

Australian/New Zealand Standard™

**Geographic information—Location-
based services—Tracking and
navigation**



AS/NZS ISO 19133:2006

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OF
AS/NZS ISO 19133:2006
Geographic information—Location-based services—Tracking and navigation

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NOTES

Australian/New Zealand Standard™

Geographic information—Location-based services—Tracking and navigation

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics.

The objective of this Standard is to provide users and designers with a description of the data types, and operations associated with those types, for the implementation of tracking and navigation services.

This Standard is identical with, and has been reproduced from ISO 19133:2005, *Geographic information—Location-based services—Tracking and navigation*.

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19107	Geographic information—Spatial schema	19107	Geographic information—Spatial schema
19108	Geographic information—Temporal schema	19108	Geographic information—Temporal schema
19109	Geographic information—Rules for application schema	19109	Geographic information—Rules for application schema
19111	Geographic information—Spatial referencing by coordinates	19111	Geographic information—Spatial referencing by coordinates
19112	Geographic information—Spatial referencing by geographic identifiers	19118	Geographic information—Spatial referencing by geographic identifiers
19118	Geographic information—Encoding	19118	Geographic information—Encoding

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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INTRODUCTION

This International Standard is a description of the data and services needed to support tracking and navigation applications for mobile clients. The web services views of this International Standard are given in Annex C.

Geographic information — Location-based services — Tracking and navigation

1 Scope

This International Standard describes the data types, and operations associated with those types, for the implementation of tracking and navigation services. This International Standard is designed to specify web services that can be made available to wireless devices through web-resident proxy applications, but is not restricted to that environment.

2 Conformance

Conformance to this International Standard takes on two meanings dependent on the type of entity declaring conformance.

Mechanisms for the transfer of data are conformant to this International Standard if they can be considered to consist of transfer record or type definitions that implement or extend a consistent subset of the object types described within this International Standard.

Web servers for tracking and navigation are conformant to this International Standard if their interfaces implement one or more of the subtypes of service defined in this International Standard and their communications and messaging are accomplished using a conformant transfer mechanism.

Clauses 6 and 7 of this International Standard use the Unified Modeling Language (UML) to present conceptual schemas for describing the information and services for tracking and navigation. Clause 8 further describes a general schema for addresses to be used as location equivalents in three types of services. Clause 9 describes network data appropriate for these services. This International Standard concerns only externally visible interfaces and places no restriction on the underlying implementations other than what is needed to satisfy the interface specifications in the actual situation, such as

- interfaces to software services using techniques such as COM or CORBA;
- interfaces to databases using techniques such as SQL;
- data interchange using encoding as defined in ISO 19118.

Few applications will require the full range of capabilities described by this conceptual schema. This clause, therefore, defines a set of conformance classes that will support applications whose requirements range from the minimum necessary to define data structures to full object implementation. This flexibility is controlled by a set of UML types that can be implemented in a variety of manners. Implementations that define full object functionality shall implement all operations defined by the types of the chosen conformance class, as is common for UML designed object implementations. Implementations that choose to depend on external “free functions” for some or all operations, or forgo them altogether, need not support all operations, but shall always support a data type sufficient to record the state of each of the chosen UML types as defined by its member variables. Common names for “metaphorically identical” but technically different entities are acceptable. The UML model in this International Standard defines abstract types, application schemas define conceptual classes, various software systems define implementation classes or data structures, and the XML from the encoding standard (ISO 19118) defines entity tags. All of these reference the same information content. There is no difficulty in allowing the use of the same name to represent the same information content