Address—geocode longitude, degrees minutes seconds Xd[dd]{mm}{ss}{.ss}

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Identifying and definitional attributes

Metadata item type:	Data Element
Short name:	Geocode longitude sexagismal
Synonymous names:	Longitude
METEOR identifier:	469925
Registration status:	Community Services (retired), Standard 10/04/2013 Disability, Standard 13/08/2015
Definition:	The geographic longitude of an address point on the earth, measured in degrees, minutes and seconds east or west of the Greenwich Meridian.
Data Element Concept:	Address—geocode longitude
Value Domain:	Longitude degrees minutes seconds Xd[dd]{mm}{ss}{.ss}

Value domain attributes

Representational attributes

Representation class:	Identifier
Data type:	Geospatial
Format:	Xd[dd]{mm}{ss}{.ss}
Maximum character length:	10
Unit of measure:	Degree Minute Second

Collection and usage attributes

Guide for use:	The 'X' in the longitude format symbolises the designator symbol “+” or “-” and should be placed prior to the first number. The designator symbol for longitudes east of Greenwich are positive and shall be designated by use of the plus sign (+), while longitudes west of Greenwich are negative and shall be designated by use of the minus sign (-). The Prime Meridian shall be designated by use of the plus sign (+). The 180th meridian shall be designated by use of the minus sign (-). The 'd' should be used to represent the degrees as a one, two or three digit number. The 'm' should be used to represent minutes as a two digit number (i.e. a place holding zero should be used for minute values under 10 for clarity). The 's' should be used to represent seconds (before the decimal) and decimal seconds (after the decimal), as a two digit number (i.e. a place holding zero should be used for second and decimal second values under 10 for clarity). Zero may also be a valid value, such as where there is no minute value but there is a second value. As a minimum the designator and a one digit representation for degrees must be populated. The remaining brackets and braces are optional, however, if seconds or decimal seconds are to be used the preceeding values must also be populated (i.e. seconds cannot be populated without minutes being populated, and decimal seconds can not be populated without a seconds value). Usage example: a traditional degrees, minutes & seconds representation for longitude of + 40° 09' 09.05" should be represented as a string format +400909.05 (Note: this is not a decimal degrees representation format, but a concatenation of the degree, minute, second and decimal second values).
Comments:	The ISO 6709 standard recommends leading zeroes for degree values less than 100, however this has not been implemented in the METeOR standard, in accordance with METeOR business rules.

Source and reference attributes

Origin: Standards Australia/Standards New Zealand 2008. AS/NZS ISO6709:2008—Standard representation of latitude, longitude and altitude for geographic point locations. Sydney/Wellington: Standards Australia/Standards NZ.

Data element attributes

Collection and usage attributes

Comments:

Geographical coordinates (latitudes and longitudes) are the universal system for defining spatial position. A set of geographic coordinates on a datum is complete and unique, worldwide.

Positions of geographic features can be defined in space by a set of coordinates. In order for coordinates to be unique, the coordinate reference system needs to be fully defined.

A coordinate reference system is realised by a reference frame, which comprises a datum and a coordinate system.

Longitudes can also be expressed in degrees decimal degrees (e.g. 150.987123), see METeOR for this related item. A conversion to decimal degrees from the degrees, minutes and seconds format can be calculated with the following formula: Decimal Degrees = Degrees + ((Minutes / 60) + (Seconds / 3600)). (REF: https://www2.landgate.wa.gov.au/slip/portal/home/Graticule.html)

Example: DMS: -75° 59' 32.483" converts to -75.992356389 decimal degrees (rounded up to 9 decimal places).

Source and reference attributes

Submitting organisation: Australian Institute of Health and Welfare

Origin: Standards Australia 2006. AS 4590—2006 Interchange of client information. Sydney: Standards Australia.

Relational attributes

Related metadata references:

See also Address—geocode latitude, decimal degrees XN[N][.N(9)]
- Aged Care, Standard 30/06/2023
- Community Services (retired), Standard 06/02/2012
- Disability, Standard 13/08/2015
- Health, Standard 05/10/2016
- Housing assistance, Standard 01/05/2013

See also Address—geocode latitude, degrees minutes seconds Xd{d}{mm}{ss}{.ss}
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Implementation in Data Set Specifications:

Address details data dictionary
- Community Services (retired), Standard 06/02/2012
- Disability, Standard 13/08/2015