

BRITISH STANDARD

Spatial datasets for geographical referencing –

Part 0: General model for gazetteers and spatial referencing

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 16, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 7666 was published by BSI and came into effect on 28 July 2006. It was prepared by Technical Committee IST/36, Geographic information. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

BS 7666 was originally published over the period 1994 to 1996 in four parts.

These four parts were revised separately over the period 2000 to 2002. During 2004 to 2005, all the parts were revised together. A new Part 0: *General model for gazetteers and spatial referencing* has been added which provides a common structure for gazetteers of any class of geographic object.

BS 7666 now comprises the following parts:

- *Part 0: General model for gazetteers and spatial referencing;*
- *Part 1: Specification for a street gazetteer;*
- *Part 2: Specification for a land and property gazetteer;*
- *Part 5: Specification for a delivery point gazetteer.*

These parts supersede BS 7666-1:2000, BS 7666-2:2000, BS 7666-3:2000 and BS 7666-4:2002. The new Part 0 has subsumed Part 3: Specification for addresses. Part 1 has subsumed Part 4: Specification for recording public rights of way but in other respects is similar in scope to that published previously. The scope of Part 2 is largely unchanged. Part 5 is new in scope.

Parts BS 7666-1:2000, BS 7666-2:2000, BS 7666-3:2000 and BS 7666-4:2002 are now withdrawn. Thus Parts 3 and 4 will not form part of the standard although there will now be a Part 5. Renumbering has not taken place to avoid any confusion with the withdrawn standards.

This part of the standard aims to provide an overview and a more generalized common data model which can then be applied as the basis for any other parts of the standard, both existing and to be developed in the future. It is based upon BS EN ISO 19112, Geographic information — *Spatial referencing by geographic identifiers*, and builds this to define spatial references and general gazetteers of geographic objects in the UK.

BS EN ISO 19112 uses the term “geographic identifiers” for spatial references in the form of a label or code that identifies a location. In BS 7666, the more commonly used term “spatial reference” is used. In order to distinguish between the geographic objects in the gazetteer (termed “locations”) and those used to reference them, the term “spatial unit” is used here for the referencing object. In the attribute tables, some elements in BS EN ISO 19112 are dropped from the spatial referencing part, and additional attributes are included in the gazetteer.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Introduction

Geographic information contains spatial references that relate the features and information represented by the data or text to positions in geographic space. Spatial references fall into two categories:

- a) those using coordinates;
- b) those using labels or codes.

This British Standard is concerned with the latter. The spatial references here are based upon a relationship with a location defined by a geographic object or objects, such as a street or property. Many different types of spatial reference exist and are used in different applications by different organizations. BS 7666 identifies some types of spatial references, and provides a way of cross-referencing between datasets collected using different types of spatial references.

1 Scope

This part of BS 7666 defines the essential components of a gazetteer of geographic locations and provides a general model of spatial references based upon named spatial units in the United Kingdom. It defines the attributes of each geographic location to be recorded in a gazetteer, and the metadata associated with the gazetteer.

This part of BS 7666 may be used for defining gazetteers of locations and systems of spatial references based upon named spatial units, but does not specify any particular ones, nor does it define a database schema. It provides the basis for the other parts of BS 7666 by defining general structures to enable gazetteers of a range of classes of geographic locations to be created in a consistent way. Specific gazetteers of particular classes of locations are defined in the other parts of BS 7666.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the reference cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*.

BS ISO 639-2, *Codes for the representation of names of languages — Part 2: Alpha-3 Code*.

3 Terms and definitions

For the purposes of this part of BS 7666, the following terms and definitions apply.

3.1 address

means of referencing an object for the purposes of identification and location

NOTE Examples are “389 Chiswick High Road, London W4 4AL” and “Nelson’s Column, Trafalgar Square, London”.

3.2 coordinate reference system

set of mathematical rules for assigning coordinates to points, related to the real world by a datum

NOTE Examples are the National Grid of Great Britain, the Irish Grid and WGS84 (latitude and longitude).

3.3 **gazetteer**

record of instances of a particular location class or classes, with sufficient information to find and identify each uniquely

NOTE Examples are a street gazetteer and a local land and property gazetteer.

3.4 **location**

identifiable geographic place

NOTE Examples are “High Street” and “St James Park”.

3.5 **spatial reference**

description of position in the real world

NOTE In the context of BS 7666, this will be based upon descriptive identifiers of spatial units.

3.6 **spatial unit**

location used in the referencing of another location

NOTE An example is “street” when used to reference the location of “building”.

4 **Gazetteer of geographic objects**

4.1 **Properties of a gazetteer**

A gazetteer shall contain all instances of an identified class or classes of locations, as defined by its scope, e.g. streets and elementary street units. The content of a gazetteer shall be identified by a scope statement that describes the classes of location and the rules of inclusion or exclusion.

NOTE An example of a scope statement is “residential property units identified from taxation records, and electoral roll records, but with individual units with shared facilities held at the combined level only”.

4.2 **Gazetteer metadata**

4.2.1 **Mandatory elements**

A gazetteer shall have the following mandatory (M) metadata elements:

- a) **name:** name of the gazetteer, e.g. National Land and Property Gazetteer;
- b) **scope:** description of the content of the gazetteer, e.g. residential property units;
- c) **territory of use:** geographic domain of the gazetteer, e.g. Great Britain;
- d) **gazetteer owner:** the organization that has overall responsibility for the gazetteer, e.g. The Local Government Information House;
- e) **custodian:** organization or officer responsible for compilation and maintenance, e.g. South Dorsetshire District Council Land and Property Gazetteer Custodian;