ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF97 to NAD 83 (CORS96) Epoch 1997.0 [v1]**	
Item status	VALID	
Identifier	604	
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
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*	Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements
	Author	R.A. Snay, T. Soler
	Publisher	ASCE
	Publication date	2008-04-01
	Edition date	2008-04-01
	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
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	ITRF97 - XYZ	
Target CRS	NAD 83 (CORS96) Epoch 1997.0 - 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

Time reference	1997.0 year
Rate of change of scale difference	-0.19 parts per billion per year
Rate of change of Z-axis rotation	-0.031 milliarc-second per year
Rate of change of Y-axis rotation	-0.757 milliarc-second per year
Rate of change of X-axis rotation	0.067 milliarc-second per year
Rate of change of Z-axis translation	0.0019 metre per year
Rate of change of Y-axis translation	-1.0E-4 metre per year
Rate of change of X-axis translation	7.0E-4 metre per year
Scale difference	-0.93 parts per billion
Z-axis rotation	11.599 milliarc-second
Y-axis rotation	9.426 milliarc-second
X-axis rotation	25.915 milliarc-second
Z-axis translation	-0.503 metre
Y-axis translation	-1.9074 metre
X-axis translation	0.9889 metre

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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