
**Information technology — Mobile item
identification and management — Mobile
AIDC application programming interface**

*Technologies de l'information — Gestion et identification d'élément
mobile — Interface de programmation pour application AIDC mobile*

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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

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Introduction

Mobile AIDC is a version of automatic identification and data capture (AIDC) technology that is combined with mobile communications for the purpose of creating novel services that provide information to Mobile AIDC terminal users just by pointing the terminal at the objects of interest. Some emerging services supported by Mobile AIDC technology are wine authentication, movie reviews and trailers, and tourist information. Mobile AIDC terminals are equipped with various AIDC devices such as a radio frequency (RF) interrogator or optically readable media (ORM) reader, and interact with data carriers around the terminal by activating embedded AIDC devices. The data carriers contain the uniform resource identifiers (URIs) of the information associated with the objects to which the data carriers are affixed, or contain user data that the Mobile AIDC terminal users intend to use. If data carriers include the URIs of associated information, the Mobile AIDC applications try to connect to the content servers to get the necessary information. From a service viewpoint, the Mobile AIDC service users interact with the information infrastructure by using Mobile AIDC terminals in a way similar to how web users use the web by mouse-clicking. This International Standard intends to cover the generic mobile application programming interfaces for Mobile AIDC application development and running.

A Mobile AIDC application is a type of mobile application that runs on a mobile application platform. The mobile application platform is the development and running environment for mobile applications for the management and coordination of activities and sharing of the limited resources of the mobile terminal. There are many kinds of mobile application platforms providing various environments or mobile applications. Mobile AIDC applications need access to data carriers such as RF tags, barcodes, etc. for reading and/or writing content. For this purpose, Mobile AIDC applications use embedded Mobile AIDC devices such as Mobile radio frequency identification (RFID) interrogators or Mobile ORM readers. To make this possible, mobile application platforms provide appropriate application programming interfaces to mobile applications.

This International Standard defines Mobile AIDC application programming interfaces such as *open*, *close*, *read*, *write*, *lock*, etc. This International Standard does not specify implementation level interfaces, but abstract level interfaces, because of the diversity of mobile application platforms. Different mobile application platforms have their own particular application programming interface sets or data dictionaries.

This International Standard uses a Unique Item Identifier (UII) as an identifier for the object to which the data carrier is affixed. Implementers may use an instance of Mobile Item Identifier (MII) defined in ISO/IEC 29174 as a UII or may use an instance of other code schemes as a UII. Implementers who wish to implement GS1 standards using the Electronic Product Code (EPC) as the UII are encouraged to contact GS1.

Information technology — Mobile item identification and management — Mobile AIDC application programming interface

1 Scope

This International Standard provides a description of Mobile AIDC applications and specifies the functional requirements of Mobile AIDC application interfaces. It defines abstract Mobile AIDC application interfaces to provide a standardized functional view over various Mobile AIDC application platforms.

2 Conformance

To claim conformance with this International Standard, a Mobile AIDC application platform shall comply with all relevant clauses of this International Standard, except those marked as “optional”.

3 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.

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms related to AIDC*

ISO/IEC 19762-3, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 3: Radio frequency identification (RFID)*

ISO/IEC TR 29172, *Information technology — Mobile item identification and management — Reference architecture for Mobile AIDC services*