AS/NZS ISO 19162:2020
Geographic information — Well-known text representation of coordinate reference systems

Amendment No. 1

Revised text amendment

Publishing and Approval Dates

Council of Standards Australia Approval: 8 February 2024

New Zealand Standards Approval Board Approval: 17 January 2024

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Summary

This Amendment applies to the following elements:

Amendment Details

AS/NZS ISO 19162:2020 is amended as follows. The amendments should be inserted in the locations as instructed.

Element	Instruction/New text
Front cover	After ISO 19162:2019, *add* the following: ISO 19162:2019/Amd 1:2023 (Incorporating Amendment No. 1)
Preface	After the first paragraph, *add* the following: 1 Amendment 1 to this Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics. 2 Delete the third paragraph and replace with the following: This document is identical with, and has been reproduced from, ISO 19162:2019, *Geographic information — Well-known text representation of coordinate reference systems* and its Amendment No. 1 (2023) which has been added at the end of the source text.
Biblio	After the Bibliography, *add* the following Amendment No. 1:

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Amendment 1

3.1.13

Replace definition with:

3.1.13
datum ensemble
group of multiple realizations of the same terrestrial or vertical reference system that, for approximate spatial referencing purposes, are not significantly different

EXAMPLE "WGS 84" as an undifferentiated group of realizations including WGS 84 (TRANSIT), WGS 84 (G730), WGS 84 (G873), WGS 84 (G1150), WGS 84 (G1674) and WGS 84 (G1762). At the surface of the Earth these have changed on average by 0.7 m between the TRANSIT and G730 realizations, a further 0.2 m between G730 and G873, 0.06 m between G873 and G1150, 0.2 m between G1150 and G1674 and 0.02 m between G1674 and G1762.

Note 1 to entry: Datasets referenced to the different realizations within a datum ensemble may be merged without coordinate transformation.

Note 2 to entry: 'Approximate' is for users to define but typically is in the order of under 1 decimetre but may be up to 2 metres.

[SOURCE: ISO 19111/Amd2:2023, 3.1.16]

3.1.14

Replace "[SOURCE: ISO 19111:2019, 3.1.8]" by "[SOURCE: ISO 19111:2019, 3.1.18]"

3.1.15

Replace "[SOURCE: ISO 19111:2019, 3.1.9]" by "[SOURCE: ISO 19111:2019, 3.1.19]"

3.1.25

Replace definition with:

3.1.25
geodetic coordinate reference system
two- or three-dimensional coordinate reference system based on a geodetic datum reference frame and having either a three-dimensional Cartesian or an ellipsoidal or a spherical coordinate system

Note 1 to entry: In this document a coordinate reference system based on a geodetic reference frame and having an ellipsoidal coordinate system is geographic.

[SOURCE: ISO 19111/Amd2:2023, 3.1.31]

3.1.45

Replace definition with:

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3.1.45
spherical coordinate system
two- or three-dimensional coordinate system in Euclidean space in which position is specified by two angular coordinates and (in the three-dimensional case) one distance coordinate

Note 1 to entry: Not to be confused with an ellipsoidal coordinate system based on an ellipsoid 'degenerated' into a sphere.

[SOURCE: ISO 19111/Amd2:2023, 3.1.60]

3.2

In the entry for EPSG, replace www.epsg-registry.org with https://epsg.org.

6.3.1

Insert the following in the row above <left bracket>:

<at sign>	::=	@	*!! ISO/IEC 10646:2012 character identifier U+0040*

6.3.4

Replace <wkt Latin text character> with the following:

<wkt Latin text character> ::= <simple Latin upper case letter> | <simple Latin lower case letter>
| <digit> | <underscore>
| <left bracket> | <right bracket> | <left paren> | <right paren>
| <left brace> | <right brace>
| <less than operator> | <equals operator>
| <greater than operator>
| <period> | <comma> | <colon> | <semicolon>
| <plus sign> | <minus sign> | <space> | <number sign>
| <percent> | <ampersand> | <quote> | <asterisk> | <circumflex>
| <solidus> | <reverse solidus> | <question mark> | <at sign>
| <vertical bar> | <degree symbol> | <doublequote symbol>

6.6

Insert the following in the row above angleUnit:

anchorEpoch	<datum anchor epoch keyword>	8 and 10

Insert the following in the two rows above baseEngCRS:

axisMaxValue	<axis maximum value keyword>	7
axisMinValue	<axis minimum value keyword>	7

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Insert the following in the row above derivedProjCRS:

definingTransformation	<defining transformation keyword>	8

Insert the following in the row above remark:

rangeMeaning	<axis value range meaning keyword>	7

7.5.1

Replace rows for spatial axis, temporalCountMeasure axis and ordinal-dateTime axis with the following:

<spatial axis>	::=	<axis keyword> <left delimiter> <axis nameAbbrev> <wkt separator> <axis direction> [<wkt separator> <axis order>] [<wkt separator> <spatial unit>] [<wkt separator> <axis range>] [{ <wkt separator> <identifier> }]... <right delimiter> *!! Axis unit and conversion factor mandatory. See 7.5.6.2.*
<temporalCountMeasure axis>	::=	<axis keyword> <left delimiter> <axis nameAbbrev> <wkt separator> <axis direction> [<wkt separator> <axis order>] [<wkt separator> <time unit>] [<wkt separator> <axis range>] [{ <wkt separator> <identifier> }]... <right delimiter> *!! Axis unit mandatory, conversion factor conditional. See 7.5.6.4*
<ordinal-dateTime axis>	::=	<axis keyword> <left delimiter> <axis nameAbbrev> <wkt separator> <axis direction> [<wkt separator> <axis order>] [<wkt separator> <axis range>] [{ <wkt separator> <identifier> }]... <right delimiter> *!! The attribute 'axis unit' is not required for an ordinal coordinate system or for a temporal dateTime coordinate system. See 7.5.6.3.*

Insert seven new rows between <axis direction> and <meridian>:

<axis range>	::=	<axis minimum value> | <axis maximum value> | { axis minimum value> <axis maximum value> } | { axis minimum value> <axis maximum value> <axis range meaning> }
<axis minimum value>	::=	<axis minimum value keyword> <left delimiter> <number> <right delimiter>
<axis minimum value keyword>	::=	AXISMINVALUE
<axis maximum value>	::=	< axis maximum value keyword> <left delimiter> <number> <right delimiter>
<axis maximum value keyword>	::=	AXISMAXVALUE

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