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**Geographic information —  
Referencing by coordinates**

**AMENDMENT 1**

*Information géographique — Système de références par coordonnées*  
*AMENDEMENT 1*

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Reference number  
ISO 19111:2019/Amd.1:2021(E)

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CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
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Published in Switzerland

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# Geographic information — Referencing by coordinates

## AMENDMENT 1

### 3.1.8

Add Note 1 to entry. The complete revised definition becomes:

### 3.1.8

#### **coordinate operation**

process using a mathematical model, based on a one-to-one relationship, that changes coordinates in a source coordinate reference system to coordinates in a target coordinate reference system, or that changes coordinates at a source coordinate epoch to coordinates at a target coordinate epoch within the same coordinate reference system

Note 1 to entry: Generalization of coordinate conversion, coordinate transformation and point motion operation.

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7.4, Figure 5

Replace Figure 5 with the following:

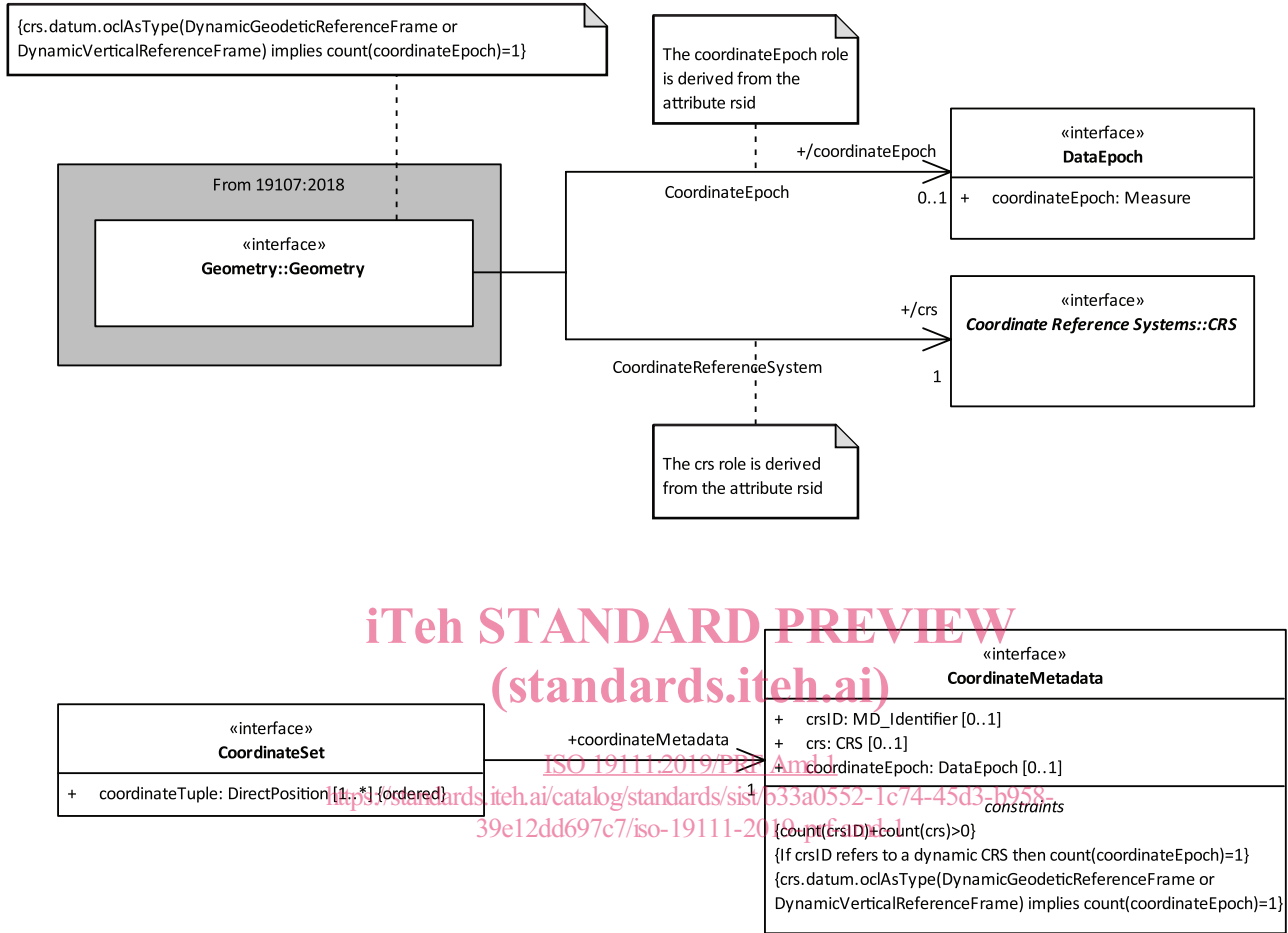


Figure 5 — UML diagram — Relationship of coordinates and coordinate metadata

7.4, Table 2

Replace Table 2 with the following:

**Table 2 — Defining elements of Coordinates::CoordinateMetadata class**

<b>Definition:</b> metadata required to reference coordinates					
<b>Stereotype:</b> Interface					
<b>Class attribute:</b> Concrete					
<b>Inheritance from:</b> (none)					
<b>Public attributes:</b>					
<u>Attribute name</u>	<u>UML identifier</u>	<u>Data type</u>	<u>Obligation</u>	<u>Maximum Occurrence</u>	<u>Attribute definition</u>
CRS ID	crsID	MD_Identifier	C	1	identifier of the coordinate reference system to which a coordinate set is referenced
CRS definition	crs	CRS	C	1	full description of the coordinate reference system to which a coordinate set is referenced
Coordinate epoch	coordinateEpoch	DataEpoch	C	1	epoch at which a coordinate set referenced to a dynamic CRS is valid
					Note: Required if the CRS is dynamic.
<b>Constraints:</b>	<p>{count(crsID)+count(CRS)&gt;0}</p> <p>Remarks: See 7.2</p> <p>{crs.datum.oclAsType(DynamicGeodeticReferenceFrame or DynamicVerticalReferenceFrame) implies count(coordinateEpoch)=1}</p> <p>{if crsID refers to a dynamic CRS then count(coordinateEpoch)=1}</p> <p>Remarks: These constraints provide the conditionality for coordinate epoch.</p>				