Data format description of Official Building Polygons of Germany (HU-DE)

For the data distribution from the data stock of the Central Office for House Coordinates and Building Polygons (ZSHH)

Version 2.5 **Stand: 01.07.2019**

Valid from the provision of the HU-DE 2019

Description of the data format

The distribution format for Building Polygons (HU) is the AdV Shape format as described in the AdV specifications on the data format “Shape” (AdV Shape Profile, version 1.0.0, updated 31 January 2014). Further information on the AdV Shape format can be found at www.adv-online.de.

2. Data contents

HU are objects with spatially referenced surrounding polygons that describe the building outlines of the real estate cadastre. Here the object fields of buildings and structures defined in ALKIS (definition according to ALKIS-OK) are applied.

The surrounding of the Shape file contains no configuration geometries, no roofs and no underground buildings.

Permitted geometries of the surroundings are polygons and multi-polygons according to the description of the OGC standard of the OGC specification

„06-103r4_Implementation_Specification_for_Geographic_Information_-_Simple_feature_access_-_Part_1_Common_Architecture_v1.2.1.pdf“.

For the data stock of the Building Polygons all the objects modelled as areas from the following object groups are used:

- AX_Gebaeude
- AX_Turm
- AX_BauwerkOderAnlageFuerIndustrieUndGewerbe
- AX_VorratsbehaelterSpeicherbauwerk
- AX_BauwerkOderAnlageFuerSportFreizeitUndErholung
- AX_SonstigesBauwerkOderSonstigeEinrichtung
- AX_HistorischesBauwerkOderSonstigeEinrichtung

A detailed list of all the defined structure definitions for ALKIS can be found under the following link:

http://repository.gdi-de.org/schemas/adv/citygml/Codelisten/BuildingFunctionTypeAdV.xml

If the objects in this list are recorded in ALKIS (ALK) in the respective Land, their building polygons are to be derived and supplied to ZSHH.

The HU objects have two mandatory attributes:

1. “AGS” (official municipality key): “LLRKKGGG” (Land, administrative region, rural/urban district, municipality) = 8 characters without semicolon

   Example of notation: 05382004

Land (LL)	05	Nordrhein-Westfalen
Administrative region (R)	3	Köln
Rural/urban district (KK)	82	Rhein-Sieg-Kreis
Municipality (GGG)	004	Alfter

   The entries of the attribute "AGS" correspond with the entries of the decoding file "schluessel-de.txt" of the House Coordinates of Germany (see also data format description of Official House Coordinates of Germany (HK-DE), version 4.2).

2. "OI" (Objectidentifier)

   Every single HU object contains an object identifier (OI) as unique identification.

The coordinates are specified by default in the spatial reference system ETRS89/UTM <zn> in metres. The notation of the UTM coordinates is obtained from the descriptions of the currently valid GeoInfoDok (currently the main document of version 6.0.1, chapter 7.1.2, no. 3) on the spatial reference system ETRS89/UTM <zn> in the respective zone <zn> 32 (=EPSG-Code 4647) or 33 (=EPSG-Code 5650)

3. Data files, file names

The Shape format consists of four separate files: the main file, index file, dBASE file and projection file. These files have the specified file extensions “.shp”, “.shx”, “.dbf” and ".prj". The file name is the same for all four files.

Example:

Main-File: gebaeude-by.shp
Index-File: gebaeude-by.shx
dBASE-File: gebaeude-by.dbf
Projection-File: gebauede-by.prj

The dBASE file meets the format requirements for dBASE files and for each HU object two attributes are provided. The first column contains the “AGS” (official municipality key) as a text in the form “LLRKKGGG”, the second column contains the object identifier (16 characters) of the dataset ("OI").

Empty entries do not occur in the attributes.

4. Distribution possibilities

The Official Building Polygons are by default spatially selected and distributed according to the following criteria:

- administrative unit (smallest unit: whole municipality) or
- geometric boundary (rectangle, polygons).

5. Update

The Official Building Polygon data stock is updated through the submission of complete data, which the Laender provide by 1 April of the current year.

The current central data stock is generally available for delivery as of 1 July of the current year.

For more details on this information, please do not hesitate to contact ZSHH.

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