ISO Geodetic Registry

Item class	Transformation	
Name	**IGb00 to IGS05 [IGS v1]**	
Item status	VALID	
Identifier	504	
Information source	*Title*	Proposed IGS05 Realization
	Author	R. Ferland
	Publisher	International GNSS Service (IGS)
	Publication date	2006-10-19
	Edition date	
	Series/Journal name	IGSMAIL
	Issue identification	5447.0
Information source	*Title*	Chronology of IGS Reference Frame Usage
	Author	International GNSS Service Analysis Centre Coordinator
	Publisher	National Oceanic and Atmospheric Administration (NOAA), National Geodetic Survey (NGS)
	Publication date	2012-10-04
	Other citation details	Website
Data source	ISO Geodetic Registry	
Remarks	Citations give the transformation from IGS05 to ITGb00. Accuracy of transformation is given at the reference epoch for the transformation parameters. Accuracy at other epochs depends on the accuracies of the parameters at the reference epoch and their rates of change. Refer to citations for accuracies of the parameters and their rates of change.	
Operation version	IGS v1	
Scope	Spatial referencing	
Operation accuracy	0.001 m	
Source CRS	IGb00 - XYZ	
Target CRS	IGS05 - XYZ	
Operation method	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)	

Extent

Description	**World.**	
Geographic Bounding Box	*West-bound longitude*	-180.0
	North-bound latitude	90.0
	East-bound longitude	180.0
	South-bound latitude	-90.0

Operation parameter values

X-axis translation	0.0 millimetre
Y-axis translation	1.7 millimetre
Z-axis translation	5.3 millimetre
X-axis rotation	0.0224 milliarc-second
Y-axis rotation	-0.0341 milliarc-second
Z-axis rotation	0.0099 milliarc-second
Scale difference	-0.8473 parts per billion
Rate of change of X-axis translation	0.4 millimetre per year
Rate of change of Y-axis translation	-0.7 millimetre per year

Rate of change of Z-axis translation	1.8 millimetre per year
Rate of change of X-axis rotation	-0.0033 milliarc-second per year
Rate of change of Y-axis rotation	1.0E-4 milliarc-second per year
Rate of change of Z-axis rotation	0.0161 milliarc-second per year
Rate of change of scale difference	-0.1748 parts per billion per year
Time reference	2000.0 year

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Item class	OperationMethod
Name	**Time-Dependent Position Vector Transformation (geocentric Cartesian domain)**
Item status	VALID
Identifier	82
Alias	Time-Dependent 7-Parameter Transformation
Alias	14-Parameter Transformation
Alias	Time-Dependent Position Vector Transformation
Data source	ISO Geodetic Registry
Remarks	Note the analogy with the rotation for the Time-dependent Coordinate Frame 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