



BSI Standards Publication

# Intelligent transport systems — Using web services (machine-machine delivery) for ITS service delivery

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Part 3: Quality of service

## National foreword

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**Intelligent transport systems — Using  
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Part 3:  
Quality of 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)).

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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

A list of all parts in the ISO 24097 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

In order to provide high quality ITS services, various types of service coordination are indispensable, e.g. coordination between financial industries in an Electronic Fee Collections service. Service systems are constructed in a heterogeneous platform, e.g. hardware, OS, middleware, and/or application development language. Web services are technologies for heterogeneous distributed systems coordination.

To provide web services in an agile and interoperable manner, the use of standard based metadata was proposed in ISO 24097-1. Web service (WS) metadata is a formal description of a web service. It is expressed by: **Interface metadata** and **QoS (Quality of Service) metadata**. WS metadata is a technical contract between a web service provider and its consumers, so both sides are aware of this interface. This provides the base of interoperability between a service provider's program and a service consumer's program. Because metadata is based on standards, software tools can support the WS lifecycle through design to servicing and upgrading.

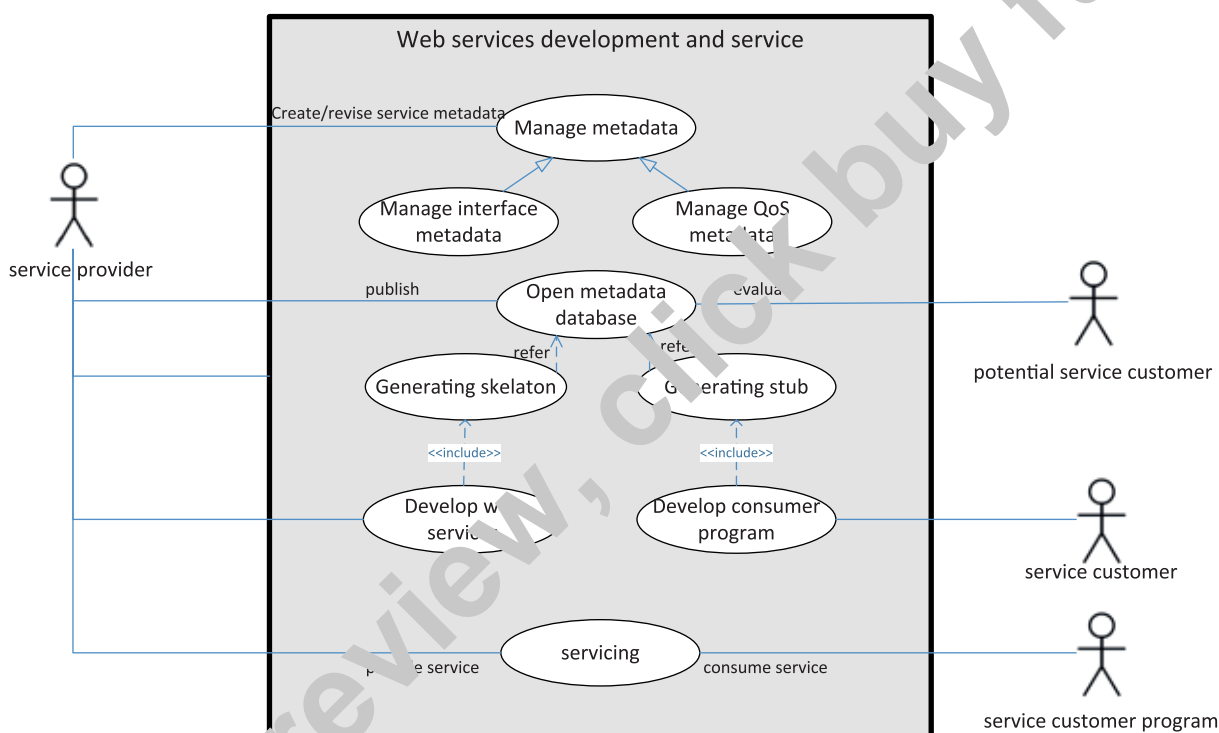


Figure 1 — ITS WS metadata use case

The **interface metadata** standard is the WSDL. This topic was covered in ISO/TR 24097-2.

**QoS metadata** is a combination of domain specific requirements and constraints such as security, reliable messaging, message addressing, and SOAP message transmission optimization.

This document focuses on these QoS topics.

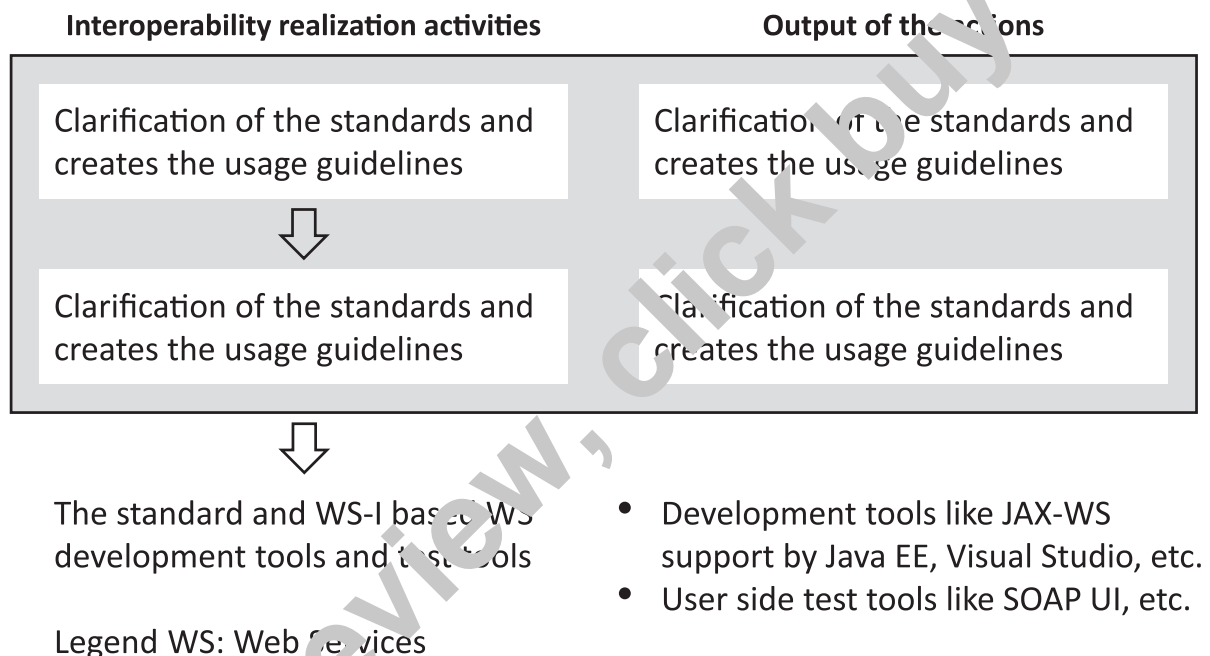
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# Intelligent transport systems — Using web services (machine-machine delivery) for ITS service delivery —

## Part 3: Quality of service

### 1 Scope

This document aims to promote ITS web services interoperability. Historically, web services interoperability evolved through activities shown in [Figure 2](#). Applying the first two steps properly is the key to interoperability.



**Figure 2 — Evolution of web services developing circumstances**

This document focuses on the following topics:

- WS-policy language;
- domain specific policy metadata:
  - WS-Addressing policy metadata;
  - WS-ReliableMessaging policy metadata;
  - WS-Security Policy metadata;
- SOAP Message transmission optimization Policy;
- other policies.