



BSI Standards Publication

Health informatics — Re-usable component strategy for use case development

National foreword

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**Health informatics — Re-usable
component strategy for use case
development**

*Informatique de santé — Stratégie de composants réutilisables pour
le développement de cas pratiques*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 215, *Health informatics*.

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Introduction

Use cases are often utilized to establish key objectives and requirements for software design and development, system testing, certification and implementation. This document offers a methodology for use case development that discovers common components of use case scenarios, then establishes a component catalogue for subsequent re-use and re-purposing of those components in new use case scenarios. The methodology establishes re-use as a key foundation for consistent infrastructure and build-out of software application systems in healthcare (and potentially other industries). Re-use of requirements often leads to re-use of software solutions (to those requirements). The methodology leads to uniformity in, and optimization of, requirement specification, standards and implementation guidance, software development, testing and certification and ultimately implementation. The methodology establishes the basis for requirements traceability, at each progression step, and end-to-end (use case to implementation).

Health informatics — Re-usable component strategy for use case development

1 Scope

This document specifies a use case development methodology, facilitated by a dynamic catalogue of re-usable components. Use cases are a basic tool in describing requirements for health and healthcare settings, service provision, information technology and software products. Use case development often follows a uniform template with components such as actors, roles, scenarios, event steps, actions, data objects/elements and requirements statements. This document includes a basic use case template and the methods of component identification, capture, cataloguing and re-use. This document also includes guidance for software designed to implement the methodology in the form of a use case authoring tool.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

action

activity or task performed by an entity at a given point in time

Note 1 to entry: A use case event is comprised of one or more actions occurring in sequence.

Note 2 to entry: It can also be defined as an element of an event (step) that a user performs during a procedure (see ISO/IEC 26514).

3.2

actor

health professional, healthcare employee, patient/consumer, sponsored healthcare provider, healthcare organisation, subject of care, device, system or application that acts (performs a role) in a health related communication or service

[SOURCE: ISO 17090-1:2013, 3.1.3, modified]

3.3

assumption

condition that is accepted as true

Note 1 to entry: It can also be defined as factors that, for planning purposes, are considered to be true, real, or certain without proof or demonstration (see ISO/IEC/IEEE 24765) or a statement that describes the expected behaviours of a system or actors who will use the system (see Reference [20]).