

# Information technology — Spatial Reference Model (SRM)

## 1 Scope

This document specifies the Spatial Reference Model (SRM) defining relevant aspects of spatial positioning and related information processing. The SRM allows precise and unambiguous specification of geometric properties such as position, direction, orientation, and distance. The SRM addresses the needs of a broad community of users, who have a range of accuracy and performance requirements in computationally intensive applications.

Aspects of this document apply to, but are not limited to:

- a) mapping, charting, geodesy, and imagery;
- b) topography;
- c) location-based services;
- d) oceanography;
- e) meteorology and climatology;
- f) interplanetary and planetary sciences;
- g) embedded systems; and
- h) modelling and simulation.

The SRM specifies an application program interface (API) that supports the representations, conversion, and transformation of position and orientation information in a variety of forms. To ensure that spatial operations are performed consistently, the application program interface specifies conversion operations between alternative representations of geometric properties.

This document is not intended to replace the standards and specifications developed by ISO/TC 211, ISO/TC 184, the International Astronomical Union (IAU), and the International Association of Geodesy (IAG). It is applicable to applications whose spatial information requirements overlap two or more of the application areas that are the scope of the work of ISO/TC 211, ISO/TC 184, the IAU, and the IAG.