

PD CEN/TR 15449-2:2012



BSI Standards Publication

# Geographic information — Spatial data infrastructures

Part 2: Best practices

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**National foreword**

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## Foreword

This document (CEN/TR 15449-2:2012) has been prepared by Technical Committee CEN/TC 287 “Geographic information”, the secretariat of which is held by BSI.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TR 15449:2011.

The present standard comprises the following parts:

- CEN/TR 15449-1, *Geographic information — Spatial data infrastructures — Part 1: Reference model*;
- CEN/TR 15449-2, *Geographic information — Spatial data infrastructures — Part 2: Best practices* (the present part);
- CEN/TR 15449-3, *Geographic information — Spatial data infrastructures — Part 3: Data centric view*;
- CEN/TR 15449-4, *Geographic information — Spatial Data Infrastructure (SDI) — Part 4: Service centric view*.

## Introduction

Spatial data infrastructure (SDI) is a general term for the computerised environment for handling data that relates to a position on or near the surface of the earth. It may be defined in a range of ways, in different circumstances, from the local up to the global level.

This Technical Report focuses on the technical aspects of SDIs, thereby limiting the term SDI to mean an implementation neutral technological infrastructure for geospatial data and services, based upon standards and specifications. It does not consider an SDI as a carefully designed and dedicated information system; rather, it is viewed as a collaborative framework of disparate information systems that contain resources that stakeholders desire to share. The common denominator of SDI resources, which can be data or services, is their spatial nature. It is understood that the framework is in constant evolution, and that therefore the requirements for standards and specifications supporting SDI implementations evolve continuously.

SDIs are becoming more and more linked and integrated with systems developed in the context of e-Government. Important drivers for this evolution are the Digital Agenda for Europe, and related policies. This Technical Report takes these developments into account. By sharing emerging requirements at an early stage with the standardization bodies, users of SDIs can help influence the revision of existing or the conception of new standards.

The users of an SDI are considered to be those individuals or organisations that, in the context of their business processes, need to share and access geo-resources in a meaningful and sustainable way. Based on platform- and vendor-neutral standards and specifications, an SDI aims at assisting organisations and individuals in publishing, finding, delivering, and eventually, using geographic information and services over the internet across borders of information communities in a more cost-effective manner.

Considering the complexity of the subject and the need to capture and formalize different conceptual and modelling views, CEN/TR 15449 is comprised of multiple parts:

- Part 1: Reference model: this provides a general context model for the other Parts, applying general IT architecture standards;
- Part 2: Best practices: this provides best practices guidance for implementing SDI, through the evaluation of the projects in the frame of the European Union funding programmes;
- Part 3: Data centric view: this addresses concerns related to the data, which includes application schemas and metadata;
- Part 4: Service centric view (in preparation): this includes the taxonomy of services, concepts of interoperability, service architecture, service catalogue, and the underlying IT standards.

Further parts may be created in the future.

## 1 Scope

This part of the Technical Report provides best practices regarding Spatial Data Infrastructures (SDIs), referencing to the outcomes of the projects in the frame of the European Union funding programmes. It summarises the deliverables of projects, structured according to the reference model defined in Part 1 of this Technical Report, to be made available in an on-line repository where the relevant outcomes are collected and classified in order to provide a structured sets of recommendations for implementing SDIs at the European, national and sub-national levels.

This collection refers mainly to the projects funded by the European Union funding programmes: this choice is driven by the wide vision and analysis which such kind of projects can provide and the wide numbers of stakeholders which have been involved.

The outcomes delivered by these relevant practices are collected into a document registry available through the CEN/TC 287 web site. This part of the Technical Report defines the processes and the content of these projects and documents registries, which will help making them more accessible and re-usable. It provides the relevant project deliverables addressing the main SDI issues as described in the other parts of this Technical Report.

The intended readership of this Technical Report are those people who are responsible for creating frameworks for SDI, experts contributing to INSPIRE, experts in information and communication technologies and e-government that need to familiarize themselves with geographic information and SDI concepts, and standards developers and writers.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 19115, *Geographic information — Metadata (ISO 19115)*

EN ISO 19135:2007, *Geographic information — Procedures for item registration (ISO 19135:2005)*

## 3 Terms and definitions

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

### 3.1 interoperability

capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units

[SOURCE: ISO/IEC 2382-1:1993]

### 3.2 register

set of files containing identifiers assigned to items with descriptions of the associated items

[SOURCE: EN ISO 19135:2007]

### 3.3 registry

information system on which a register is maintained