ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF2000 to GDA94 [GA v2]**	
Item status	VALID	
Identifier	497	
Information source	*Title*	ITRF to GDA94 coordinate transformations
	Author	John Dawson and Alex Woods
	Publisher	de Gruyter
	Publication date	2010-10-25
	Edition date	2010-10-01
	Series/Journal name	Journal of Applied Geodesy
	Issue identification	4.0
	Page	189.0
Data source	ISO Geodetic Registry	
Remarks	Implemented 2010. Replaces 2001 transformation by Dawson and Steed, ITRF2000 to GDA94 [GA v1]. RMS of transformation residuals: 3mm north, 8mm east and 55mm vertical. Maximum residuals: 5mm north, 13mm east and 84mm vertical.	
Operation version	GA v2	
Scope	Spatial referencing	
Operation accuracy	0.06 m	
Source CRS	ITRF2000 - XYZ	
Target CRS	GDA94 - XYZ	
Operation method	Time-Dependent Coordinate Frame Transformation (geocentric Cartesian domain)	

Extent

Description	**Australia - onshore and offshore - mainland, Tasmania, Lord Howe Island, Norfolk Island, Macquarie Island. Christmas Island - onshore and offshore. Cocos (Keeling) Islands - onshore and offshore.**	
Geographic Bounding Box	*West-bound longitude*	93.41
	North-bound latitude	-8.47
	East-bound longitude	173.4
	South-bound latitude	-60.56

Operation parameter values

Time reference	1994.0 year
Rate of change of scale difference	0.249 parts per billion per year
Rate of change of Z-axis rotation	1.224 milliarc-second per year
Rate of change of Y-axis rotation	1.4868 milliarc-second per year
Rate of change of X-axis rotation	1.7454 milliarc-second per year
Rate of change of Z-axis translation	11.24 millimetre per year
Rate of change of Y-axis translation	3.55 millimetre per year
Rate of change of X-axis translation	-4.66 millimetre per year
Scale difference	7.07 parts per billion
Z-axis rotation	1.9356 milliarc-second

Y-axis rotation	0.4594 milliarc-second
X-axis rotation	-1.6705 milliarc-second
Z-axis translation	-20.37 millimetre
Y-axis translation	-29.85 millimetre
X-axis translation	-45.91 millimetre

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