ISO Geodetic Registry

Item class	GeodeticCRS	
Name	**ITRF2008 - XYZ**	
Item status	VALID	
Identifier	242	
Alias	IERS Terrestrial Reference Frame 2008	
Alias	International Terrestrial Reference Frame 2008	
Information source	*Title*	Analysis and results of ITRF2008
	Author	Z. Altamimi, X. Collilieux, L. Metivier
	Publisher	International Earth Rotation and Reference Systems Service Central Bureau, Verlag des Bundesamts fur Kartographie und Geodasie, Frankfurt am Main, Germany
	Publication date	2012-01-01
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	37.0
Information source	*Title*	ITRF2008 is available on line
	Author	IERS
	Publication date	2010-05-31
	Edition date	
	Series/Journal name	IERS Message
	Issue identification	164.0
Data source	ISO Geodetic Registry	
Remarks	Replaces ITRF2005 - XYZ. Replaced by ITRF2014 - XYZ.	
Scope	Spatial referencing	
Datum	International Terrestrial Reference Frame 2008	
Coordinate System	Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian | X in the equatorial plane at the Prime Meridian]. UoM: m.	

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

ISO Geodetic Registry

Item class	GeodeticDatum	
Name	**International Terrestrial Reference Frame 2008**	
Item status	VALID	
Identifier	179	
Alias	IERS Terrestrial Reference Frame 2008	
Alias	ITRF2008	
Information source	*Title*	IERS Conventions (2010)
	Author	G. Petit, B.J. Luzum (eds)
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie
	Publication date	2010
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	36.0
	Other citation details	ISSN: 1019-4568
Information source	*Title*	ITRF2008 is available on line
	Author	IERS
	Publication date	2010-05-31
	Edition date	
	Series/Journal name	IERS Message
	Issue identification	164.0
Information source	*Title*	Analysis and results of ITRF2008
	Author	Z. Altamimi, X. Collilieux, L. Metivier
	Publisher	International Earth Rotation and Reference Systems Service Central Bureau, Verlag des Bundesamts fur Kartographie und Geodasie, Frankfurt am Main, Germany
	Publication date	2012-01-01
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	37.0
Data source	ISO Geodetic Registry	
Remarks	Replaces ITRF2005. Replaced by ITRF2014. This is a purely Cartesian reference frame with no ellipsoid defined. GRS80 is the ellipsoid recommended by the IAG and IERS.	
Anchor definition	Realisation of the IERS Terrestrial Reference System (ITRS) at reference epoch 2005.0. Origin is defined such that it has zero translations and translation rates with respect to the mean Earth center of mass, averaged by the SLR station positions time series. Scale is defined by nullifying the scale factor and its rate with respect to the mean of VLBI and SLR long-term solutions as obtained by stacking their respective time series. Orientation (at epoch 2005.0) and its rate are aligned to the ITRF2005 using 179 stations of high geodetic quality. Datum defined by a set of 3 dimensional Cartesian station coordinates and velocities given by the citations.	
Release date	2010-05-31	
Coordinate Reference Epoch	2005.0	
Scope	Spatial referencing	
Ellipsoid	GRS 1980	
Prime Meridian	Greenwich	

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

ISO Geodetic Registry

Item class	Ellipsoid	
Name	**GRS 1980**	
Item status	VALID	
Identifier	27	
Alias	Geodetic Reference System 1980	
Alias	GRS1980	
Alias	IAG GRS80	
Alias	International 1979	
Alias	GRS80	
Information source	*Title*	Geodetic Reference System 1980
	Author	H. Moritz
	Publisher	Springer International Publishing
	Publication date	2003-03
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 74, No. 1
	Page	128–162
Information source	*Title*	Geodetic Reference System 1980
	Author	H. Moritz
	Publisher	International Association of Geodesy
	Publication date	1984
	Series/Journal name	Bulletin Geodesique
	Issue identification	Volume 58, No. 3
	Page	395-405
Data source	ISO Geodetic Registry	
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.	
Semi-major axis	6378137.0 m	
Inverse flattening	298.257222101 m	

ISO Geodetic Registry

Item class	PrimeMeridian	
Name	**Greenwich**	
Item status	VALID	
Identifier	25	
Alias	Zero meridian	
Information source	*Title*	Why the Greenwich meridian moved
	Author	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	Publisher	Springer International Publishing
	Publication date	2015-12
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 89, No. 12
	Page	1263–1272
Information source	*Title*	IERS Conventions (2010)
	Author	G. Petit, B.J. Luzum (eds)
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie
	Publication date	2010
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	36.0
	Other citation details	ISSN: 1019-4568
Data source	ISO Geodetic Registry	
Greenwich longitude	0.0 °	

ISO Geodetic Registry

Item class	CartesianCS	
Name	**Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian | X in the equatorial plane at the Prime Meridian]. UoM: m.**	
Item status	VALID	
Identifier	45	
Alias	Earth centred, earth fixed, right-handed 3D coordinate system, consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing towards North Pole. UoM: m.	
Alias	ECEF	
Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used in geocentric coordinate reference systems.	

Axes

Item class	CoordinateSystemAxis	
Name	**Geocentric X**	
Item status	VALID	
Identifier	33	
Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	X	
Direction	Geocentre > equator/0°E	
Unit	metre	

Item class	CoordinateSystemAxis
Name	**Geocentric Y**
Item status	VALID
Identifier	37

Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Y	
Direction	Geocentre > equator/90°E	
Unit	metre	

Item class	CoordinateSystemAxis	
Name	**Geocentric Z**	
Item status	VALID	
Identifier	39	
Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Z	
Direction	Geocentre > north pole	
Unit	metre	