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**Electronic business eXtensible  
Markup Language (ebXML) —**

**Part 2:  
Applicability Statement (AS) profile of  
ebXML messaging service**

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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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by the OASIS ebXML Messaging Services Technical Committee (as "OASIS AS4 Profile of ebMS 3.0 Version 1.0") and drafted in accordance with its editorial rules. It was assigned to Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration* and adopted under the "fast-track procedure".

A list of all parts in the ISO 15000 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Historically, the platform for mission-critical business-to-business (B2B) transactions has steadily moved from proprietary value-added networks (VANs) to Internet-based protocols free from the data transfer fees imposed by the VAN operators. This trend has been accelerated by lower costs and product ownership, a maturing of technology, internationalization, widespread interoperability, and marketplace momentum. The exchange of electronic data interchange (EDI) business documents over the Internet has substantially increased along with a growing presence of extensible markup language (XML) and other document types such as binary and text files.

The Internet messaging services standards that have emerged provide a variety of options for end users to consider when deciding which standard to adopt. These include pre-Internet protocols, the EDIINT series of IETF RFC 3355 AS1, IETF RFC 4130 AS2 and IETF RFC 4823 AS3, simple XML over hypertext transport protocol (HTTP), government specific frameworks, OASIS ebXML messaging (ebMS) 2.0, and web services variants. As Internet messaging services standards have matured, new standards are emerging that leverage prior B2B messaging services knowledge for applicability to web services messaging.

The emergence of the OASIS ebMS 3.0 Standard, now ISO 15000-1:2021, represents a leap forward in Web Services B2B messaging services by meeting the challenge of composing many web services standards into a single comprehensive specification for defining the secure and reliable exchange of documents using web services. ISO 15000-1:2021 composes the fundamental web services standards W3C SOAP 1.1, W3C SOAP 1.2, W3C SOAP with Attachments, OASIS WS-Security 1.0 and 1.1, W3C WS-Addressing, and the OASIS reliable messaging standards WS-Reliability 1.1 and WS-ReliableMessaging - currently at version 1.2, together with guidance for the packaging of messages and receipts along with definitions of messaging choreographies for orchestrating document exchanges.

Like AS2, ISO 15000-1:2021 brings together many existing standards that govern the packaging, security, and transport of electronic data under the umbrella of a single specification document. While ISO 15000-1:2021 represents a leap forward in reducing the complexity of web services B2B messaging, the specification still contains numerous options and comprehensive alternatives for addressing a variety of scenarios for exchanging data over a web services platform.

In order to fully take advantage of the AS2 success story, this profile of ISO 15000-1:2021 has been developed. Using ISO 15000-1:2021 as a base, a subset of functionality has been defined along with implementation guidelines adopted based on the “just-enough” design principles and AS2 functional requirements to trim down ISO 15000-1:2021 into a more simplified and AS2-like specification for web services B2B messaging. The main benefits of AS4 compared to AS2 are:

- compatibility with web services standards;
- message pulling capability;
- a built-in receipt mechanism.

AS4 also provides a minimal client conformance profile that supports data exchanges that have lower-end requirements and do not require (the equivalent of) some of the more advanced capabilities of AS2 and ISO 15000-1:2021, such as support for multiple payloads, message receipts and signing or encryption of messages and receipts.