ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF2008 to NAD 83 (2011) Epoch 2010 [v1]**	
Item status	VALID	
Identifier	566	
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
	Page	48421-48422
Information source	*Title*	CORS Coordinates
	Author	National 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	
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

Description	**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 longitude*	167.65
	North-bound latitude	74.71
	East-bound longitude	-63.88
	South-bound latitude	14.92

Operation parameter values

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

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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