ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF96 to GDA94 [GA v2]**	
Item status	VALID	
Identifier	465	
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, ITRF96 to GDA94 [GA-Aus 2001 v1]. RMS of transformation residuals: 22mm north, 56mm east and 90mm vertical. Maximum residuals: 49mm north, 126mm east and 193mm vertical.	
Operation version	GA v2	
Scope	Spatial referencing	
Operation accuracy	0.11 m	
Source CRS	ITRF96 - 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

X-axis translation	24.54 millimetre
Y-axis translation	-36.43 millimetre
Z-axis translation	-68.12 millimetre
X-axis rotation	-2.7359 milliarc-second
Y-axis rotation	-2.0431 milliarc-second
Z-axis rotation	0.3731 milliarc-second
Scale difference	6.901 parts per billion
Rate of change of X-axis translation	-21.8 millimetre per year
Rate of change of Y-axis translation	4.71 millimetre per year
Rate of change of Z-axis translation	26.27 millimetre per year

Rate of change of X-axis rotation	2.0203 milliarc-second per year
Rate of change of Y-axis rotation	2.1735 milliarc-second per year
Rate of change of Z-axis rotation	1.629 milliarc-second per year
Rate of change of scale difference	0.388 parts per billion per year
Time reference	1994.0 year

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