

PD ISO/TS 19158:2012



BSI Standards Publication

Geographic information — Quality assurance of data supply

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee IST/36, Geographic information.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2013

ISBN 978 0 580 72761 0

ICS 35.240.70

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 January 2013.

Amendments issued since publication

Amd. No.	Date	Text affected
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TECHNICAL SPECIFICATION

ISO/TS 19158

First edition
2012-10-15

Geographic information — Quality assurance of data supply

*Information géographique — Assurance qualité relative à
l'approvisionnement de données*



Reference number
ISO/TS 19158:2012(E)

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Published in Switzerland

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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.

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

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

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISO/TS 19158 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

Introduction

This Technical Specification provides a quality assurance framework for the producer and customer in their production relationship. It identifies methods of managing the quality of production more efficiently and effectively. It enables innovation and continual improvement within the context of existing:

- geographic information quality principles and quality evaluation procedures, and
- quality management systems.

With ever increasing demands in value and quality in the Geographic Information (GI) market the framework facilitates the production of a product that meets requirements in terms of cost, quantity, quality and timeliness.

Through the application of the framework there are opportunities for:

- better understanding of requirements by all involved in production and update especially within multiple producer environments,
- reduced data throughput time,
- reduced rework,
- improved data quality, and
- increased confidence within a mutually beneficial relationship leading to lower costs for both supplier and organization.

ISO 19157 establishes the principles for the description of geographic data quality and specifies components for reporting quality information as well as procedures for the evaluation of geographic data quality.

The quality assessment procedure, as defined in this Technical Specification, is a second-party (customer) conformity assessment activity.

Geographic information — Quality assurance of data supply

1 Scope

This Technical Specification provides a framework for quality assurance specific to geographic information. It is based upon the quality principles and quality evaluation procedures of geographic information identified in ISO 19157 and the general quality management principles defined in ISO 9000 [2].

The framework defined in this Technical Specification enables a customer to satisfy itself that its suppliers, both internal and external, are capable of delivering geographic information to the required quality. Fundamental to the framework is the assurance of the supplier's ability to understand and meet the quality requirements. Through the quality assurance framework both the customer and the supplier are able to consider the quality required at the earliest opportunity in the production/update process.

Principles and responsibilities of the relationship between the customer and the supplier that facilitate the framework are provided. The responsibility for the quality assessment procedure is shared between the customer and the supplier.

This Technical Specification is applicable to customers and suppliers of all geographic information where the quality of the product may be impacted upon by the supplier's processes in any of the following scenarios:

- there is an agreement or legislation for the supply of data acquisition services,
- data acquisition services are being tendered for, and
- one or more suppliers exist in the supply chain.

This Technical Specification is not applicable for the supply of legacy datasets or 'off the shelf' products where there is no further data production or update activity to manage.

2 Conformance

Any organization claiming conformance with this specification shall pass all of the requirements described in the abstract test suite presented in Annex A.

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 19157:—¹⁾, *Geographic information — Data quality*

4 Terms and definitions

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

1) To be published.