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INTERNATIONAL STANDARD

ISO/IEC 30106-3

First edition
2016-03-15

Information technology — Object oriented BioAPI —

Part 3: C# implementation

Technlogies de l'information — Objet orienté BioAPI — Partie 3: Mise en oeuvre de C#

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Reference number
ISO/IEC 30106-3:2016(E)

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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.

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 document 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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 37, *Biometrics*.

ISO/IEC 30106 consists of the following parts, under the general title *Information technology — Object-oriented BioAPI*:

— *Part 1: Architecture*

— *Part 2: Java implementation*

— *Part 3: C# implementation*

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Introduction

In this part of ISO/IEC 30106, an application programming interface expressed in C# language is specified. C# is intended to be a simple, general-purpose, object-oriented programming language that is aimed at enabling programmers to quickly build a wide range of applications for the Microsoft .NET platform.

One of the advantages of using C# is that, as it is designed for the Common Language Infrastructure (CLI), it allows multiple high-level languages to be used on different computer platforms without being rewritten for specific architectures.

C# shares some features (overloading, some syntactic details, etc.) with C++ but includes new characteristics (reference and output parameters, enumerations, unified type system, etc.). Besides, C# is very similar to Java (interfaces, exceptions, object-orientation, etc.), which implies that the structure of interfaces and namespaces (which is the equivalent to packages in Java language) is mostly the same as Java but, as expected, code implementation and compilation are different.

As Java implementation allows an easy use of Java BSPs, Java-based application servers or Java applets, C# is the best way to write windows desktop and web applications/services and provides an advanced and well-designed remote framework.

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Information technology — Object oriented BioAPI —

Part 3:
C# implementation

1 Scope

This part of ISO/IEC 30106 specifies an interface of a BioAPI C# framework and BioAPI C# BSP which will mirror the corresponding components specified in ISO/IEC 30106-1. The semantic equivalence of this part of ISO/IEC 30106 will be maintained with ISO/IEC 30106-2 (Java implementation). In spite of the differences in actual parameters passed between functions, the names and interface structure are the same.

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 30106-1, *Information technology — BioAPI for object oriented programming languages — Part 1: Architecture*

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