INTERNATIONAL STANDARD

ISO 25178-72

First edition
2017-05

AMENDMENT 1
2020-09

Geometrical product specifications (GPS) — Surface texture: Areal —

Part 72: XML file format x3p

AMENDMENT 1

Spécification géométrique des produits (GPS) — État de surface: Surfacique —

Partie 72: Format de fichier XML x3p

AMENDEMENT 1

Reference number
ISO 25178-72:2017/Amd.1:2020(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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This document was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 290, *Dimensional and geometrical product specification and verification*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Geometrical product specifications (GPS) — Surface texture: Areal —

Part 72: **XML file format x3p**

AMENDMENT 1

Page 3, 3.14

Replace with:

3.14
global coordinate system
three-dimensional, right-handed coordinate system in which the position and orientation of the original point cloud is defined

Page 3, 3.15

Replace with:

3.15
view coordinate system
three-dimensional, right-handed coordinate system in which the stored point coordinates are defined

Note 1 to entry: Conversion from view coordinates (x, y, z) to global coordinates (X, Y, Z) could involve rotation and translation.

Note 2 to entry: Many instruments measure the z coordinates of surface points in the view coordinate system at predefined values of the respective x and y coordinates.

Page 5, 5.4.4

Replace EXAMPLE with:

EXAMPLE A vendor specific extension could be a vendor specific xml file or any other type of file.

Page 5, 5.5.3.1

Replace with:

5.5.3.1 Revision

The `Revision` record shall contain the string “ISO25178-72:2017/DAM1”.

Page 7, 5.5.3.3.2.1

Replace with:

5.5.3.3.2.1 General

The `AxisType` element shall be one of the letters "I" for incremental axis or "A" for absolute axis. The *x* and *y* coordinates can either be of incremental axis type or absolute axis type. The *z* coordinates shall be of absolute axis type.

Page 7, 5.5.3.3.2.3

Replace with:

5.5.3.3.2.3 Absolute axis type

An absolute axis type shall be used for the explicit storage of *x*, *y* and *z* coordinates. Coordinates of absolute axis type shall be stored as dimensionless values. The dimensional coordinate shall be calculated by multiplying the stored value by a scaling factor *I* in metres.

NOTE 1 Compared with an incremental axis type, the absolute axis type causes a higher memory usage for *x* and *y* coordinates. The amount of memory used is as large as for the *z* coordinate because for each 3D point the *x* and *y* coordinate is stored separately. Therefore, it is recommended that incremental *x* and *y* axes are used whenever possible, i.e. when point spacing is regular and homogenous.

NOTE 2 The constant *I* is usually called calibration factor.

Page 8, 5.5.3.3.4

Replace with:

5.5.3.3.4 Increment

The `Increment` element shall contain a positive length value in metres specifying either the increment of the incremental axis or the scaling factor of the absolute axis. The increment shall not be zero. The increment values for the *x*, *y* and *z* axes are named with the symbols I_x, I_y and I_z.

NOTE The element name `Increment` is used due to historical reasons.