ISO Geodetic Registry

Item class Transformation

Name ITRF2008 to NAD 83 (2011) Epoch 2010 [v1]

Item statusVALIDIdentifier566

Information source Title Introducing HTDP 3.1 to transform coordinates

across time and spatial reference frames

Author C. Pearson, R.A. Snay
Publisher Springer-Verlag
Publication date 2013-01-01
Edition date 2013-01-01
Series/Journal name GPS Solutions
Issue identification Volume 17, No. 1

Page 1-15

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

transformation from IGb08

Information source Title Publication of North American Datum of 1983

(2011) Epoch 2010.00, North American Datum of 1983 (PA2011) Epoch 2010.00 and North American Datum of 1983 (MA2011) Epoch

2010.00

Author US Government

Publisher Office of Federal Register, NARA

Publication date 2013-08-08 Edition date 2013-08-08

Series/Journal name Federal Register Notice

Issue identification Volume 78, No. 153, Document: 2013–19167,

Citation: 78 FR 48421

Page48421-48422TitleCORS CoordinatesAuthorNational Geodetic Survey

Publisher National Oceanic and Atmospheric Administration

(NOAA) National Geodetic Survey (NGS)

Revision date 2017-05-16

Series/Journal name NGS Online listing of transformation parameters

Other citation details webpage

Data source ISO Geodetic Registry

Remarks Transformation defines NAD83(2011) and is treated as errorless.

Operation version v1

Information source

Scope Spatial referencing

Operation accuracy 0.0 m

Source CRS ITRF2008 - XYZ

Target CRS NAD 83 (2011) Epoch 2010 - 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

- P	
X-axis translation	0.99343 metre
Y-axis translation	-1.90331 metre
Z-axis translation	-0.52655 metre
X-axis rotation	25.91467 milliarc-second
Y-axis rotation	9.42645 milliarc-second
Z-axis rotation	11.59935 milliarc-second
Scale difference	1.71504 parts per billion
Rate of change of X-axis translation	7.9E-4 metre per year
Rate of change of Y-axis translation	-6.0E-4 metre per year
Rate of change of Z-axis translation	-0.00134 metre per year
Rate of change of X-axis rotation	0.06667 milliarc-second per year
Rate of change of Y-axis rotation	-0.75744 milliarc-second per year
Rate of change of Z-axis rotation	-0.05133 milliarc-second per year
Rate of change of scale difference	-0.10201 parts per billion per year
Time reference	1997.0 year

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