ISO Geodetic Registry

Item class Transformation

Name WGS 84 (G873) to WGS 84 EGM84 - OHt [1]

Item status VALID Identifier 621

Information source Title WGS 84, N=M=180 Earth Gravitational Model

Author NGA Office of Geomatics

Publisher National Geospatial-Intelligence Agency

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Edition date

Other citation details Website

Data source ISO Geodetic Registry

Remarks Transformation from WGS 84 (G873) ellipsoidal heights to EGM84

orthometric heights using the EGM 84 geoid grid.

Operation version 1.0

Scope Spatial referencing

Operation accuracy 1.0 m

Source CRS WGS 84 (G873) - LatLonEHt

Target CRS WGS 84 EGM84 - OHt

Operation method Geographic3D to Gravity Related Height (EGM84)

Extent

Description	World.	
Geographic Bounding Box	West-bound longitude	-180.0
	North-bound latitude	90.0
	East-bound longitude	180.0
	South-bound latitude	-90.0

Operation parameter values

Geoid (height correction) model file	wwgrid.exe	
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ISO Geodetic Registry

Item class OperationMethod

Name Geographic3D to Gravity Related Height

(EGM84)

Item status VALID Identifier 76

Data source ISO Geodetic Registry

Remarks This transformation involves the application of a geoid-ellipsoid

separation value interpolated from a geoid model. The model provides separation values at the nodes on a regular grid of latitude and longitude intersection points. The geodetic latitude and longitude used to interpolate within the grid are not affected by this transformation. The grid is referenced to a specific geographic CRS (the source CRS) and interpolation must be made in this system. Calculation of the separation is achieved through a bi-linear interpolation of the EGM84 grid, using the latitude and longitude of the point. This step provides the geoid-ellipsoid separation (N) above the ellipsoid of the source Geographic 3D CRS. The orthometeric height (H) is then computed from the ellipsoid height (h) in the source Geographic 3D CRS using: H = h - N Applies to EGM84 models. For later models see Geographic3D to GravityRelatedHeight (EGM96) and Geographic3D to GravityRelatedHeight (EGM2008).

Operation parameters

Geoid (height correction) model file