ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF2008 to NAD 83 (PA11) Epoch 2010 [v1]**	
Item status	VALID	
Identifier	565	
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(PA11) and is treated as errorless.	
Operation version	v1	
Scope	Spatial referencing	
Operation accuracy	0.0 m	
Source CRS	ITRF2008 - XYZ	
Target CRS	NAD 83 (PA11) Epoch 2010 - XYZ	
Operation method	Time-Dependent Coordinate Frame Transformation (geocentric Cartesian domain)	

Extent

Description	**American Samoa - onshore and offshore. Marshall Islands - onshore and offshore. United States (USA) - onshore and offshore - Hawaii. United States Minor Outlying Islands - onshore and offshore.**

Geographic Bounding Box	*West-bound longitude*	157.47
	North-bound latitude	31.8
	East-bound longitude	-151.27
	South-bound latitude	-17.56

Operation parameter values

Time reference	1997.0 year
Rate of change of scale difference	0.08 parts per billion per year
Rate of change of Z-axis rotation	-2.186 milliarc-second per year
Rate of change of Y-axis rotation	1.007 milliarc-second per year
Rate of change of X-axis rotation	-0.384 milliarc-second per year
Rate of change of Z-axis translation	-0.0018 metre per year
Rate of change of Y-axis translation	1.0E-4 metre per year
Rate of change of X-axis translation	1.0E-4 metre per year
Scale difference	1.1 parts per billion
Z-axis rotation	2.712 milliarc-second
Y-axis rotation	13.469 milliarc-second
X-axis rotation	27.741 milliarc-second
Z-axis translation	-0.5653 metre
Y-axis translation	-2.0161 metre
X-axis translation	0.908 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