ISO Geodetic Registry

Item class Transformation

Name ITRF96 to NAD 83 (CORS96) Epoch 1997.0 [v1]

Item statusVALIDIdentifier518

Information source Title Introducing HTDP 3.1 to transform coordinates

across time and spatial reference frames

Author C. Pearson, R.A. Snay

PublisherSpringer-VerlagPublication date2013-01-01Edition date2013-01-01Series/Journal nameGPS SolutionsIssue identificationVolume 17, No. 1

Page 1-15

Other citation details NAD83 (2011), NAD83 (MA11), NAD83 (PA11)

transformation from IGb08

Information source Title Continuously Operating Reference Station

(CORS): History, Applications, and Future

Enhancements

Author R.A. Snay, T. Soler

PublisherASCEPublication date2008-04-01Edition date2008-04-01

Series/Journal name Journal of Surveying Engineering

Issue identification Volume 134, No. 4

Page 95-104

Other citation details NAD83 (CORS96) Epoch 1996.0,NAD83

(CORS96) Epoch 1997.0, NAD83 (CORS96)

Epoch 2002.0

Information source Title NGS No Longer Updates Published CORS

Coordinates in the Following Reference Frames

Author National Geodetic Survey

Publisher National Oceanic and Atmospheric Administration

(NOAA) National Geodetic Survey (NGS)

Revision date 2017-03-16 Edition date 2017-03-16

Series/Journal name NGS Online listing of transformation parameters

Other citation details webpage

Data source ISO Geodetic Registry

Remarks Transformation defines NAD83(CORS96) and is treated as errorless.

Operation version v1

Scope Spatial referencing

Operation accuracy 0.0 m

Source CRS ITRF96 - XYZ

Target CRS NAD 83 (CORS96) Epoch 1997.0 - XYZ

Operation method Time-Dependent Coordinate Frame Transformation (geocentric

Cartesian domain)

Extent

United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut,

Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).

Geographic Bounding Box

West-bound longitude167.65North-bound latitude74.71East-bound longitude-63.88South-bound latitude14.92

Operation parameter values

Time reference	1997.0 year
Rate of change of scale difference	0.0 parts per billion per year
Rate of change of Z-axis rotation	-0.0316 milliarc-second per year
Rate of change of Y-axis rotation	-0.7423 milliarc-second per year
Rate of change of X-axis rotation	0.0532 milliarc-second per year
Rate of change of Z-axis translation	0.0 metre per year
Rate of change of Y-axis translation	0.0 metre per year
Rate of change of X-axis translation	0.0 metre per year
Scale difference	0.0 parts per billion
Z-axis rotation	11.66 milliarc-second
Y-axis rotation	9.65 milliarc-second
X-axis rotation	25.79 milliarc-second
Z-axis translation	-0.5129 metre
Y-axis translation	-1.9072 metre
X-axis translation	0.991 metre

ISO Geodetic Registry

Item class OperationMethod

Name Time-Dependent Coordinate Frame

Transformation (geocentric Cartesian domain)

Item status VALID
Identifier 94

Alias Time-Dependent 7-Parameter Transformation

Alias 14-Parameter Transformation

Alias Time-Dependent Coordinate Frame Transformation

Data source ISO Geodetic Registry

Remarks Note the analogy with the Time-dependent Position Vector

Transformation but beware of the differences! The Position Vector

Transformation convention is used by IAG.

Formula Geomatics Guidance Note No 7, part 2: Coordinate Conversions and

Transformations including Formulas

Operation parameters

X-axis translation

Y-axis translation

Z-axis translation

X-axis rotation

Y-axis rotation

Z-axis rotation

Scale difference

Rate of change of X-axis translation

Rate of change of Y-axis translation

Rate of change of Z-axis translation

Rate of change of X-axis rotation

Rate of change of Y-axis rotation

Rate of change of Z-axis rotation

Rate of change of scale difference

Time reference