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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, XXX
C(20YY)YYY

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Draft

COMMISSION REGULATION (EC) No .../..

of [...]

Amending Commission Regulation C (20XX) YYY of [date] implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the Network Services Article 11(1)(c) download services

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COMMISSION REGULATION (EC) No .../..

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Amending Commission Regulation C (20XX) YYY of [date] implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the Network Services Article 11(1)(c) download services

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)¹, and in particular Article 16 thereof,

Whereas:

- (1) Download Services are the mechanisms by which users can have access to the full information content captured and transformed by Member States into their geographic data sets according to the spatial data themes defined in Directive 2007/2/EC. The Download Services provide the capability to access the information in order to fulfil a series of possible tasks including integration with other information, and to allow deep analysis as a basis for knowledge and decision making.
- (2) Download Services are coupled to the spatial data sets to which they give access. Member States shall implement Download Services providing access to every Spatial Data Set within the scope of Article 4 of the Directive 2007/2/EC. This implementing rule describes Download Services at a generic level, that is, independent of the underlying spatial data theme(s).
- (3) European Spatial Data Infrastructures already offer several ways to access geographic information. The Download Services aims at capturing an extensive range of these existing functionalities.
- (4) For increased flexibility and to satisfy a wide range of user requirements, the direct access download should be implemented.
- (5) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 22 of Directive 2007/2/EC,

¹ OJ L 108, 25.4.2007, p. 1.

HAS ADOPTED THIS REGULATION:

Article 1

Subject Matter

This Regulation sets out the requirements for the establishment and maintenance of the Download Services provided for in Article 11(1)(c) of Directive 2007/2/EC (hereinafter “the Download Services”) and obligations related to the availability of those services to the public authorities of the Member States and third parties pursuant to Article 12 of that Directive.

Article 2

Definitions

The following definitions are appended to article 2 of Regulation 20xx/yyyy/EC:

- (1) Direct Access Download means that the Download Service provides access to the Spatial Objects in Spatial Data Sets based upon a query.

Article 3

Requirements for Download Services

The following is appended to article (3) of the Regulation 20xx/yyyy/EC.

- (c) As concerns the Download Services, the applicable specific requirements and characteristics set out in Annex I of the Regulation 20xx/yyyy/EC and annex I and II of this Regulation;

Article 4

Access to the Download Services

The following is appended to article (4) of the Regulation 20xx/yyyy/EC.

1. Not later than [DATE = 18 months after the date of entry into force of this Regulation], Member States shall provide the Download Services with initial operating capability.
2. Not later than [DATE = 24 months after the date of entry into force of this Regulation] Member States shall provide the Download Services in conformity with this Regulation.

Article 5

Entry into force

This Regulation shall enter into force on the [twentieth](#) day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [\[...\]](#)

For the Commission

[\[...\]](#)

Member of the Commission

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ANNEX I

Quality of Service

The following Quality of Service criteria relating to performance and capacity shall be ensured for the Download Service.

1. PERFORMANCE

The response time for the Get Download Service Metadata operation, specified in Annex II, shall be maximum 10 seconds in normal situation.

For the Get Spatial Data Set operation and for the Get Spatial Object operation, specified in Annex II, and for a query consisting exclusively of a bounding box, the response time for sending the initial response shall be maximum 30 seconds in normal situation, then, still in normal situation, the Download Service shall maintain a sustained response greater than 0.5 Megabytes per second or greater than 500 Spatial Objects per second.

For the Describe Spatial Data Set operation and for the Describe Spatial Object Type operation, specified in Annex II, the response time for sending the initial response shall be maximum 10 seconds in normal situation, then and still in normal situation the Download Service shall maintain a sustained response greater than 0.5 Megabytes per second or greater than 500 descriptions of Spatial Objects per second.

Normal situation represents periods out of peak load. It is set at 90% of the time.

2. CAPACITY

The minimum number of served simultaneous requests to a Download Service according to the performance Quality of Service shall be 10 requests per second. The number of requests processed in parallel may be limited to 50.

ANNEX II

Download Service

Part A

Download Operations

1. LIST OF OPERATIONS

In order to be in conformity with Article 11 (1) (c) of the Directive 2007/2/EC, the Download Service shall at least provide the operations listed in Table 1 of this Annex.

Table 1

Operation	Role
Get Download Service Metadata	Provides all necessary information about the service, the available Spatial Data Sets, and describes the service capabilities.
Get Spatial Data Set	The Get Spatial Data Set operation allows the retrieval of a Spatial Data Set.
Describe Spatial Data Set	This operation returns the description of the complete set of types of the Spatial Objects in the Spatial Data Set.
Link Download Service	Allows the declaration, by a Public Authority or a Third Party, of a Download Service for downloading of Spatial Data Sets or, where practicable, Spatial Objects, through the Member State Download Service while maintaining the downloading capability at the Public Authority or the Third Party location.

The request and response parameters of each operation complete the description of each operation and form an integral part of the Download Service technical specification.

2. GET DOWNLOAD SERVICE METADATA OPERATION

2.1. *Get Download Service Metadata request*

2.1.1. *Get Download Service Metadata request parameters*

The Get Download Service Metadata request parameter indicates the natural language to be used for the content of the Get Download Service Metadata response.

2.2. *Get Download Service Metadata response*

The Get Download Service Metadata response shall contain the following sets of parameters:

- Download Service Metadata;
- Operations Metadata;

- Languages;
- Spatial Data Sets Metadata.

2.2.1. Download Service Metadata parameter

The Download Service Metadata parameters shall at least contain the INSPIRE metadata elements of the Download Service.

2.2.2. Operations Metadata parameter

The Operations metadata parameter provides metadata about the operations implemented by the Download Service. These metadata parameters shall describe each operation; it shall at least describe each operation, including as a minimum a description of the data exchanged and the network address.

2.2.3. Languages parameter

Two language parameters shall be provided:

- The response Language parameter indicating the natural language used in the Get Download Service Metadata response parameters;
- The Supported languages parameter containing the list of the natural languages supported by the Download Service.

2.2.4. Spatial Data Sets Metadata parameters

The INSPIRE metadata elements of the available Spatial Data Sets shall be provided. In addition for each Spatial Data Set, the list of available Coordinate Reference Systems shall also be provided.

For a given Spatial Data Set, the list of available Coordinate Reference Systems shall be the relevant list of Coordinate Reference Systems mandated in the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, if the Spatial Data Set is declared in conformity with these implementing rules.

3. GET SPATIAL DATA SET OPERATION

3.1. Get Spatial Data Set request

The Get Spatial Data Set request contains the following parameters:

- Language;
- Spatial Data Set Identifier;
- Coordinate Reference System.

3.1.1. Language parameter

The Language parameter indicates the natural language requested for the Spatial Data Set.

3.1.2. *Spatial Data Set Identifier parameter*

The Spatial Data Set Identifier parameter shall contain the Unique Resource Identifier of the Spatial Data Set.

3.1.3. *Coordinate Reference System parameter*

The Coordinate Reference System parameter shall contain one of the Coordinate Reference Systems in the list of available Coordinate Reference Systems of the selected Spatial Data Set indicated in 2.2.4.

3.2. *Get Spatial Data Set response*

3.2.1. *Get Spatial Data Set response parameter*

The Get Spatial Data Set response parameter shall be the requested Spatial Data Set in the requested language and Coordinate Reference System. If the Spatial Data Set is declared in conformity with the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, the Spatial Data Objects, in the Spatial Data Set, shall also be in conformity with these implementing rules.

4. DESCRIBE SPATIAL DATA SET OPERATION

4.1. *Describe Spatial Data Set request*

The Describe Spatial Data Set request contains the following parameters:

- Language
- Spatial Data Set Identifier;

4.1.1. *Language parameter*

The Language parameter indicates the natural language requested for the description of the Spatial Objects type.

4.1.2. *Spatial Data Set Identifier parameter*

The Spatial Data Set Identifier parameter shall contain the Unique Resource Identifier of the Spatial Data Set.

4.2. *Describe Spatial Data Set response*

4.2.1. *Describe Spatial Data Set response parameter*

The Describe Spatial Data Set response parameter shall be the description of the Spatial Data Objects in the requested Spatial Data Set in the requested language. If the Spatial Data Set is declared in conformity with the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, the description of the Spatial Data Objects shall also be in conformity with these implementing rules.

5. LINK DOWNLOAD SERVICE OPERATION

The Link Download Service operation allows the declaration of the availability of a Download Service compliant with this regulation, for the Download of resources through the Member State Download Service while maintaining the resources at the owner location.

5.1. *Link Download Service request*

5.1.1. *Link Download Service request parameter*

The Link Download Service request parameter shall provide all information about the Public Authority's or Third Party's Download Service compliant with this regulation, enabling the Member State Download Service to provide access to Spatial Data Sets and, where practicable, to Spatial Data Objects from the Public Authority's or Third Party's Download Service.

Part B

Direct Access Download Operations

6. LIST OF OPERATIONS

Where practicable, in order to be in conformity with Article 11 (1) (c) of the Directive 2007/2/EC, the Download Service shall also provide the additional operations listed in Table 2 of this Annex.

Table 2

Operation	Role
Get Spatial Object	This operation allows the retrieval of Spatial Objects based upon a query.
Describe Spatial Object Type	This operation returns the description of the specified Spatial Objects types.

The request and response parameters of each operation complete the description of each operation and form an integral part of the Download Service technical specification.

7. GET SPATIAL OBJECT OPERATION

7.1. *Get Spatial Object request*

The Get Spatial Object request shall support the following parameters:

- Language;
- Spatial Data Set Identifier;
- Coordinate Reference System;
- Query.

7.1.1. *Language parameter*

The Language parameter indicates the natural language requested for the Spatial Objects.

7.1.2. *Spatial Data Set Identifier parameter*

The Spatial Data Set Identifier parameter shall contain the Unique Resource Identifier of the required Spatial Data Set. If the parameter is not provided, all available Spatial Data Sets shall be assumed.

7.1.3. *Coordinate Reference System parameter*

The Coordinate Reference System parameter shall contain one of the relevant Coordinate Reference Systems in the list of Coordinate Reference Systems mandated in the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, and shall define the Coordinate Reference System for the Get Spatial Object response.

7.1.4. *Query parameter*

The Query parameter shall contain a combination through logical and comparison operators of search criteria as specified in Part C.

7.2. *Get Spatial Object response*

The Get Spatial Object response contains the following parameters:

- Spatial Objects Set;
- Spatial Objects Set Metadata.

7.2.1. *Spatial Objects Set parameter*

The Spatial Objects Set parameter shall be the set of Spatial Data Objects in conformity with the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, fulfilling the search criteria in the query, in the requested language and Coordinate Reference System.

7.2.2. *Spatial Objects Set Metadata parameter*

The Get Spatial Object Set Metadata parameter shall contain at least the INSPIRE metadata elements of the Spatial Data Objects Set.

8. DESCRIBE SPATIAL OBJECT TYPE OPERATION

8.1. *Describe Spatial Object Type request*

The Describe Spatial Object Type request contains the following parameters:

- Language;
- Spatial Object Type.

8.1.1. *Language parameter*

The Language parameter indicates the natural language requested for the description of the Spatial Object type.

8.1.2. *Spatial Object Type parameter*

The Spatial Object Type parameter shall contain the language-neutral name of the required Spatial Object Type mandated in the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services. If not provided all available types of Spatial Objects shall be assumed selected.

8.2. *Describe Spatial Object Type response*

8.2.1. *Describe Spatial Object Type response parameter*

The Describe Spatial Object type response parameter shall be the description of the spatial object type, in conformity with the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services.

Part C

Search Criteria for the Get Spatial Object Operation

For the purposes of the Get Spatial Object Operation of the Download Service, as a minimum the following search criteria shall be implemented:

- Unique Resource Identifier of Spatial Data Set;
- All relevant key attributes and the relationship between Spatial Objects mandated in the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services; in particular the Unique Identifier of Spatial Object and temporal dimension characteristics including date of update;
- Bounding box, expressed in any of the relevant Coordinate Reference Systems mandated in the implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services;
- Spatial Data Theme.