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Intelligent transport systems — Integrated transport information, management and control — Data quality in ITS systems

*Systemes intelligents de transport (SIT) — Information des transports
intégré, gestion et commande — Qualité de données dans les
systemes SIT*



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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.

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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 exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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Introduction

The publication and assessment of the quality of data that may be used by or exchanged between ITS systems and centres via integrated networks is vitally important. Without a knowledge of the quality of the data being exchanged, the usefulness of that data¹⁾ is severely restricted, and whether it is fit for the intended purpose can not be established. In the worst case, it could lead to incorrect decisions being made due to wrong interpretations of the real occurrences upon which the data is based.

All data that does not have a stated quality should therefore be classed as unqualified and should be treated with appropriate caution.

Knowledge of the quality of data is relevant to all stages in the communication chain and is especially important where open systems are in place which have no knowledge of the recipient or ultimate use to which the data may be put. In particular, data quality is now a key issue for service providers who need to deliver accurate information to their clients. A high level of quality is needed for the information services to retain credibility with their customers (rebuilding trust is a very hard task).

Simply stating a measurement of quality associated with a piece of data does not in itself guarantee that the data source meets that quality. However, that is more a question of the monitoring and enforcement of service level agreements between data suppliers and data consumers and is outside the scope of this Technical Report.

This Technical Report sets out only a framework for the publication and assessment of data quality. The intention is that each type of data-application domain should have its own annex setting out the quality meta-data that are appropriate for their type of data and application.

1) Note that the term "data" is used throughout this document to mean the collective for data (plural).