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Edition 1.0 2014-10

TECHNICAL REPORT

colour inside

Use cases related to ambient assisted living (AAL) in the field of audio, video and multimedia systems and equipment

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE XA

ICS 33.160

ISBN 978-2-8322-1895-2

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USE CASES RELATED TO AMBIENT ASSISTED LIVING (AAL) IN THE FIELD OF AUDIO, VIDEO AND MULTIMEDIA SYSTEMS AND EQUIPMENT

FOREWORD

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IEC TR 62907, which is a technical report, has been prepared by technical area 16: Active assisted living (AAL), accessibility and user interfaces, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
100/2263/DTR	100/2340/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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INTRODUCTION

This Technical Report (TR) captures the results of a use case input process that began with the call for contributions of AAL use cases on 2012-06-06. The current document reflects contributions and discussions by IEC TC 100 national mirror committees, user organizations and the ITU-T Focus Group on Audio Visual Media Accessibility. This Technical Report also contains material gathered from reports, AAL research projects and group output from the IEC TC 100 AAL stage 0 project team meetings in October 2012 (Berlin), June 2013 (London) and September 2013 (Shenzhen). In total, seventeen use cases were submitted.

To start the project, a survey was designed and distributed to the IEC TC 100 P-members to collect Ambient Assisted Living (AAL) use cases. The use case submissions consisted of the title of the use case, a description and the origin of the use case. Also incorporated is the relevance of the use case within the scope of IEC TC 100. These are mainly activity based AAL use cases providing a user experience perspective from those who want to operate AV and multimedia equipment or access AAL services. The use case template helped to group and categorize the use cases according to the identified user requirements and experience of usability barriers faced by users. Understanding the usability barriers made it easier to identify categories and highlight use case commonalities. Where multiple use cases fall in the same category and had overlapping items, they were consolidated into one extended use case. All selected use cases have real-world validity. Gaps were filled by adding extra use cases and future developments were also considered. Usability barriers and functional requirements were extracted from the use cases and recommendations given for future standardization items related to AAL.

There is a natural mapping from the user experience based use cases to the clustered technical use cases, where specific technical and functional requirements are expressed.

The following national committees, liaison organizations and EU research projects contributed use cases on Ambient Assisted Living:

a) IEC TC 100 P-members China, Germany, Japan, UK and U.S.;

b) the European Blind Union;

c) the ITU-T Focus Group Audio Visual Media Accessibility;

d) and the EU Research Projects GUIDE, Persona, universAAL and AALIANCE.

Technological advances have enormous potential to make the society more inclusive by providing AAL solutions. The key issues relevant for IEC TC 100 which need to be addressed include barriers to accessibility and usability, and interoperability and personalization to ensure wide adoption.

This TR extracts and applies the user needs and accessibility principles published in ISO/IEC Guide 71.

The target audience for the TR includes:

- AAL service users who can understand how their AAL needs and their usability requirements are considered by an AAL service provider.
- AAL service providers who can learn about users AAL needs, and accessibility and usability issues, and can also learn how to operate AAL systems.
- AAL application developers who can develop AAL applications according to the needs of the AAL service users.
- CE and ICT device manufacturers who want to know what are the AAL needs of the users and what barriers elderly people and people with disabilities face which are related to the accessibility of interfaces and content.
- Administrations and government authorities that have to act as AAL service users and AAL regulators.

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USE CASES RELATED TO AMBIENT ASSISTED LIVING (AAL) IN THE FIELD OF AUDIO, VIDEO AND MULTIMEDIA SYSTEMS AND EQUIPMENT

1 Scope

This Technical Report comprises seventeen use cases for Ambient Assisted Living submitted to IEC between June 2012 and September 2013.

The initial objective of this Technical Report is the identification of AAL scenarios and use cases based on real-world applications and requirements. Use cases are a well-known tool for expressing requirements at a high level with real-life relevance. The use cases provide a practical context for considerations on interoperability and standards based on user experience. They make it clear where existing standards can be further used and highlight where standardisation work is needed.

The use cases are based on the identified requirements of elderly people and people with disabilities. The use case scenarios demonstrate both the usability barriers and functional requirements. In addition, the accessibility principles developed in ISO/IEC Guide 71 were applied.

A further objective of this report is to highlight potential areas for standardisation in the AAL environment to ensure ease of operation and interoperability with a focus on specific aspects relating to audio, video and multimedia equipment.

2 Normative references

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

ISO/IEC Guide 71:2001, *Guidelines for standards developers to address the needs of older persons and persons with disabilities*