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Geographic information — Data quality measures

Information géographique — Mesures de la qualité des données

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Foreword

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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 normative document:

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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order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn.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again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.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.

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Introduction

Knowledge of the quality of geographic data is often crucial for the application of the data, as different users and different applications often have different data quality requirements. A user of geographic data may have multiple datasets from which to choose. Therefore, it is necessary to compare the quality of the datasets to determine which best fulfils the requirements of the user. To facilitate such comparisons, it is essential that the results of the quality reports are expressed in a comparable way and that there is a common understanding of the data quality measures that have been used. These data quality measures provide descriptors of the quality of geographic data through comparison with the universe of discourse. The use of incompatible measures makes data quality comparisons impossible to perform.

Data quality needs to be reported by the producer and evaluated by the user against his or her requirements for different criteria and data quality measures. It is essential that reported quality for a dataset contains the quality measurements that may be of interest to a potential user of the dataset, and that the metrics used to determine the quality are reported and available to the user.

ISO 19113 establishes the principles for the description of geographic data quality and specifies components for reporting quality information. Procedures for the evaluation of geographic data quality are described in ISO 19114.

The objective of this Technical Specification is to guide the producer in choosing the right data quality measures for data quality reporting, and the user in the evaluation of the usefulness of a dataset by standardizing the components and structures of data quality measures and by defining commonly used data quality measures.