.11.11	Referenced standards and/or standardization committees .....	99
B.11.12	Relation with other known use cases .....	100
B.11.13	General remarks .....	100
B.11.14	Data security and privacy .....	100



B.11.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	100
B.11.16	User requirements and interactions with other actors.....	100
B.11.17	Drawings or diagrams depicting the use case .....	101
Annex C (informative)	User requirements analysis .....	105
Annex D (informative)	Extraction of user requirements from the 10 representative use cases.....	110
Annex E (informative)	Updated AAL use case template (this updated version 2 to be used for new use cases) .....	115
E.1	Description of the use case.....	115
E.1.1	Name of use case.....	115
E.1.2	Version management.....	115
E.1.3	Scope and objectives of use case.....	115
E.1.4	Level of criticality (see 5.3).....	115
E.1.5	AAL level(s) of assistance (see 5.4).....	115
E.1.6	Narrative of use case – Short description .....	115
E.1.7	Use case category and geographic context.....	116
E.1.8	Basic information on the use case .....	116
E.2	Components of the use case.....	116
E.2.1	Narrative of use case – Complete description .....	116
E.2.2	Actors: persons, technical components, and organizations (see 5.8) .....	116
E.2.3	AAL system component composition (see 5.7).....	117
E.2.4	Issues: legal contracts, legal regulations, constraints, and others (including regional regulations).....	117
E.2.5	Referenced International Standards and/or standardization committees .....	117
E.2.6	Relation with other known use cases .....	117
E.2.7	General remarks.....	117
E.2.8	Data security considerations.....	117
E.2.9	Data privacy considerations.....	117
E.2.10	Ethical considerations for autonomous systems .....	118
E.2.11	Conformity aspects (common international assessment methodology/critical requirements) .....	118
E.2.12	User requirements and interactions with other actors.....	118
E.3	Drawings or diagrams depicting the use case .....	118
Bibliography	.....	119
Figure 1	– AAL architecture model.....	15
Figure 2	– Overview of AAL user domains.....	18
Figure 3	– AAL use case categories.....	19
Figure 4	– Relationship between actors .....	22
Figure 5	– Overview of user requirements.....	30
Figure 6	– AAL use case classification.....	31
Figure C.1	– Extraction example of user requirements from UC #1 .....	105
Figure D.1	– Extraction example of user requirements from UC #1(same as Figure C.1).....	110
Figure D.2	– Extraction of user requirements from UC #2 .....	110
Figure D.3	– Extraction of user requirements from UC #3 .....	111
Figure D.4	– Extraction of user requirements from UC #4 .....	111
Figure D.5	– Extraction of user requirements from UC #5 .....	112

Figure D.6 – Extraction of user requirements from UC #6 .....	112
Figure D.7 – Extraction of user requirements from UC #7 .....	113
Figure D.8 – Extraction of user requirements from UC #8 .....	113
Figure D.9 – Extraction of user requirements from UC #9 .....	114
Figure D.10 – Extraction of user requirements from UC #10.....	114
Table 1 – Updated titles and categories of use cases .....	23
Table 2 – Categories and functionalities of use cases .....	29
Table C.1 – Extraction of user requirements from use cases.....	106
Table C.2 – Allocation to user requirements groups .....	108
Table C.3 – Mapping of user requirements groups by UC categories and Figure 5.....	109

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ACTIVE ASSISTED LIVING (AAL) USE CASES

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**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

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Technical Specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 63134, which is a Technical Specification, has been prepared by IEC systems committee Active Assisted Living.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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- replaced by a revised edition, or
- amended.

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## INTRODUCTION

IEC SyC AAL is developing use cases for AAL system standards with a view to identify gaps in standardization.

All selected use cases have a real-world validity. The development of use cases makes it easier to define AAL categories of similar use cases and highlight their commonalities. It was then possible to extract functional requirements from the use cases and make recommendations for future standardization items related to AAL. Collecting the use cases also allowed SyC AAL to validate the proposed AAL reference model and reference architecture.

This document captures the results of a use case input process that began with the call for contributions of AAL use cases in November 2015. The current document reflects contributions and discussions by SyC AAL experts, mirror committees and liaison members. This document also contains material gathered from reports, AAL research projects and group output from the SyC AAL meetings in November 2015 (Tokyo), April 2016 (Wellington), October 2016 (Frankfurt), April 2017 (Beijing), September 2017 (Cleveland), May 2018 (Tokyo) and October 2018 (Seoul), as well as information obtained from the subsequent web calls to the meetings.

As of November 2018, a total of 45 use cases were submitted. To start the project, members of the SyC AAL user focus working group were requested to submit use cases using the IEC template. The use case submissions consisted of the title of the use case, a description and the origin of the use case. The use case template helped to group and categorize the use cases according to the identified functional requirements and needs of users. The former AAL use case template developed in SG 3 AAL was modified in order to capture also wider societal issues including security, risk and privacy, as well as looking at AAL in relation to the Internet of Things (IoT).

Experts from the following national committees, liaison organizations and research projects contributed use cases on AAL: Canada, China, Japan, Germany, Netherlands, South Korea, UK, USA, ISO IEC JTC 1 SC 41 PCHA and Continua and AALiance2.

The target audience for this document includes the following stakeholders who have an interest in the AAL system:

- AAL users and service provider personnel who can learn about AAL user needs and how to operate AAL systems;
- first responders, formal carers, etc. to understand how to respond to an AAL system emergency call;
- CE and ICT device manufacturers who want to understand AAL devices and interface and interoperability requirements;
- AAL care recipients who are interested in the usability, accessibility and performance of the AAL system;
- AAL operators to understand the system requirements;
- regulators who are responsible for developing and supervising AAL and related regulations.

## ACTIVE ASSISTED LIVING (AAL) USE CASES

### 1 Scope

This document identifies AAL scenarios and use cases based on real-world applications and requirements. The use cases provide a practical context for considerations of interoperability and standards based on user experience. Use cases provide a context for utilizing existing standards and identifying further standardization work. User requirements have also been identified.

This document also highlights potential areas for standardization in the AAL environment to ensure safety, security, privacy, ease of operation, performance and interoperability.

Lastly, this document is a contribution to the IEC use case management repository, the purpose of which is to collect, administer, maintain, and analyse use cases.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-871, *International Electrotechnical Vocabulary – Part 871: Active assisted living (AAL)*

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## CONTENTS

FOREWORD .....	10
INTRODUCTION .....	12
1 Scope .....	13
2 Normative references .....	13
3 Terms, definitions and abbreviated terms .....	13
3.1 Terms and definitions .....	13
3.2 Abbreviated terms .....	13
4 General .....	14
4.1 Overview .....	14
4.2 Objectives .....	14
4.3 Use case development stages .....	14
4.4 AAL architecture model .....	14
5 Definition of AAL use case template .....	16
5.1 Overview .....	16
5.2 Description of use case .....	16
5.3 AAL levels of criticality .....	16
5.4 Levels of assistance (user domains) .....	17
5.5 Use case categories .....	18
5.6 Context of use .....	19
5.7 System component composition .....	20
5.8 Actors .....	21
5.8.1 General .....	21
5.8.2 Persons .....	21
5.8.3 Technical components .....	21
5.8.4 Organizations .....	21
5.8.5 Relationship between actors .....	22
6 Use case analysis .....	22
6.1 General .....	22
6.2 Overview and representative use cases .....	22
6.2.1 General .....	22
6.2.2 Prevention and management of chronic long-term conditions .....	25
6.2.3 Social interaction .....	26
6.2.4 Mobility .....	26
6.2.5 Health & wellness .....	27
6.2.6 (Self-)management of daily life activities at home .....	27
6.3 Functionalities that appear in each use case .....	28
7 Considerations of user requirements .....	30
7.1 General .....	30
7.2 Definition of user requirements .....	31
7.2.1 General .....	31
7.2.2 Safety .....	31
7.2.3 Security .....	32
7.2.4 Privacy and data protection .....	32
7.2.5 Functional requirements .....	32
8 Summary of standards gap analysis .....	33



9	Conclusions and recommendations.....	33
	Annex A (informative) AAL use case template (version 1.10) .....	35
	A.1 Level of criticality (see 5.3) .....	35
	A.2 Name of use case .....	35
	A.3 AAL function and service layer .....	35
	A.4 AAL system component composition .....	35
	A.5 Version management .....	35
	A.6 Basic information to use case .....	36
	A.7 Scope and objectives of use case .....	36
	A.8 Narrative of use case .....	36
	A.9 Actors: people, components, systems, integrated systems, applications and organizations .....	36
	A.10 Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	36
	A.11 Referenced standards and/or standardization committees.....	37
	A.12 Relation with other known use cases .....	37
	A.13 General remarks .....	37
	A.14 Data security and privacy .....	37
	A.15 Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	37
	A.16 User requirements and interactions with other actors .....	37
	A.17 Drawings or diagrams depicting the use case .....	37
	Annex B (informative) Representative use cases .....	38
	B.1 Use case 1 personal health check.....	38
	B.1.1 Level of criticality (See 5.3) .....	38
	B.1.2 Name of use case .....	38
	B.1.3 AAL function and service layer .....	38
	B.1.4 AAL system component composition.....	38
	B.1.5 Version management.....	39
	B.1.6 Basic information to use case .....	39
	B.1.7 Scope and objectives of use case .....	39
	B.1.8 Narrative of use case.....	40
	B.1.9 Actors: people, components, systems, integrated systems, applications and organizations .....	40
	B.1.10 Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	40
	B.1.11 Referenced standards and/or standardization committees .....	41
	B.1.12 Relation with other known use cases .....	41
	B.1.13 General remarks .....	41
	B.1.14 Data security and privacy .....	41
	B.1.15 Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	41
	B.1.16 User requirements and interactions with other actors.....	41
	B.1.17 Drawings or diagrams depicting the use case .....	42
	B.2 Use case 2 advanced medication monitoring.....	42
	B.2.1 Level of criticality (see 5.3).....	42
	B.2.2 Name of use case .....	42
	B.2.3 AAL function and service layer .....	42
	B.2.4 AAL system component composition.....	43
	B.2.5 Version management.....	43

B.2.6	Basic Information to use case .....	43
B.2.7	Scope and objectives of use case .....	43
B.2.8	Narrative of use case .....	43
B.2.9	Actors: people, components, systems, integrated systems, applications and organizations .....	46
B.2.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	46
B.2.11	Referenced standards and/or standardization committees .....	46
B.2.12	Relation with other known use cases .....	46
B.2.13	General remarks .....	46
B.2.14	Security and privacy .....	47
B.2.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	47
B.2.16	User requirements and interactions with other actors .....	47
B.2.17	Drawings or diagrams depicting the use case .....	48
B.3	Use Case 3 enable social interaction with care provider .....	48
B.3.1	Level of criticality (see 5.3) .....	48
B.3.2	Name of use case .....	49
B.3.3	AAL function and service layer .....	49
B.3.4	AAL system component composition .....	49
B.3.5	Version management .....	49
B.3.6	Basic information to use case .....	50
B.3.7	Scope and objectives of use case .....	50
B.3.8	Narrative of use case .....	51
B.3.9	Actors: people, components, systems, integrated systems, applications and organizations .....	52
B.3.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	52
B.3.11	Standards and/or standardization committees .....	52
B.3.12	Relation with other known use cases .....	53
B.3.13	General remarks .....	53
B.3.14	Data security and privacy .....	53
B.3.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	53
B.3.16	User requirements and interactions with other actors .....	53
B.3.17	Drawings or diagrams depicting the use case .....	54
B.4	Use case 4 social interaction with smart TV .....	55
B.4.1	Level of criticality (see 5.3) .....	55
B.4.2	Name of use case .....	55
B.4.3	AAL function and service layer .....	55
B.4.4	AAL system component composition .....	56
B.4.5	Version management .....	56
B.4.6	Basic information to use case .....	56
B.4.7	Scope and objectives of use case .....	57
B.4.8	Narrative of use case .....	57
B.4.9	Actors: people, components, systems, integrated systems, applications and organizations .....	57
B.4.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	58
B.4.11	Referenced standards and/or standardization Committees .....	58
B.4.12	Relation with other known use cases .....	58

B.4.13	General remarks .....	58
B.4.14	Data security and privacy .....	58
B.4.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	58
B.4.16	User requirements and interactions with other actors.....	59
B.4.17	Drawings or diagrams depicting the use case .....	59
B.5	Use case 5 smart wheeled walker .....	60
B.5.1	Level of criticality (see 5.3).....	60
B.5.2	Name of use case .....	61
B.5.3	AAL function and service layer .....	61
B.5.4	AAL system component composition.....	61
B.5.5	Version management.....	61
B.5.6	Basic information to use case .....	62
B.5.7	Scope and objectives of use case .....	62
B.5.8	Narrative of use case.....	63
B.5.9	Actors: people, components, systems, integrated systems, applications and organizations .....	63
B.5.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	64
B.5.11	Referenced standards and/or standardization committees .....	64
B.5.12	Relation with other known use cases .....	64
B.5.13	General remarks .....	64
B.5.14	Data security and privacy .....	64
B.5.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	65
B.5.16	User requirements and interactions with other actors.....	65
B.5.17	Drawings or diagrams depicting the use case .....	65
B.6	Use Case 6 enhanced terminal accessibility.....	66
B.6.1	Level of criticality (see 5.3).....	66
B.6.2	Name of use case .....	66
B.6.3	AAL function and service layer .....	67
B.6.4	AAL system component composition.....	67
B.6.5	Version management.....	67
B.6.6	Basic information to use case .....	67
B.6.7	Scope and objectives of use case .....	68
B.6.8	Narrative of use case.....	68
B.6.9	Actors: people, components, systems, integrated systems, applications and organizations .....	69
B.6.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	69
B.6.11	Referenced standards and/or standardization committees .....	69
B.6.12	Relation with other known use cases .....	69
B.6.13	General remarks.....	70
B.6.14	Data security and privacy .....	70
B.6.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	70
B.6.16	User requirements and interactions with other actors.....	70
B.6.17	Drawings or diagrams depicting the use case .....	71
B.7	Use case 7 intelligent apartment .....	71
B.7.1	Level of criticality (See 5.3) .....	71

B.7.2	Name of use case .....	71
B.7.3	AAL function and service layer .....	72
B.7.4	BAAL system component composition .....	72
B.7.5	Version management .....	72
B.7.6	Basic information to use case .....	73
B.7.7	Scope and objectives of use case .....	73
B.7.8	Narrative of use case .....	74
B.7.9	Actors: people, components, systems, integrated systems, applications and organizations .....	75
B.7.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	75
B.7.11	Referenced standards and/or standardization committees .....	75
B.7.12	Relation with other known use cases .....	76
B.7.13	General remarks .....	76
B.7.14	Data security and privacy .....	76
B.7.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	76
B.7.16	User requirements and interactions with other actors .....	76
B.7.17	Drawings or diagrams depicting the use case .....	77
B.8	Use case 8 personal trainer .....	77
B.8.1	Level of criticality (see 5.3) .....	77
B.8.2	Name of use case .....	78
B.8.3	AAL function and service layer .....	78
B.8.4	AAL system component composition .....	78
B.8.5	Version management .....	78
B.8.6	Basic information to use case .....	79
B.8.7	Scope and objectives of use case .....	79
B.8.8	Narrative of use case .....	79
B.8.9	Actors: people, components, systems, integrated systems, applications and organizations .....	80
B.8.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations) .....	80
B.8.11	Referenced standards and/or standardization committees .....	80
B.8.12	Relation with other known use cases .....	80
B.8.13	General remarks .....	81
B.8.14	Data security and privacy .....	81
B.8.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL) .....	81
B.8.16	User requirements and interactions with other actors .....	81
B.8.17	Drawings or diagrams depicting the use case .....	82
B.9	Use case 9 behaviour monitoring .....	84
B.9.1	Level of criticality (see 5.3) .....	84
B.9.2	Name of use case .....	84
B.9.3	AAL function and service layer .....	84
B.9.4	AAL system component composition .....	84
B.9.5	Version Management .....	85
B.9.6	Basic Information to Use Case .....	85
B.9.7	Scope and Objectives of Use Case .....	85
B.9.8	Narrative of use case .....	86

B.9.9	Actors: people, components, systems, integrated systems, applications and organizations .....	86
B.9.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	87
B.9.11	Referenced standards and/or standardization committees .....	87
B.9.12	Relation with other known use cases .....	87
B.9.13	General remarks .....	87
B.9.14	Data security and privacy .....	88
B.9.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	88
B.9.16	User requirements and interactions with other actors.....	88
B.9.17	Drawings or diagrams depicting the use case .....	89
B.10	Use case 10 shopping and nutrition planner.....	90
B.10.1	Level of criticality (see 5.3).....	90
B.10.2	Name of Use Case.....	91
B.10.3	AAL function and service layer .....	91
B.10.4	AAL system component composition.....	91
B.10.5	Version management.....	91
B.10.6	Basic information to use case .....	92
B.10.7	Scope and objectives of use case .....	92
B.10.8	Narrative of use case.....	93
B.10.9	Actors: people, components, systems, integrated systems, applications and organizations .....	93
B.10.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	93
B.10.11	Referenced standards and/or standardization committees .....	94
B.10.12	Relation with other known use cases .....	94
B.10.13	General remarks .....	94
B.10.14	Data security and privacy .....	94
B.10.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	94
B.10.16	User requirements and interactions with other actors.....	94
B.10.17	Drawings or diagrams depicting the use case .....	95
B.11	Use case 11 intelligent lighting fixtures .....	96
B.11.1	Level of criticality (see 5.3).....	96
B.11.2	Name of use case .....	96
B.11.3	AAL function and service layer .....	96
B.11.4	AAL system component composition.....	97
B.11.5	Version management.....	97
B.11.6	Basic information to use case .....	97
B.11.7	Scope and objectives of use case .....	97
B.11.8	Narrative of use case.....	98
B.11.9	Actors: people, components, systems, integrated systems, applications and organizations .....	99
B.11.10	Issues: legal contracts, legal regulations, constraints and others (including regional regulations).....	99
B.11.11	Referenced standards and/or standardization committees .....	99
B.11.12	Relation with other known use cases .....	100
B.11.13	General remarks .....	100
B.11.14	Data security and privacy .....	100

B.11.15	Conformity aspects (common international assessment methodology/critical requirements) (to be completed by IEC SyC AAL).....	100
B.11.16	User requirements and interactions with other actors.....	100
B.11.17	Drawings or diagrams depicting the use case .....	101
Annex C (informative)	User requirements analysis .....	105
Annex D (informative)	Extraction of user requirements from the 10 representative use cases.....	110
Annex E (informative)	Updated AAL use case template (this updated version 2 to be used for new use cases) .....	115
E.1	Description of the use case.....	115
E.1.1	Name of use case.....	115
E.1.2	Version management.....	115
E.1.3	Scope and objectives of use case.....	115
E.1.4	Level of criticality (see 5.3).....	115
E.1.5	AAL level(s) of assistance (see 5.4).....	115
E.1.6	Narrative of use case – Short description .....	115
E.1.7	Use case category and geographic context.....	116
E.1.8	Basic information on the use case .....	116
E.2	Components of the use case.....	116
E.2.1	Narrative of use case – Complete description .....	116
E.2.2	Actors: persons, technical components, and organizations (see 5.8) .....	116
E.2.3	AAL system component composition (see 5.7).....	117
E.2.4	Issues: legal contracts, legal regulations, constraints, and others (including regional regulations).....	117
E.2.5	Referenced International Standards and/or standardization committees .....	117
E.2.6	Relation with other known use cases .....	117
E.2.7	General remarks.....	117
E.2.8	Data security considerations.....	117
E.2.9	Data privacy considerations.....	117
E.2.10	Ethical considerations for autonomous systems .....	118
E.2.11	Conformity aspects (common international assessment methodology/critical requirements) .....	118
E.2.12	User requirements and interactions with other actors.....	118
E.3	Drawings or diagrams depicting the use case .....	118
Bibliography.....		119
Figure 1 – AAL architecture model.....		15
Figure 2 – Overview of AAL user domains.....		18
Figure 3 – AAL use case categories.....		19
Figure 4 – Relationship between actors .....		22
Figure 5 – Overview of user requirements.....		30
Figure 6 – AAL use case classification.....		31
Figure C.1 – Extraction example of user requirements from UC #1 .....		105
Figure D.1 – Extraction example of user requirements from UC #1(same as Figure C.1).....		110
Figure D.2 – Extraction of user requirements from UC #2 .....		110
Figure D.3 – Extraction of user requirements from UC #3 .....		111
Figure D.4 – Extraction of user requirements from UC #4 .....		111
Figure D.5 – Extraction of user requirements from UC #5 .....		112

Figure D.6 – Extraction of user requirements from UC #6 .....	112
Figure D.7 – Extraction of user requirements from UC #7 .....	113
Figure D.8 – Extraction of user requirements from UC #8 .....	113
Figure D.9 – Extraction of user requirements from UC #9 .....	114
Figure D.10 – Extraction of user requirements from UC #10.....	114
Table 1 – Updated titles and categories of use cases .....	23
Table 2 – Categories and functionalities of use cases .....	29
Table C.1 – Extraction of user requirements from use cases.....	106
Table C.2 – Allocation to user requirements groups .....	108
Table C.3 – Mapping of user requirements groups by UC categories and Figure 5.....	109

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ACTIVE ASSISTED LIVING (AAL) USE CASES

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**This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.**



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IEC TS 63134, which is a Technical Specification, has been prepared by IEC systems committee Active Assisted Living.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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## INTRODUCTION

IEC SyC AAL is developing use cases for AAL system standards with a view to identify gaps in standardization.

All selected use cases have a real-world validity. The development of use cases makes it easier to define AAL categories of similar use cases and highlight their commonalities. It was then possible to extract functional requirements from the use cases and make recommendations for future standardization items related to AAL. Collecting the use cases also allowed SyC AAL to validate the proposed AAL reference model and reference architecture.

This document captures the results of a use case input process that began with the call for contributions of AAL use cases in November 2015. The current document reflects contributions and discussions by SyC AAL experts, mirror committees and liaison members. This document also contains material gathered from reports, AAL research projects and group output from the SyC AAL meetings in November 2015 (Tokyo), April 2016 (Wellington), October 2016 (Frankfurt), April 2017 (Beijing), September 2017 (Cleveland), May 2018 (Tokyo) and October 2018 (Seoul), as well as information obtained from the subsequent web calls to the meetings.

As of November 2018, a total of 45 use cases were submitted. To start the project, members of the SyC AAL user focus working group were requested to submit use cases using the IEC template. The use case submissions consisted of the title of the use case, a description and the origin of the use case. The use case template helped to group and categorize the use cases according to the identified functional requirements and needs of users. The former AAL use case template developed in SG 3 AAL was modified in order to capture also wider societal issues including security, risk and privacy, as well as looking at AAL in relation to the Internet of Things (IoT).

Experts from the following national committees, liaison organizations and research projects contributed use cases on AAL: Canada, China, Japan, Germany, Netherlands, South Korea, UK, USA, ISO IEC JTC 1 SC 41 PCHA and Continua and AALiance2.

The target audience for this document includes the following stakeholders who have an interest in the AAL system:

- AAL users and service provider personnel who can learn about AAL user needs and how to operate AAL systems;
- first responders, formal carers, etc. to understand how to respond to an AAL system emergency call;
- CE and ICT device manufacturers who want to understand AAL devices and interface and interoperability requirements;
- AAL care recipients who are interested in the usability, accessibility and performance of the AAL system;
- AAL operators to understand the system requirements;
- regulators who are responsible for developing and supervising AAL and related regulations.

## ACTIVE ASSISTED LIVING (AAL) USE CASES

### 1 Scope

This document identifies AAL scenarios and use cases based on real-world applications and requirements. The use cases provide a practical context for considerations of interoperability and standards based on user experience. Use cases provide a context for utilizing existing standards and identifying further standardization work. User requirements have also been identified.

This document also highlights potential areas for standardization in the AAL environment to ensure safety, security, privacy, ease of operation, performance and interoperability.

Lastly, this document is a contribution to the IEC use case management repository, the purpose of which is to collect, administer, maintain, and analyse use cases.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-871, *International Electrotechnical Vocabulary – Part 871: Active assisted living (AAL)*