ISO Geodetic Registry

Item class Transformation

Name ITRF92 to NAD83(CSRS96) v1 [v1]

Item status VALID
Identifier 477

Information source Title Modern Geodetic Reference Frames for Precise

Satellite Positioning and Navigation

Author J. Kouba, J. Popelar

Publication date 1994-09-02

Series/Journal name Proceedings on the International Symposium

on Kinematic Systems in Geodesy, Geomatics and Navigation, Banff, Canada, August 30 -

September 2, 1994

Page 79-86

Information source Title The Evolution of NAD83 in Canada

Author M. Craymer

Publisher Canadian Institute of Geomatics

Publication date 2006 Series/Journal name Geomatica Issue identification Volume 60, No. 2

Page 151-164

Information source Title The Canadian Spatial Reference System (CSRS)

Author Canadian Geodetic Survey

Publisher Canadian Geodetic Survey, Surveyor General

Branch, Earth Sciences Sector, Natural Resources Canada, Government of Canada

Publication date 2016-08-30

Data source ISO Geodetic Registry

Remarks Transformation defines NAD83(CSRS96)v1 and is treated as errorless.

Operation version v1

Scope Spatial referencing

Operation accuracy 0.0 m

Source CRS ITRF92 - XYZ

Target CRS NAD83(CSRS96) v1 - XYZ

Operation method Time-Dependent Position Vector Transformation (geocentric Cartesian

domain)

Extent

Canada - onshore and offshore - Alberta,
British Columbia, Manitoba, New Brunswick,
Newfoundland and Labrador, Northwest
Territories, Nova Scotia, Nunavut, Ontario,
Prince Edward Island, Quebec, Saskatchewan,
Yukon.

Geographic Bounding Box
West-bound longitude
North-bound latitude
East-bound longitude
-47.74

South-bound latitude

Operation parameter values

40.04

Time reference	1988.0 year
Rate of change of scale difference	0.0 parts per billion per year
Rate of change of Z-axis rotation	0.032 milliarc-second per year
Rate of change of Y-axis rotation	0.742 milliarc-second per year
Rate of change of X-axis rotation	-0.052 milliarc-second per year
Rate of change of Z-axis translation	0.0 metre per year
Rate of change of Y-axis translation	0.0 metre per year
Rate of change of X-axis translation	0.0 metre per year
Scale difference	5.0 parts per billion
Z-axis rotation	-10.7 milliarc-second
Y-axis rotation	-15.5 milliarc-second
X-axis rotation	-27.5 milliarc-second
Z-axis translation	-0.543 metre
Y-axis translation	-1.984 metre
X-axis translation	0.936 metre

ISO Geodetic Registry

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