# ISO Geodetic Registry

Item class Transformation

Name ITRF96 to GDA94 [GA v2]

Item statusVALIDIdentifier465

Information source Title ITRF to GDA94 coordinate transformations

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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