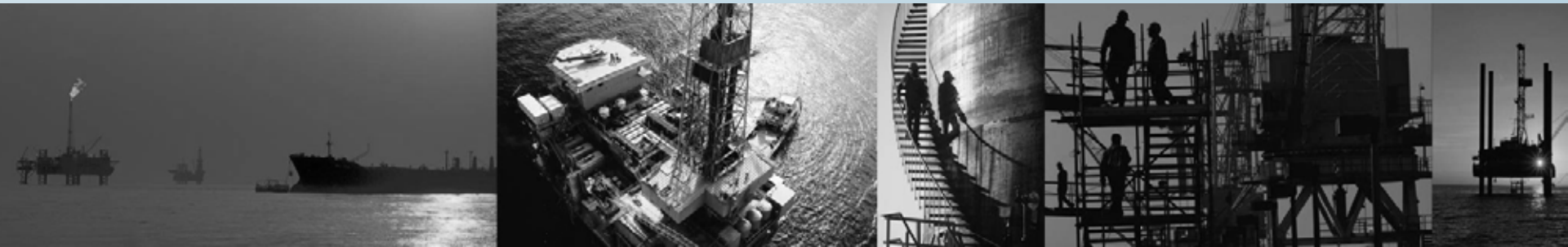




Experts in Geomatics, Surveying, Positioning,
Geospatial Data, and Mapping Sciences

Coordinate Reference Systems

(Best Practices for Assignment, Manipulation and Conversion in GIS Systems)



Jim Cain
Cain & Barnes, L. P.
jim.cain@cain-barnes.com

CAIN & BARNES, L.P.
Geomatics Experts Group



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Review: Datum, GeogCRS, ProjCRS

Geographic Coordinate Reference System (GeogCRS)

- Result of combining a geodetic datum and a set of coordinate axes (or a coordinate system)
- GeogCRS is often called a “Datum” or “Coordinate System” in general traditional usage

Coordinate Transformation takes you from one CRS to another, typically from a GeogCRS to another GeogCRS.

- May be tied into “Datum” definition in E&P Applications
- Often called “Datum Shift” in E&P applications

Projected Coordinate Reference System (ProjCRS) applies a map projection to a GeogCRS.

- Often called “Projection” in E&P Applications
- And usually called “Datum Shifts” as well in your applications
- Coordinates in these systems are your familiar “X,Y” or “E,N”

Recognized by ISO*, the EPSG** database of the OGP***, where

* ISO is the International Standards Organization;

**EPSG is the (former) European Petroleum Survey Group, now part of OGP

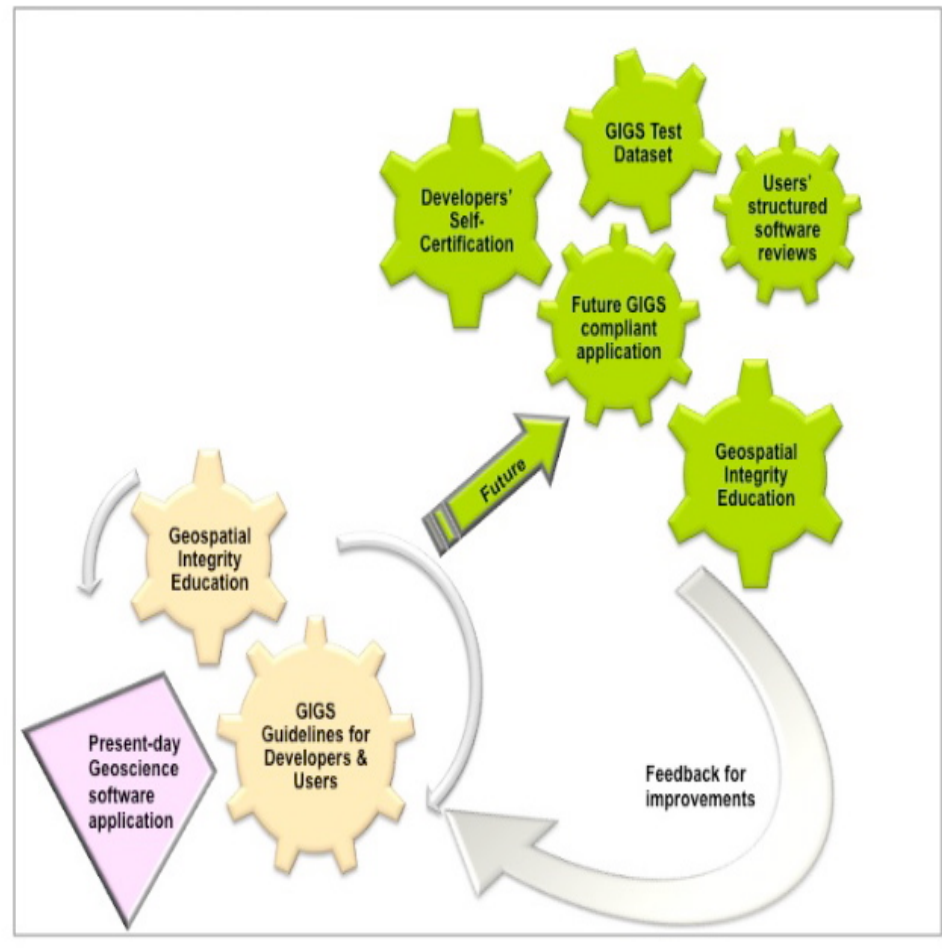
*** OGP is the International Oil and Gas Producers Association



Geospatial Integrity of Geoscience Software

The purpose of the GIGS JIP was to reduce, and eliminate where possible, common failures of geospatial integrity in geoscience software applications by:

- Improving the process of manipulation of geospatial data and metadata
- Maintaining integrity during transfers of data
- Educating users about risks of integrity failures
- Encouraging robust management of geospatial data
- Minimizing human errors through a better user interface



GIGS JIP Member Companies



GIGS JIP Executive Committee

- Brian Schostak (Shell), Chair
- Jonathan Stigant (Devon), Vice Chair
- Barry Barrs (ExxonMobil)
- Jonathan Davis (BP)
- M. Zukhairi B A Latef (Petronas)

The GIGS JIP companies
invested over U.S. \$1.5
million in a 3 year period.



GIGS Vendor Collaboration

Major Application Reviews:



Member Contributed Application Reviews:

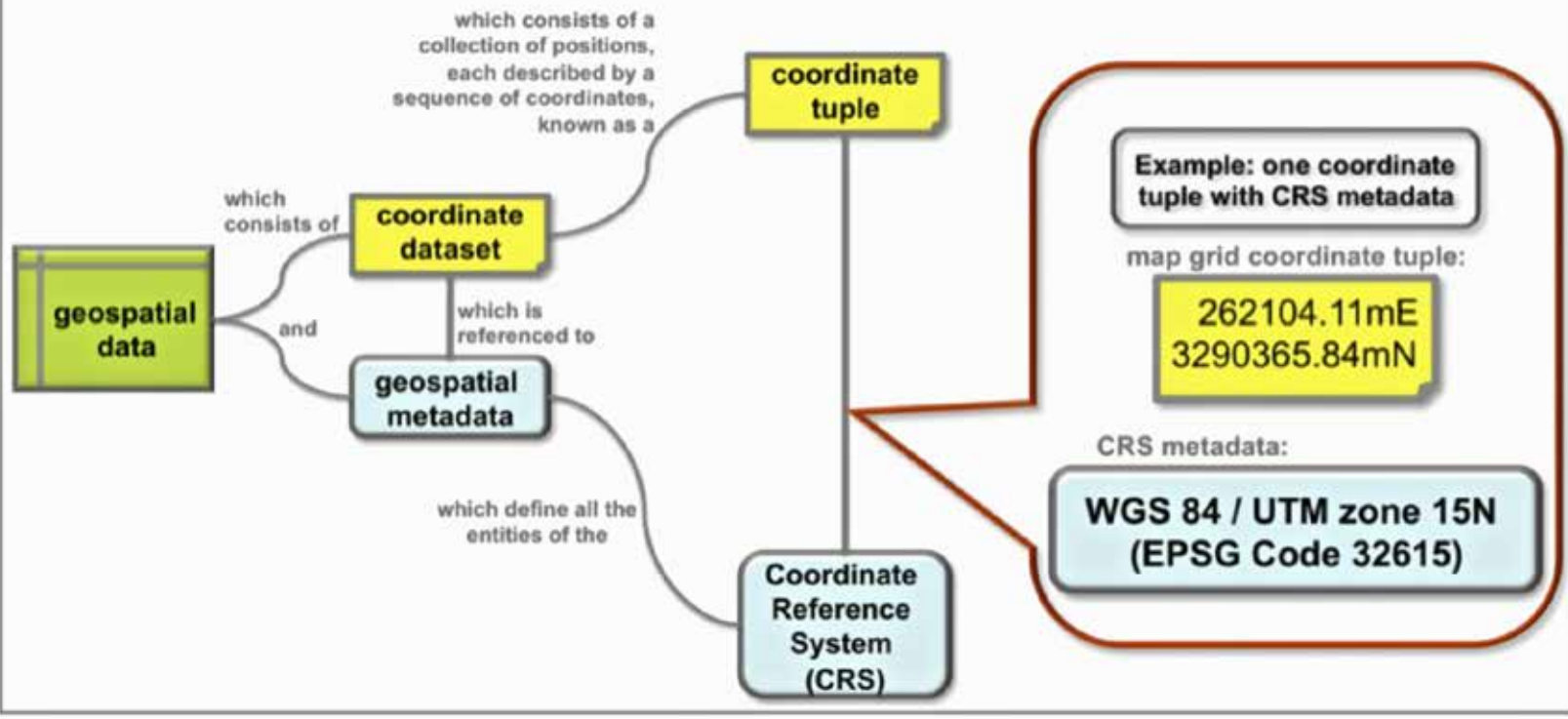


PETRA®



Coordinate Dataset

Coordinate Reference System & coordinate tuple



CRS Tuples : Include The Axis Definition

ProjectedCRS [ETRS89 / LCC Germany (E-N)]

[metadata](#)

Code: [EPSG::5243](#)

Name: [ETRS89 / LCC Germany \(E-N\)](#)

+ Aliases

+ Area of Use [Germany - onshore]

[metadata](#)

+ Base Geodetic CRS [ETRS89]

[metadata](#)

- Conversion [LCC Germany]

[metadata](#)

Code: [EPSG::4838](#)

Name: [LCC Germany](#)

+ Aliases

Operation is Reversible: yes

+ Area of Use [Germany - onshore]

[metadata](#)

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude of false origin	51° N	degree	No
Longitude of false origin	10° 30' E	sexagesimal DMS	No
Latitude of 1st standard parallel	48° 40' N	sexagesimal DMS	No
Latitude of 2nd standard parallel	53° 40' N	sexagesimal DMS	No
Easting at false origin	0	metre	No
Northing at false origin	0	metre	No

+ Method [Lambert Conic Conformal (2SP)]

[metadata](#)

+ Cartesian CS [Cartesian 2D CS. Axes: easting, northing (E,N). Orientations: east, north. UoM: m.]

[metadata](#)


CRS Tuples : Include The Axis Definition

ProjectedCRS [ETRS89 / LCC Germany (N-E)] [metadata](#)

Code: [EPSG::4839](#)

Name: [ETRS89 / LCC Germany \(N-E\)](#)

+ Aliases

+ Area of Use [Germany - onshore] [metadata](#)

+ Base Geodetic CRS [ETRS89] [metadata](#)

- Conversion [LCC Germany] [metadata](#)

Code: [EPSG::4838](#)

Name: [LCC Germany](#)

+ Aliases

Operation is Reversible: yes

+ Area of Use [Germany - onshore] [metadata](#)

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude of false origin	51° N	degree	No
Longitude of false origin	10° 30' E	sexagesimal DMS	No
Latitude of 1st standard parallel	48° 40' N	sexagesimal DMS	No
Latitude of 2nd standard parallel	53° 40' N	sexagesimal DMS	No
Easting at false origin	0	metre	No
Northing at false origin	0	metre	No

+ Method [Lambert Conic Conformal (2SP)] [metadata](#)

+ Cartesian CS [Cartesian 2D CS. Axes: northing, easting (N,E). Orientations: north, east. UoM: m.] [metadata](#)



UKOOA P1/90 Header : Which CRS?

```

H0202 TAPE VERSION IDENTIFIER    UKOOA P1/90

H1500 GEODETIC DATUM POSTPROC.   CAMACUPA
H1501 DATUM SHIFT TO WGS 84      -48.0-345.0-231.0 0.000 0.000 0.000 0.0000000
H1700 VERTICAL DATUM             ES ECHO SOUNDER POSITION
H1800 PROJECTION                  004 TRANSVERSE MERCATOR
H1950 SPHEROID                   CLARKE 1880 ROYAL GEOGRAPHICAL SOCIETY
H2000 GRID UNITS                 Meters
H2001 FALSE EASTING              500000
H2002 FALSE NORTHING             10000000
H2003 SCALE FACTOR               0.9996
H2200 CENTRAL MERIDIAN           11 30 0.000E
H2201 LATITUDE                   0 0 0.000
  
```

ProjectedCRS [Camacupa / TM 11.30 SE]

Code: [EPSG::22091](#)

Name: [Camacupa / TM 11.30 SE](#)

+ Area of Use [Angola - offshore block 15]

+ Base Geodetic CRS [Camacupa]

- Conversion [TM 11.30 SE]

Code: [EPSG::16611](#)

Name: [TM 11.30 SE](#)

Operation is Reversible: yes

+ Area of Use [Angola - offshore block 15]

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude of natural origin	0°	sexagesimal DMS	No
Longitude of natural origin	11° 30' E	sexagesimal DMS	No
Scale factor at natural origin	0.9996	unity	No
False easting	500000	metre	No
False northing	10000000	metre	No

+ Method [Transverse Mercator]

+ Cartesian CS [Cartesian 2D CS. Axes: easting, northing (E,N). Orientations: east, north. UoM: m.]



UKOOA P1/90 Header : Which Datum Tfm?

```

H0202 TAPE VERSION IDENTIFIER    UKOOA P1/90

H1500 GEODETIC DATUM POSTPROC.   CAMACUPA
H1501 DATUM SHIFT TO WGS 84      -48.0 -345.0 -231.0 0.000 0.000 0.000 0.0000000
H1700 VERTICAL DATUM             ES ECHO SOUNDER POSITION
H1800 PROJECTION                  004 TRANSVERSE MERCATOR
H1950 SPHEROID                   CLARKE 1880 ROYAL GEOGRAPHICAL SOCIETY
H2000 GRID UNITS                 Meters
H2001 FALSE EASTING              500000
H2002 FALSE NORTHING             1000000
H2003 SCALE FACTOR               0.9996
H2200 CENTRAL MERIDIAN           11 30 0.000E
H2201 LATITUDE                   0 0 0.000
    
```

Coordinate Transformation [Camacupa to WGS 84 (7)] [metadata](#)

Code: [EPSG::1324](#)

Name: [Camacupa to WGS 84 \(7\)](#)

Operation Version: ELF-Ago B15

Operation is Reversible: yes

Accuracy: 3 [metre](#)

[+ Area of Use \[Angola - offshore blocks 3 7 15 and 17\]](#) [metadata](#)

[+ Source CRS \[Camacupa\]](#) [metadata](#)

[+ Target CRS \[WGS 84\]](#) [metadata](#)

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
X-axis translation	-48	metre	Yes
Y-axis translation	-345	metre	Yes
Z-axis translation	-231	metre	Yes

[+ Method \[Geocentric translations \(geog2D domain\)\]](#) [metadata](#)



UKOOA P1/90 Header : Linear Units

```

H0202 TAPE VERSION                UKOOA P1/90
H1400 GEODETIC DATUM AS SURVEY    WGS 1984 SAT        6378137.000 298.2572236
H1500 GEODETIC DATUM AS POST.     NAD 1927          CLARKE (1866 6378206.400 294.9786982
H1600 DATUM SHIFTS                6.0-158.0-172.0 0.000 0.000 0.000 0.0000000
H1700 VERTICAL DATUM              MEAN SEA LEVEL
H1800 PROJECTION                  0006 LAMBERT, 2 STANDARD PARALLELS
H1900 GRID SYSTEM                 LOUISIANA SOUTH (1702)
H2000 GRID UNITS                  20. S. SURVEY FEET        3.280833333300
H2001 HEIGHT UNITS                1 METRES              .000000000000
H2002 ANGULAR UNITS              1 DEGREES
H2100 STANDARD PARALLELS         2918 0.000N 3042 0.000N
H2200 CENTRAL MERIDIAN           9120 0.000W
H2301 GRID ORIGIN                2840 0.000N 9120 0.000W
H2302 GRID COORDINATES AT ORIGIN 2000000.00E        0.00N
    
```

QCVD1 1446 17197 294714.59N 921526.89W 17068556 4087251

Coordinate Point Definition		Coordinate Point Definition	
Name	Single Point Conversion	Name	Single Point Conversion
Geodetic latitude	29 47 14.59 N deg	Northing	408725.1 usft
Geodetic longitude	92 15 26.89 W deg	Easting	1706855.6 usft
		Scale Factor	00.999932647484250
		Convergence	-00.46

Conversion Settings		Datum Transformation		Coordinate System	
Coordinate System				Coordinate System	
System	NAD27	No transformation needed		System	Louisiana South 1702
Datum	North American Datum 1927 (NAD27)			Datum	North American Datum 1927 (NAD27)
Units	Degree			Units	US Survey Foot
Vertical	None			Vertical	None



UKOOA P1/90 Header : Which CRS?

ProjectedCRS [Bogota 1975 / Colombia East Ce

Code: *EPSG::21898*

Name: *Bogota 1975 / Colombia East Central zone*

+ Aliases

+ Area of Use [Colombia - 72°35'W to 69°35'V

+ Base Geodetic CRS [Bogota 1975]

- Conversion [Colombia East Central zone]

Code: *EPSG::18053*

Name: *Colombia East Central zone*

+ Aliases

Operation is Reversible: yes

+ Area of Use [Colombia - 72°35'W to 69°3

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude of natural origin	4° 35' 56.57" N	sexagesimal DMS	No
Longitude of natural origin	71° 4' 51.3" W	sexagesimal DMS	No
Scale factor at natural origin	1	unity	No
False easting	1000000	metre	No
False northing	1000000	metre	No

+ Method [Transverse Mercator]

[metadata](#)

+ Cartesian CS [Cartesian 2D CS. Axes: northing, easting (X,Y). Orientations: north, east. UoM: m.]

[metadata](#)

```

H03 CLIENT : ECOPETROL
H04 GEOPHYSICAL CONTRACTOR : WESTERN GEOPHYSICAL
H05 SURVEY CONTRACTOR : WESTERN GEOPHYSICAL
H06 SURVEY PROCESSING : WESTERN GEOPHYSICAL
H07 TYPE OF COMPUTER : PERSONAL COMPUTER
H08 COORDINATE LOCATION : RECEIVER
H09 OFFSET :
H10 GMT : NOT AVAILABLE
H11 NUM RECV GROUPS PER SHOT : NOT AVAILABLE
H12 SURVEY SPHERIOD : INTERNATIONAL 6378388.000 297.0000000
H13 POST-PLOT SPHERIOD : INTERNATIONAL
H14 SURVEY GEODETIC DATUM : BOGOTA
H15 POST-PLOT GEODETIC DATUM : BOGOTA
H16 TRANSFORMATION DATUM : NOT AVAILABLE
H17 VERTICAL DATUM : MSL-COLOMBIA
H18 PROJECTION TYPE : TRANSVERSE MERCATOR
H181 GRID DESCRIPTION : PLANAS CONFORME DE GAUSS
H19 PROJECTION ZONE : TRES GRADOS ESTE
H20 PROJECTION UNITS : METERS (INTL)
H220 CENTRAL MERIDIAN : 0710451.300W
H231 LAT/LON OF ORIGIN : 0043556.570N 0710451.300W
H232 FALSE EASTING/NORTHING : 1000000.E 1000000.N
H241 SCALE FACTOR AT ORIGIN : 0 1.0
H242 LAT/LON OF SCALE FACTOR : 0043556.570N 0710451.300W
    
```



UKOOA P1/11 Header : a new P1 format

Example Coordinate Reference System Details

Geographic CRS

HG,1,4,0,CRS Number/Type/Name:	,1,4326,2,geographic 2D,WGS 84
HG,1,4,3,Geodetic Datum:	,1,6326,World Geodetic System 1984
HG,1,4,4,Ellipsoid:	,1,7030,WGS 84,6378137,,298.257223563,4,metre
HG,1,4,5,Prime Meridian:	,1,8901,Greenwich,0,2,degree
HG,1,6,0,Coordinate System:	,1,6422,Ellipsoidal 2D CS,ellipsoidal,2
HG,1,6,1,Coordinate System Axis 1:	,1,1,106,Geodetic latitude,north, Lat,2,2,degree
HG,1,6,1,Coordinate System Axis 2:	,1,2,107,Geodetic longitude,east,Long,2,2,degree

Projected CRS

HG,1,4,0,CRS Number/Type/Name:	,1,2310,1,projected,WGS 84 / UTM zone 31N
HG,1,4,3,Geodetic Datum:	,1,32631,World Geodetic System 1984
HG,1,4,4,Prime Meridian:	,1,8901,Greenwich,0,2,degree,0.0174533
HG,1,4,5,Ellipsoid:	,1,7030,WGS 84,6378137,298.257223563,4,metre
HG,1,5,0,Projection:	,1,16031,UTM zone 31N
HG,1,5,1,Projection Method:	,1,9807,Transverse Mercator,1,5
HG,1,5,2,Base Geographical CRS:	,1,4326,2
HG,1,5,3,Latitude of natural origin:	,1,8801,,0,2,degree
HG,1,5,3,Longitude of natural origin:	,1,8802,,3,2,degree
HG,1,5,3,Scale factor at natural origin:	,1,8805,0.9996,3, unity
HG,1,5,3,False easting:	,1,8806,500000,4, metre
HG,1,5,3,False northing:	,1,8807,,0,4, metre
HG,1,6,0,Coordinate System:	,1,4400,Cartesian 2D CS,Cartesian,2
HG,1,6,1,Coordinate System Axis 1:	,1,1,1, Easting, east,E,4,2,metre
HG,1,6,1,Coordinate System Axis 2:	,1,2,2,Northing,north,N,4,2,metre

Vertical CRS

HG,1,4,0,CRS Number/Type/Name:	,4,5773,5,vertical,EGM96 Geoid Height
HG,1,4,6,Vertical Datum:	,4,5171,EGM96 Geoid
HG,1,6,0,Coordinate System:	,4,6499,Vertical CS,vertical,1
HG,1,6,1,Coordinate System Axis 1:	,4,1,9904,Gravity-related height,up,H,4,2,metre

Compound CRS

HG,1,4,0,CRS Number/Type/Name:	,1,,6,compound,WGS 84 / UTM zone 31N / EGM96
HG,1,4,1,Horizontal CRS:	,1,2,WGS 84 / UTM zone 31N
HG,1,4,2,Vertical CRS:	,1,4,EGM96



Terminology

Projected Coordinate System Properties

General

Name: Timbalai 1948 RSO Borneo Feet

Projection

Name: Rectified_Skew_Orthomorphic_Natural_Oi

Parameter	Value
Scale_Factor	0.999839999999999950
Azimuth	53.315820479086227000
Longitude_Of_Center	115.000000000000000000
Latitude_Of_Center	4.000000000000000000
XY_Plane_Rotation	53.130102354155980000

Coordinate system definitions

Group: Borneo RSO Grids OK

System: NW Borneo RSO Cancel

Datum: TIMBALAI

Linear Unit: METERS EPSG Code: 29800

Projection: RSO/Hotine Oblique Mercator (1 pt & az)

Origin Latitude: N 4 00 00.00 Origin Longitude: E 115 00 00.00

False Northing (Y): 0.000000

Scale Factor: 0.999839999999999950

Skew Azimuth: 53.315820479086227000

Map Projection Editor: 'Timbalai 1948 / Borneo'

File Help

Coord Sys Type: Hotine Oblique Mercator - Azimuth Skew List ...

Basis Geog. CS: Timbalai 1948 List ...

Prime Meridian: Greenwich List ...

Datum: Timbalai 1948 List ...

Spheroid: Everest Brunei List ...

Surface measure: meters List ...

Description:

Azimuth Projection Center: 53.315820 dega

False Easting: 590476.8 meters

False Northing: 442857.6 meters

Latitude Projection Center: 4.00000000 dega

Longitude Projection Center: 115.00000000 dega

Scale Factor Proj Center: 0.9998399 unitless

Azimuth Skew: 53.1301023 dega

Rectified Skew Orthomorphic Borneo Grid (feet)

Alias: RSO Borneo (ftSe)

Code: 19957 Data Source: OGP

Remarks: See 19956 and 19958 for chains and metres versions. If using Hotine Oblique Mercator (variant A) method (code 9812) FE = FN = 0 ftSe. Being replaced by metric version (code 19958).

Parameter	Value
Area of use	Malaysia - East Malaysia (Sabah; Sarawak).
Information source	EPSG unit conversion of Directorate of Color
Scope	Large and medium scale topographic mapping
Type	Projection
Method Name	Hotine Oblique Mercator (variant B)
Latitude of projection centre	04° 00' 00.000"N (degree)
Longitude of projection centre	115° 00' 00.000"E (degree)
Azimuth of initial line	53° 18' 56.954" (degree)
Angle from Rectified to Skew ...	53° 07' 48.369" (degree)
Scale factor on initial line	0.99984 (unity)
Easting at projection centre	1937263.44 (British foot (Sears 1922))
Northing at projection centre	1452947.58 (British foot (Sears 1922))



GeoFrame v4.4 : Which CRS And Datum Tfm?

Create Coordinate Reference System

EPSG V6.11.2

Geodetic Datum

EPSG Id.	EPSG Tran.	Name
4208	15754	Aratu
4263	15755	Minna
4691	15769	Moorea 87
4629	15770	Tahaa 54
4692	15771	Maupiti 83
4689	15773	IGN63 Hiva Oa
4689	15774	IGN63 Hiva Oa
4630	15775	IGN72 Nuku Hiva
4630	15776	IGN72 Nuku Hiva
4630	15777	IGN72 Nuku Hiva
4159	15778	European Libyan Datum 1979
4682	15779	Gulshan 303

Datum code: EPSG:4208_15754

Datum description: Aratu

☐ Filter EPSG Tran. ☐ 15754

Ellipsoid

Name: International 1924

IUGG 1967 Reference Ellipsoid

JEFFREYS 1948

Kaula 1963

Krassovsky - 1940/1948

Krassovsky 1940

Michigan - Based on Clarke 1866 + 800 feet

Modified Fischer - 1960 (South Asia)

New Zealand Geodetic Datum of 1949 (aka Inter Norwegian National Ellipsoid (NG0))

Ellipsoid code: EPSG:7022

Ellipsoid description: International 1924

Semi-major Axis (m): 6378388.000

Semi-minor Axis (m): 6356911.946

Inverse Flattening: 296.99999823

Geodetic Transform (Datum --> WGS84)

Method: Molodensky

X Shift (m): -158.000

Y Shift (m): 315.000

Z Shift (m): -148.000

X Rotation (sec): NA

Y Rotation (sec): NA

Z Rotation (sec): NA

Scale (ppm): NA

Projection Transverse Mercator

Geodetic Datum Code: EPSG:4208_15754

Average Ellipsoidal Height (m): 0.000000

Average Geoid Separation (m): 0.000000

Orthometric Height (m): 0.000000

Origin Latitude (deg): 0.000000

Central Meridian (deg): -45.000000

False Easting (m): 500000.000000

False Northing (m): 10000000.000000

Scale Factor: 0.999600

Projection Variation: TM_Gauss_Kruger

OK Reset Cancel Help



Petrel 2010.x : Geodetic Metadata

Petrel 2010.1 Coordinate System Manager

File Help

Coordinate systems and transformations | **Geodetic catalog**

Coordinate systems

Name	Code	Source	Description	Base GCRS code	Base GCRS name	Type	Well-known text (WKT)
Contains	Contains	Contains	Contains	Contains	Contains	Contains	Contains
Anguilla_1957_British_West_Indies_Grid	2000	EPSG		4600	GCS_Anguilla_1957	Projected	PROJCS["Anguilla_1957_British_West_Indies_Grid",GEOGCS["GCS_Anguilla_1957",DATUM["D...
Antigua_1943_British_West_Indies_Grid	2001	EPSG		4601	GCS_Antigua_1943	Projected	PROJCS["Antigua_1943_British_West_Indies_Grid",GEOGCS["GCS_Antigua_1943",DATUM["D...
Dominica_1945_British_West_Indies_Grid	2002	EPSG		4602	GCS_Dominica_1945	Projected	PROJCS["Dominica_1945_British_West_Indies_Grid",GEOGCS["GCS_Dominica_1945",DATUM["D...
Grenada_1953_British_West_Indies_Grid	2003	EPSG		4603	GCS_Grenada_1953	Projected	PROJCS["Grenada_1953_British_West_Indies_Grid",GEOGCS["GCS_Grenada_1953",DATUM["D...
Montserrat_1958_British_West_Indies_Grid	2004	EPSG		4604	GCS_Montserrat_1958	Projected	PROJCS["Montserrat_1958_British_West_Indies_Grid",GEOGCS["GCS_Montserrat_1958",DATUM["D...
St_Kitts_1955_British_West_Indies_Grid	2005	EPSG		4605	GCS_St_Kitts_1955	Projected	PROJCS["St_Kitts_1955_British_West_Indies_Grid",GEOGCS["GCS_St_Kitts_1955",DATUM["D...
St_Lucia_1955_British_West_Indies_Grid	2006	EPSG		4606	GCS_St_Lucia_1955	Projected	PROJCS["St_Lucia_1955_British_West_Indies_Grid",GEOGCS["GCS_St_Lucia_1955",DATUM["D...
St_Vincent_1945_British_West_Indies_Grid	2007	EPSG		4607	GCS_St_Vincent_1945	Projected	PROJCS["St_Vincent_1945_British_West_Indies_Grid",GEOGCS["GCS_St_Vincent_1945",DATUM["D...
NAD_1927_CGQ77_MTM_2_SCOPQ	2008	EPSG		4608	GCS_NAD_1927_CG	Projected	PROJCS["NAD_1927_CGQ77_MTM_2_SCOPQ",GEOGCS["GCS_NAD_1927_CGQ77",DATUM["D...
NAD_1927_CGQ77_MTM_3_SCOPQ	2009	EPSG		4609	GCS_NAD_1927_CG	Projected	PROJCS["NAD_1927_CGQ77_MTM_3_SCOPQ",GEOGCS["GCS_NAD_1927_CGQ77",DATUM["D...

Transforms

Name	Code	Source	Description	Rule	From	To	Well-known text (WKT)
Contains	Contains	Contains	Contains	Contains	Contains	Contains	Contains
Ain_el_Abd_To_WGS_1984_3	1055	EPSG		Simple	4204	4326	GEOGTRAN["Ain_el_Abd_To_WGS_1984_3",GEOGCS["GCS_Ain_el_Abd_1970",DATUM["D_Ai...
Ain_el_Abd_To_WGS_1984_4	1056	EPSG		Simple	4204	4326	GEOGTRAN["Ain_el_Abd_To_WGS_1984_4",GEOGCS["GCS_Ain_el_Abd_1970",DATUM["D_A...
Ain_el_Abd_To_WGS_1984_5	1057	EPSG		Simple	4204	4326	GEOGTRAN["Ain_el_Abd_To_WGS_1984_5",GEOGCS["GCS_Ain_el_Abd_1970",DATUM["D_A...
Ain_el_Abd_To_WGS_1984_6	1058	EPSG		Simple	4204	4326	GEOGTRAN["Ain_el_Abd_To_WGS_1984_6",GEOGCS["GCS_Ain_el_Abd_1970",DATUM["D_A...
KOC_To_WGS_1984_1	1059	EPSG		Simple	4246	4326	GEOGTRAN["KOC_To_WGS_1984_1",GEOGCS["GCS_Kuwait_Oil_Company",DATUM["D_Kuwa...
NGN_To_WGS_1984_1	1060	EPSG		Simple	4310	4326	GEOGTRAN["NGN_To_WGS_1984_1",GEOGCS["GCS_NGN",DATUM["D_NGN",SPHEROID["...
KUDAMS_To_WGS_1984_1	1061	EPSG		Simple	4319	4326	GEOGTRAN["KUDAMS_To_WGS_1984_1",GEOGCS["GCS_KUDAMS",DATUM["D_Kuwait_Ubhi...
KUDAMS_To_WGS_1984_2	1062	EPSG		Simple	4319	4326	GEOGTRAN["KUDAMS_To_WGS_1984_2",GEOGCS["GCS_KUDAMS",DATUM["D_Kuwait_Ubhi...
Vientiane_1982_To_Lao_1997_1	1063	EPSG		Simple	4676	4678	GEOGTRAN["Vientiane_1982_To_Lao_1997_1",GEOGCS["GCS_Vientiane_1982",DATUM["D_V...
Lao_1993_To_Lao_1997_1	1064	EPSG		Simple	4677	4678	GEOGTRAN["Lao_1993_To_Lao_1997_1",GEOGCS["GCS_Lao_1993",DATUM["D_Lao_1993",S...
Lao_1997_To_WGS_1984_1	1065	EPSG		Simple	4678	4326	GEOGTRAN["Lao_1997_To_WGS_1984_1",GEOGCS["GCS_Lao_1997",DATUM["D_Lao_Natio...
Amersfoort_To_ETRS_1989_MB	1066	EPSG		Simple	4289	4258	GEOGTRAN["Amersfoort_To_ETRS_1989_MB",GEOGCS["GCS_Amersfoort",DATUM["D_Amers...
Minna_To_WGS_1984_11	1067	EPSG		Simple	4293	4326	GEOGTRAN["Minna_To_WGS_1984_11",GEOGCS["GCS_Minna",DATUM["D_Minna",SPHEROID["...

Message log

Error (0) Warning (0) Info (2) Clear Export View log file



ArcGIS: Datum Tfm Lookup

Coordinate Transformation [NAD27 to WGS 84 (79)]

[metadata](#)

Code: **EPSG::15851**

Name: **NAD27 to WGS 84 (79)**

Operation Version: OGP-Usa Conus

Operation is Reversible: yes

Accuracy: 5 [metre](#)

+ Area of Use [USA - conus including EEZ]

[metadata](#)

+ Source CRS [NAD27]

[metadata](#)

+ Target CRS [WGS 84]

[metadata](#)

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude difference file	conus.las		Yes
Longitude difference file	conus.los		Yes

+ Method [NADCON]

[metadata](#)

Geographic(datum) transformations & Areas of use

Name	Code	Area of use
NAD_1927_To_WGS_1984_34	1692	Canada - Quebec
NAD_1927_To_WGS_1984_79_CONUS	15851	United States - lower 48 states
NAD_1927_To_WGS_1984_83	15855	Gulf of Mexico - Tampico area

C:\Program Files\ArcGIS\Documentation\geographic_transformations.pdf



ArcGIS: Datum Tfm Lookup

Coordinate Transformation [Amersfoort to WGS 84 (1)]

[metadata](#)

Code: [EPSG::1112](#)

Name: [Amersfoort to WGS 84 \(1\)](#)

Operation Version: NCG-Nld 93

Operation is Reversible: yes

Accuracy: 1 [metre](#)

+ Area of Use [Netherlands - onshore]

[metadata](#)

+ Source CRS [Amersfoort]

[metadata](#)

+ Target CRS [WGS 84]

[metadata](#)

Parameter Values

Warning: **CARE!** Ensure application uses this method! See Guidance Note 7-1

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
X-axis translation	593.16	metre	Yes
Y-axis translation	26.15	metre	Yes
Z-axis translation	478.54	metre	Yes
X-axis rotation	-6.3239	microradian	Yes
Y-axis rotation	-0.5008	microradian	Yes
Z-axis rotation	-5.5487	microradian	Yes
Scale difference	4.0775	parts per million	Yes

+ Method [Position Vector transformation (geog2D domain)]

[metadata](#)

X-axis rotation	-6.3239	microradians	-1.304398	arc-seconds
Y-axis rotation	-0.5008	microradians	-0.10329741	arc-seconds
Z-axis rotation	-5.5487	microradians	-1.1445015	arc-seconds

Geographic (datum) transformations—Coordinate frame and position vector (7 parameters) methods

Name	Code	Method	dx	dy	dz	rx	ry	rz	ds
Amersfoort_To_WGS_1984	1112	Position_Vector	593.16	26.15	478.54	-1.304398	-0.10329741	-1.1445015	4.0775
Amersfoort_To_WGS_1984_2	1672	Coordinate_Frame	565.04	49.91	465.84	0.40939439	-0.3597052	1.868491	4.0772



Precision and Presentation Options

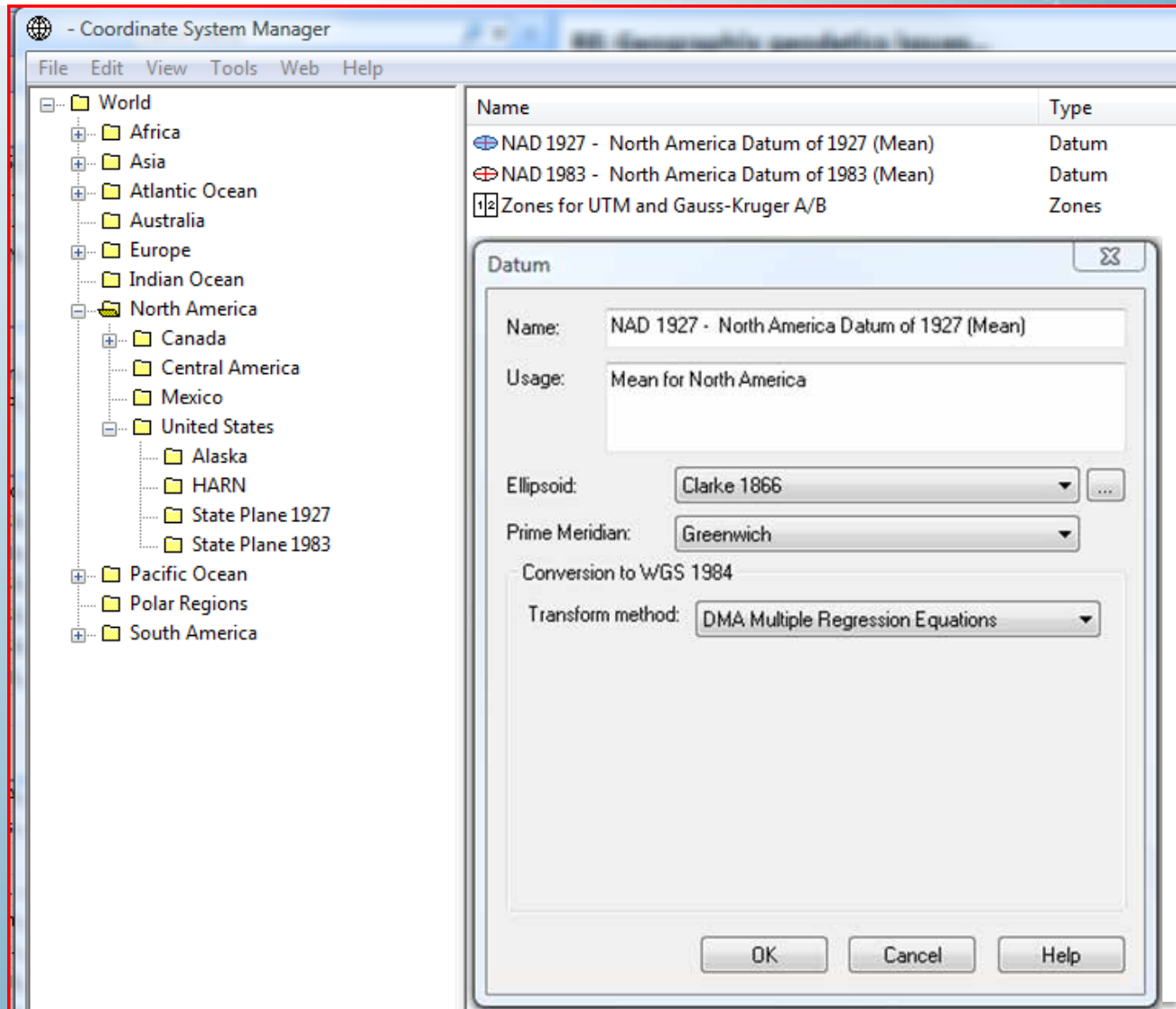
Precisions are shown consistent to centimeter level

Degrees Minutes Seconds (DD MM SS.sss H)	34 ° 27' 17.453" N	118 ° 31' 32.684" E
Degrees Decimal Minutes (DD MM.mmmmm H)	34 ° 27. 29088' N	118 ° 31. 54473' E
Decimal Degrees * (DD.ddddddd H)	34.2881814 ° N	118.5257456 ° E
DMS in Sexagesimal Format (DD.MMSSssss)	34.2717453 ° N	118.3132684 ° E

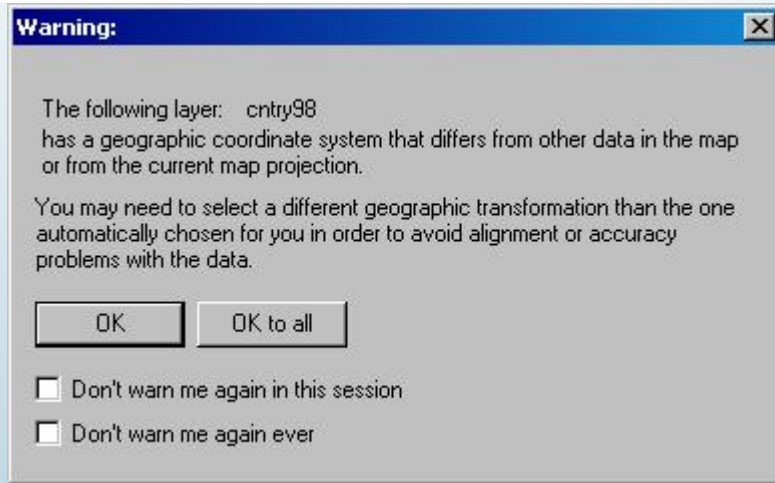
- In this case, difference is about 20 kilometers (12 statute miles) if DD.MMSSssss is thought to be DD.ddddddd!



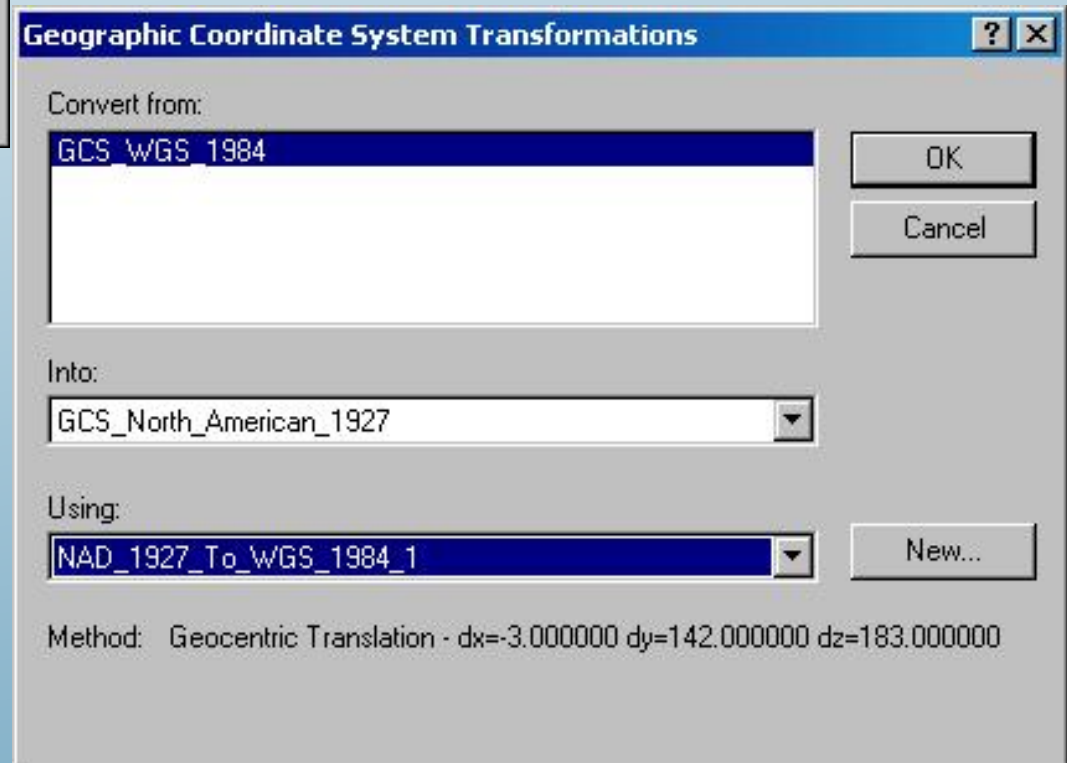
Be Aware Of Default “Datums”



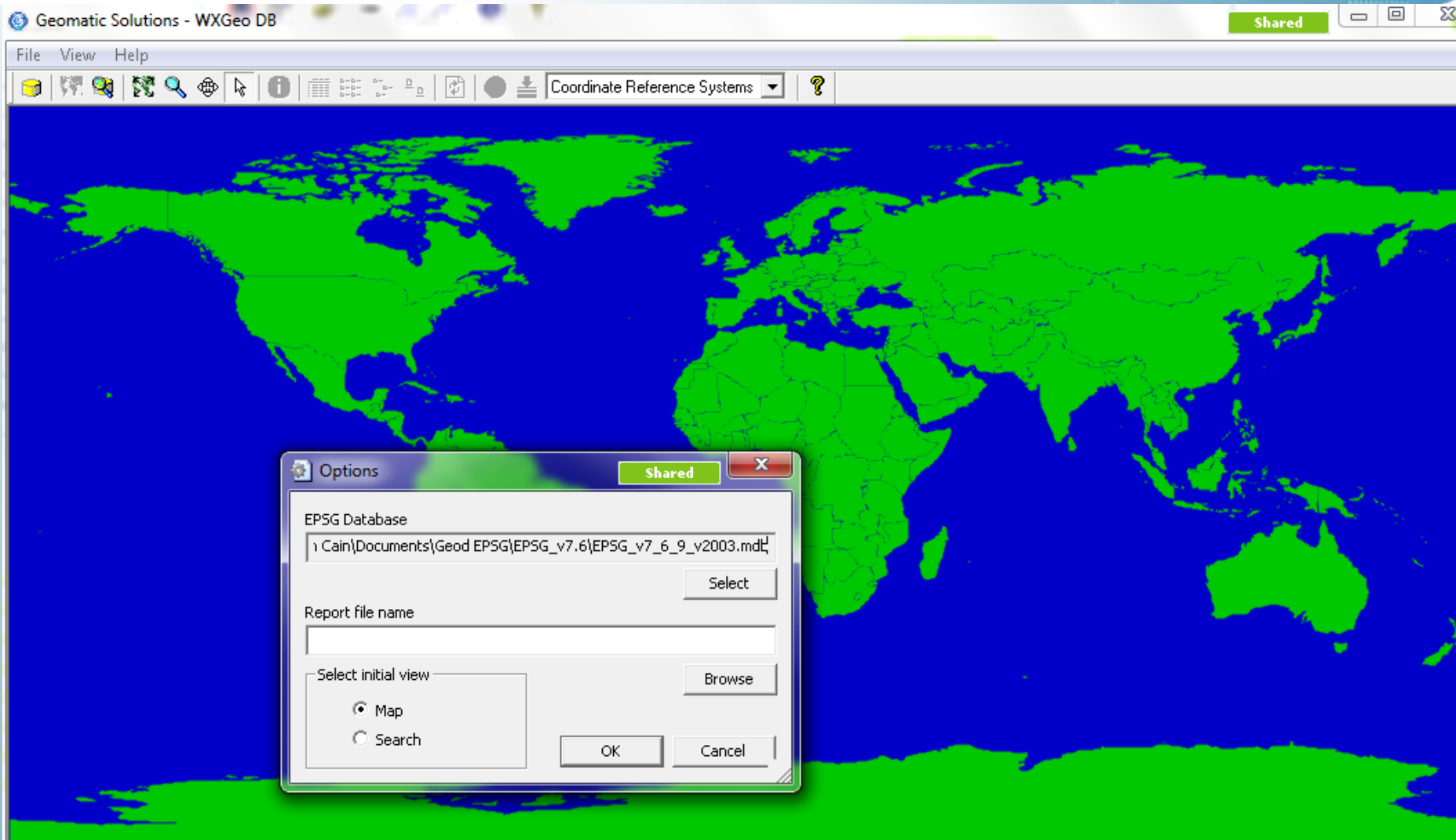
Be Aware Of Default “Datums”



Is NAD27 to WGS 84 (1)
the Datum Transformation
you wish to use?



Geo Suite : Works With EPSG MS Access db



Geo Suite Calc : Drill down for Metadata

Coordinate Reference System  Currently Sharing

☐ World (Global) Systems ☒ Local Systems

Area
<all areas>

Coordinate Reference System Type
Geographic 2D CRS

Coordinate Reference System
Bogota 1975

Details

Type:
Geographic 2D
Datum:
Bogota 1975
Ellipsoid:
International 1924
Area name:
Colombia - mainland
Information source:
IGAC special publication no. 1, "Geodesia" 4th edition, 1975.

OK Cancel

Coordinate Reference System  Currently Sharing

☐ World (Global) Systems ☒ Local Systems

Area
<all areas>

Coordinate Reference System Type
Geographic 2D CRS

Coordinate Reference System
Bogota 1975 (Bogota)

Details

Type:
Geographic 2D
Datum:
Bogota 1975 (Bogota)
Ellipsoid:
International 1924
Area name:
Colombia - mainland
Information source:
IGAC special publication no. 1, "Geodesia" 4th edition, 1975.

OK Cancel

Geo Suite Calc : Drill down for Metadata

Coordinate Reference System

World (Global) Systems ☐ Local Systems ☒

Area: <all areas>

Coordinate Reference System Type: Geographic 2D CRS

Coordinate Reference System: **Bogota 1975**

Details

Type: Geographic 2D
Datum: Bogota 1975
Ellipsoid: International 1924
Area name: Colombia - mainland
Information source: IGAC special publication no. 1, "Geodesia" 4th edition, 1975.

Coordinate Reference System Properties

Name: Bogota 1975
Alias: Bogota
Code: 4218 Data Source: OGP
Remarks: Replaces earlier 3 adjustments of 1951, 1944 and 1941. Replaced by MAGNA-SIRGAS (CRS code 4685).
Scope: Geodetic survey.

Parameter	Value
Type	Geographic 2D
Datum	Bogota 1975
Information Source	IGAC special publication no. 1
Area of use	Colombia - mainland.

Datum Properties

Name: Bogota 1975
Alias: Bogota
Code: 6218 Data Source: OGP
Remarks: Replaces 1951 adjustment. Replaced by MAGNA-SIRGAS (datum code 6685).

Parameter	Value
Area of use	Colombia - mainland.
Information source	Instituto Geografico Agustin Codazzi (IGAC)
Scope	Topographic mapping.
Type	Geodetic
Realization Epoch	1975
Ellipsoid	International 1924
Prime Meridian	Greenwich
Origin description	Fundamental point: Bogota observatory. La

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Geo Suite Calc : Drill Down for Metadata

Coordinate Reference System

☐ World (Global) Systems ☒ Local Systems

Area: <all areas>

Coordinate Reference System Type: Geographic 2D CRS

Coordinate Reference System: **Bogota 1975 (Bogota)**

Details

Type: Geographic 2D
Datum: Bogota 1975 (Bogota)
Ellipsoid: International 1924
Area name: Colombia - mainland
Information source: IGAC special publication no. 1, "Geodesia" 4th edition, 1975.

Coordinate Reference System Properties

Name: **Bogota 1975 (Bogota)**

Alias:

Code: 4802 Data Source: OGP

Remarks: Replaces earlier 3 adjustments of 1951, 1944 and 1941.

Scope: Geodetic survey.

Parameter	Value
Type	Geographic 2D
Datum	Bogota 1975 (Bogota)
Information Source	IGAC special publication no. 1
Area of use	Colombia - mainland.

Coordinate system properties

Name: Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north

Authority: OGP Authority code: 6422

Remarks: Coordinates referenced to this CS are in degrees. Any degree representation (e.g. DMSH, decimal, etc.) may be

Datum Properties

Name: **Bogota 1975 (Bogota)**

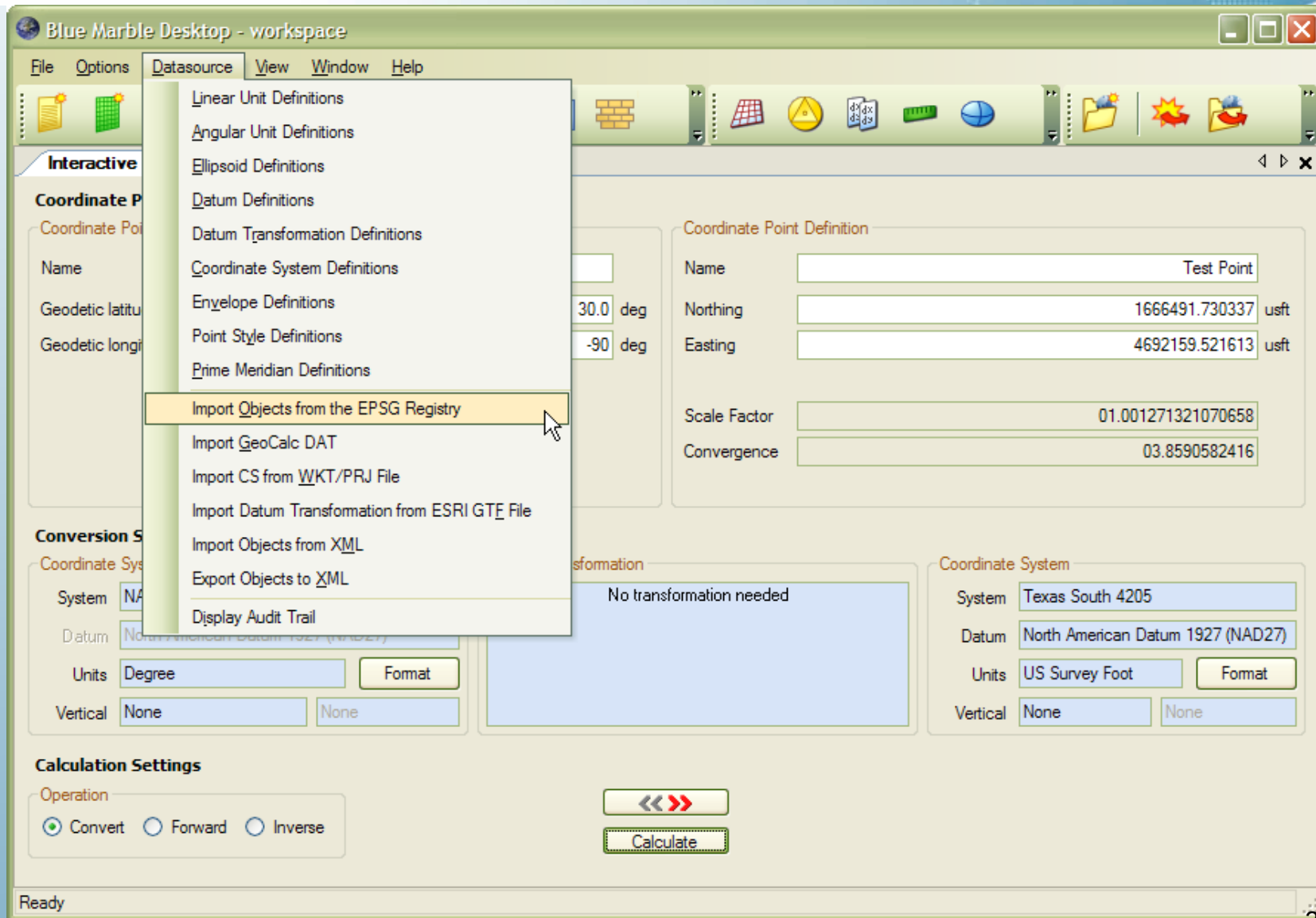
Alias:

Code: 6802 Data Source: OGP

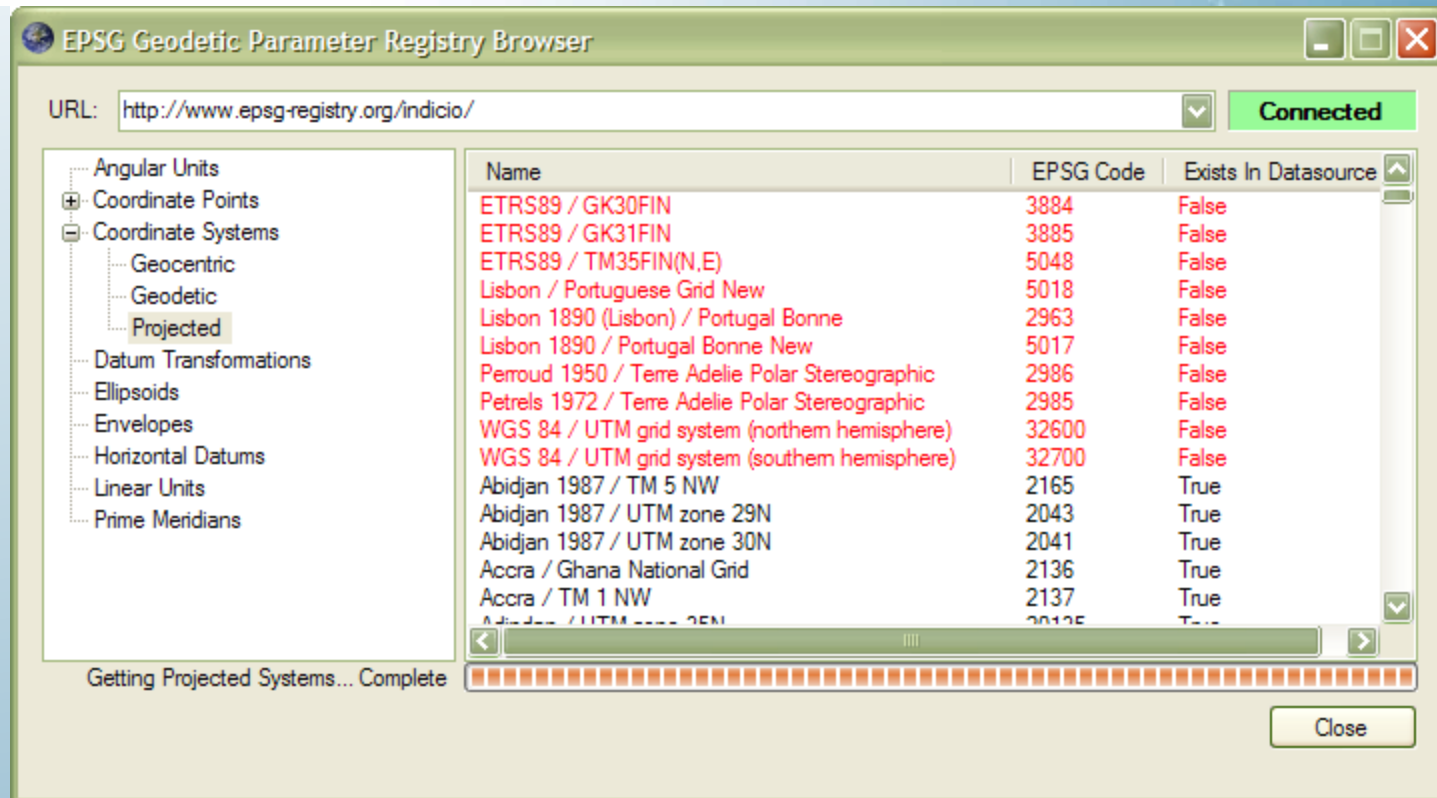
Remarks:

Parameter	Value
Area of use	Colombia - mainland.
Scope	Topographic mapping.
Type	Geodetic
Realization Epoch	1975
Ellipsoid	International 1924
Prime Meridian	Bogota
Origin description	Fundamental point: Bogota observatory. La

BM GeoCalc 7.x : Works with EPSG Registry



BM GeoCalc 7.x : Works with EPSG Registry



BM GeoCalc 7.x : Drill Down for Metadata

The image shows a sequence of four overlapping windows in the BM GeoCalc 7.x application, illustrating a 'drill down' process for metadata. The windows are:

- Projected Coordinate System Viewer**: The background window. It has tabs for 'Identification' and 'Definition'. The 'Definition' tab is active, showing fields for Envelope (USA - Texas), Point Style (Projected Point), Geodetic (NAD27), and Projection (Lambert Conformal Conic). A table of parameters is visible at the bottom.
- Geodetic Coordinate System Viewer**: Overlaid on the first window. It has tabs for 'Identification' and 'Definition'. The 'Definition' tab is active, showing fields for Envelope (North America), Point Style (Geodetic), Datum (North American), and Vertical Reference.
- Horizontal Datum Viewer**: Overlaid on the second window. It has tabs for 'Identification' and 'Definition'. The 'Definition' tab is active, showing fields for Ellipsoid (Clarke 1866) and Prime Meridian (Greenwich).
- Prime Meridian Viewer**: The foreground window. It has tabs for 'Identification' and 'Definition'. The 'Definition' tab is active, showing fields for Longitude (Value: 0, Units: Degree) and a 'Close' button.

Red boxes highlight the 'Geodetic' field in the first window, the 'Datum' field in the second, the 'Prime Meridian' field in the third, and the 'Info...' button in the top right of the first window.

Parameter	Value
central_meridian	-98.5
false_easting	2000000
false_northing	0
latitude_of_origin	25.6666
standard_parallel1	26.1666

What Is An EPSG code?

Guidance Note Number 7, part 1 : Using the EPSG Geodetic Parameter Dataset

5.9.1 Codes: In the EPSG Dataset codes are assigned to CRSs, coordinate transformations, and their component entities (datums, projections, etc.). Within each entity type, every record has a unique code.

Whilst EPSG codes are unique within any one entity type, a code value may be used for multiple entities of different types.

Now codes are assigned sequentially and no meaning should be interpreted. Codes are within the range 1024 to 32,767 inclusive.

With effect from EPSG dataset version 6.3 (February 2003), the integer range from 6,000,000 to 6,999,999 was used for codes of geographic CRSs with coordinates in explicitly described degree representations.

Users who wish to augment the EPSG data with their own information should utilise codes greater than 32,767. This will prevent conflict with future additions to the EPSG Dataset. OGP does not monitor codes used by 3rd parties.



Is The EPSG Code Sufficient?

ProjCRS Code 54050:

Petrel 2010.x (using ESRI metadata) : WGS 84 / World Fuller (meters)

An Internal Corporate Database : NAD27 / TM 109 NW (ftUS)

We need to distinguish different codes through the “Authority”,
i.e. ESRI, OGP, Petrel, SLB, XOM, Shell, Total, etc.

The OGP Geodetic Subcommittee plans to publish a Guidance Note with
recommendations on this subject.



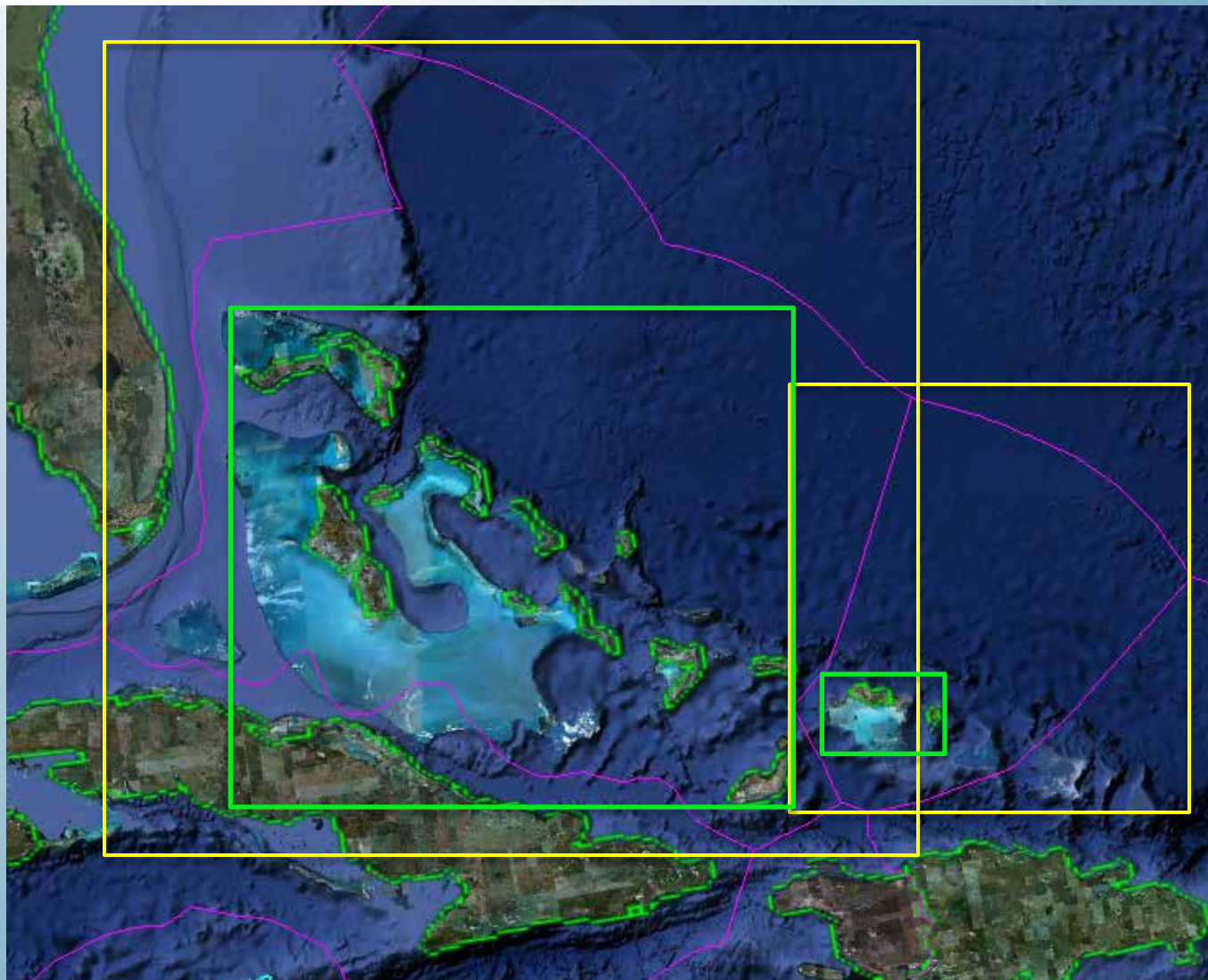
Polygons are now Provided For The EPSG dataset

The Geomatics Committee of the OGP has provided EPSG Area Polygons without charge to the user community:

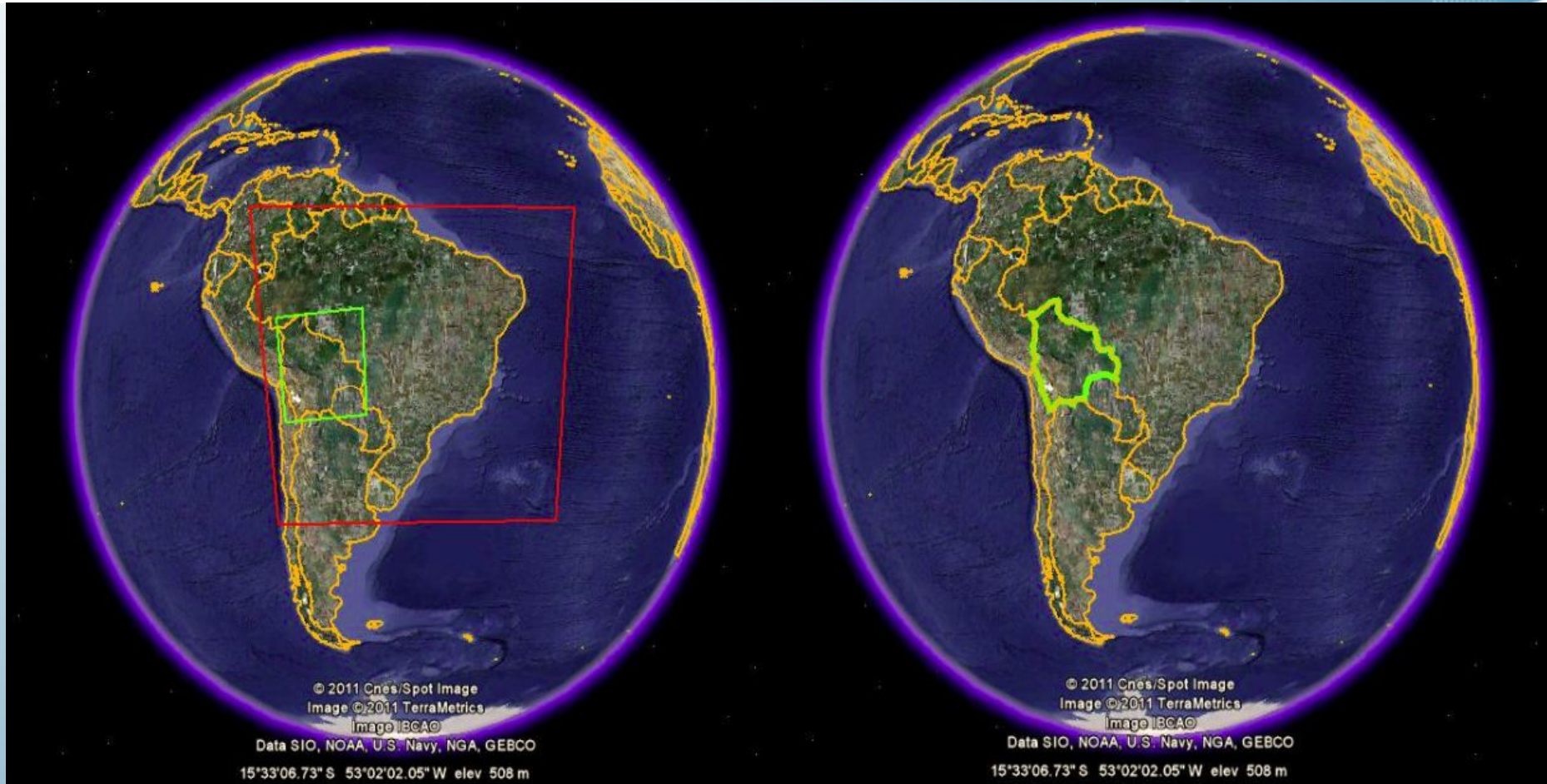
- These Area Polygons are considered geospatial data
- These can be provided for download as either GML or ESRI shapefiles or both
- Delivery of these Area Polygons was staged as follows:
 - North and South American Regions and Global Regions Area Polygons were made available on the OGP website, downloadable from <http://info.ogp.org.uk/geomatics/polygons/> in early 2012
 - Remaining regions of the world were made available for individual download from the same site in late 2012.
 - As of late 2012, these Area Polygons are also available directly via the EPSG Registry. At that time the online registry was also upgraded from GML v3.2.0 to v3.2.1.
- Future addition of a map front end application is considered an end-user expectation and will not be directly provided by the OGP
- Area Polygons + map front end will be more valuable than sum of parts



Example Polygons : EEZ And +3NM



Area Polygons : Examples



Area Polygons : Search Capability

Name	Code	De...	Type	Area name	Revision ...	Remarks
ED50 to WGS 84 (5)	1137	No	transformation	Egypt	21/05/2005	Derived at 14 stations.
Egypt 1907 to WGS 72 (1)	1545	No	transformation	Egypt	07/03/2000	
Egypt 1907 to WGS 84 (1)	1148	No	transformation	Egypt	21/05/2005	Derived at 14 stations.
Egypt 1907 to WGS 84 (2)	8537	No	concatenated op...	Egypt	07/03/2000	Used by Shell. May be implemented as a single transfo
Egypt Gulf of Suez S-650 TL to WGS 72BE (1)	15792	No	transformation	Egypt - Gulf of Suez	11/01/2006	Derived by Egypt Surveys Limited through single point
Egypt Gulf of Suez S-650 TL to WGS 84 (1)	8657	No	concatenated op...	Egypt - Gulf of Suez	22/03/2007	Can be implemented as a single positon vector transfo
Egypt Gulf of Suez S-650 TL to WGS 84 (2)	15846	No	transformation	Egypt - Gulf of Suez	03/02/2006	Sometime referred to as "Egypt 1907 to WGS 84". Howe
WGS 72BE to WGS 84 (1)	1240	No	transformation	World - WGS72BE to WGS8...	12/12/1996	

Name	Code	De...	Type	Area name	Revision ...	Remarks
Egypt 1907	4229	No	geographic 2D	Egypt	06/01/20...	
Egypt 1907 / Blue Belt	22991	No	projected	Egypt - Sinai peninsula	16/07/20...	Also known as Egypt 1907 / Green Belt.
Egypt 1907 / Red Belt	22992	No	projected	Egypt - east of 29°E	02/06/19...	See also Egypt 1907 / Blue Belt for non o
Egypt 1930	4199	No	geographic 2D	Egypt - onshore	06/01/20...	Note that Egypt 1930 uses the Internation
Egypt Gulf of Suez S-650 TL	4706	No	geographic 2D	Egypt - Gulf of Suez	31/01/20...	Differs from Egypt 1907 (CRS code 4229)
Egypt Gulf of Suez S-650 TL / Red Belt	3355	No	projected	Egypt - Gulf of Suez	31/01/20...	Differs from Egypt 1907 / Red Belt (CRS c
ITRF2005	4896	No	geocentric	World (by country)	20/01/20...	Replaces ITRF2000 (code 4919).
NSIDC EASE-Grid Global	3410	No	projected	World - 86°S to 86°N	02/06/20...	Used as basis for Equal-Area Scalable Ear
NSIDC EASE-Grid North	3408	No	projected	World - north of 0°N	02/06/20...	Used as basis for Equal-Area Scalable Ear
WGS 72 / UTM zone 36N	32236	No	projected	World - N hemisphere - 30°E to 36°E	02/06/19...	
WGS 72BE / UTM zone 36N	32436	No	projected	World - N hemisphere - 30°E to 36°E	02/06/19...	
WGS 84	4979	No	geographic 3D	World (by country)	27/08/20...	
WGS 84 / NSIDC EASE-Grid Global	3975	No	projected	World - 86°S to 86°N	25/04/20...	Alternative to NSIDC EASE-Grid Global, C
WGS 84 / NSIDC EASE-Grid North	3973	No	projected	World - north of 0°N	25/04/20...	Alternative to NSIDC EASE-Grid North, C
WGS 84 / Pseudo-Mercator	3857	No	projected	World - 85°S to 85°N	09/02/20...	Uses spherical development of ellipsoids
WGS 84 / UTM grid system (northern hem...	32600	No	projected	World - 0°N to 84°N	05/06/20...	Use WGS 84 / UTM zone xx N (codes 3260
WGS 84 / UTM zone 36N	32636	No	projected	World - N hemisphere - 30°E to 36°E ...	02/06/20...	In Moldova used with axes reversed - use
WGS 84 / World Mercator	3395	No	projected	World - between 80°S and 84°N	02/06/20...	Euro-centric view of world excluding pol



OGP Geomatics Geodesy Subcommittee

Current membership:

- * Christian Ameil (Total)
- * Roel Nicolai (Shell)
- * Geir Simensen (Statoil)
- * Melita Kennedy (ESRI) (US)
- * Jim Cain (Cain & Barnes) (US)
- * Don Abbey (Woodside)
- * Craig Allinson (BP)
- * Phil Summerfield (ExxonMobil) (US)
- * Derek Salvage (ExxonMobil) (US)
- * Roger Lott - (retired) - Chairman
- * Paul Nolan (RPS/Cairn / GIS SME)
- * Ricardo Lomba (PetroBras)

Employee of oil & gas operator / OGP member in green

Former member contributors:

- * Bernard Flaceliere (Total)
- * Walter Jardine (BP)
- * Mike Postle-Hacon (RPS)
- * Jean-Patrick Girbig (Petro Consultants)
- * Bruno Ravanias (Total)
- * Bish Karko (Devon) (US)
- * Alan Faichney (Concept Systems)

Primary role: maintenance of EPSG database of geodetic parameters



EPSG Geodetic Parameter Registry

query by filter

retrieve by code

EPSG Geodetic Parameter Registry

Version: 7.6.9

Welcome guest! | [\(login or register\)](#) | [help](#)



Name:

Click to choose

Type:

Name of the area of use

Area:

North Latitude

West Longitude

South Latitude

East Longitude

BBox: (dec. deg.)

?

Welcome to the EPSG Geodetic Parameter Dataset

The EPSG Geodetic Parameter Dataset is a structured dataset of Coordinate Reference Systems and Coordinate Transformations, accessible through this data registry. The geographic coverage of the data is worldwide, but it is stressed that the dataset does not and cannot record all possible geodetic parameters in use around the world. The EPSG Geodetic Parameter Dataset is maintained by the Geodesy Subcommittee of OGP.

The EPSG Geodetic Parameter Dataset, offered through this OGP web registry service, may be used free of charge, but its use is subject to the acceptance of the [Terms of Use](#).

Users may query and view the data and generate printable reports. The Registry supports anonymous (guest) access, but also permits the user to register for additional services, such as the export of the entire dataset as GML 3.2 dictionaries.

Additionally the Registry provides a web service interface, permitting geospatial software to query and retrieve geodetic parameters. Information on how to access the service is available in [Guidance Note 7-3: EPSG Registry Developers Guide](#).

• [Release notes for current version](#)

• [Subscribe to Mailing List](#)

• [Guidance Note 7: EPSG Dataset supporting documentation](#)

• [Submit Feedback or Change Request](#)

[Back](#) to OGP Surveying and Positioning Committee home page

Developed by: [Galdos Systems Inc.](#)

Version: 1.2.10

<http://www.epsg-registry.org/>

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EPSG Geodetic Datasets : Structure

Guidance Note Number 7, part 3

Registry developers guide

Revision history:

Version	Date	Download	Amendments
1.1	March 2010	PDF Word (zipped)	Correction to example code in section 4.3.1 Find Entity by BBOX
1.0	May 2009		First release of this document, GN7 part 3
0.*	To April 2009		Draft versions of document

Guidance Note Number 7, part 4

EPSG Geodetic Parameter Relational Database - Developers Guide

Revision history:

Version	Date	Download	Amendments
4.0	April 2009	PDF Word (zipped)	Major revision to include web registry. Access- and SQL-specific discussion moved to new GN7 part 4
3.0	July 2007		Use of data conditions amended. Annex F added.
2.1	February 2007		Deprecation rules updated. Policy on code uniqueness clarified. Additional information on user update utility added. Minor editorial corrections to text.
2.0	April 2006		Amendment to deprecation rules. Updated references to EPSG.
1.1	November 2004		Minor editorial corrections to text. Annex E SQL scripts updated.
1.0	October 2004		Final draft



<http://www.epsg-registry.org/>

EPSG Geodetic Parameter Registry : Registration

query by filter

retrieve by code

EPSG Geodetic Parameter Registry Version: 7.6.9

Welcome guest! | ([login or register](#)) | [help](#)

Name:

Click to choose

Type:

Name of the area of use

Area:

BBox: (dec. deg.)

North Latitude

West Longitude

South Latitude

East Longitude

Search

Reset

?



Welcome to the EPSG Geodetic Parameter Dataset

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Version: 1.2.10

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EPSG Geodetic Parameter Registry : Registration

The EPSG Geodetic Parameter Registry is a free product
Registration and use are at no cost

As a registered user, you can view deprecated records.

“Subscribe to Mailing List” is available from the main Registry Page

The Mailing List provides a "no charge" version release advisory service.



<http://www.epsg-registry.org/>

EPSG Geodetic Parameter Registry : Searches

[query by filter](#) [retrieve by code](#)

Name:

Type:

Area:

Click to choose

Name of the area of use

BBox: (dec. deg.)

North Latitude

West Longitude

South Latitude

East Longitude

Search

Reset

?

EPSG Geodetic Parameter Registry Version: 7.6.9

Welcome guest! | ([login or register](#)) | [help](#)



[query by filter](#) [retrieve by code](#)

Name:

Type:

Area:

Click to choose

Name of the area of use

BBox: (dec. deg.)

North Latitude

West Longitude

South Latitude

East Longitude

Search

Reset

?

EPSG Geodetic Parameter Registry Version: 7.6.9

Welcome guest! | ([login or register](#)) | [help](#)



- Clear Selection
 - Coordinate Transformation
 - Coordinate Reference System
 - Coordinate Conversion
 - Datum
 - Prime Meridian
 - Ellipsoid
 - Coordinate Operation Method
 - Coordinate Operation Parameter
 - Coordinate System
 - Axis Name
 - Unit of Measure (UOM)
 - Area of Use
 - Naming System
 - Version History
 - Change Request
- Projected CRS
 - Geodetic CRS
 - Vertical CRS
 - Engineering CRS
 - Compound CRS
- Geographic 2D CRS
 - Geographic 3D CRS
 - Geocentric CRS



EPSG Geodetic Parameter Registry : Searches

query by filter

retrieve by code

EPSG Geodetic Parameter Registry Version: 7.6.9

Welcome guest! | ([login or register](#)) | [help](#)



Code: 23032

Retrieve

Reset

?

Note: Codes are only unique within a type, therefore multiple codes may be retrieved.

Search Results (1 - 1 of 1 possible results)

[Report all results](#) ? | [Report selected results](#) ? | Entities per page: 5

<<prev | next>>

Report	Name	Code	Type	Status	Area Description	Remarks / Description
☐	ED50 / UTM zone 32N	EPSG::23032	ProjectedCRS	Valid	Europe - between 6°E and 12°E - Denmark; Germany offshore; Italy; Netherlands offshore; Norway; Svalbard.	view

<<prev | next>>



EPSG Geodetic Parameter Registry : Views

query by filter

retrieve by code

Code: ?

Note: Codes are only unique within a type, therefore multiple codes may be retrieved.

EPSG Geodetic Parameter Registry Version: 7.6.9
Welcome guest! | ([login or register](#)) | [help](#)



ProjectedCRS [ED50 / UTM zone 32N] [metadata](#)

Code: [EPSG::23032](#)

Name: [ED50 / UTM zone 32N](#)

+ Aliases

+ Area of Use [Europe - 6°E to 12°E and ED50 by country] [metadata](#)

+ Base Geodetic CRS [ED50] [metadata](#)

- Conversion [UTM zone 32N] [metadata](#)

Code: [EPSG::16032](#)

Name: [UTM zone 32N](#)

Operation is Reversible: yes

+ Area of Use [World - N hemisphere - 6°E to 12°E] [metadata](#)

Parameter Values

Parameter Name	Parameter Value or Parameter File	Unit of Measure	Sign Reversible
Latitude of natural origin	0°	degree	No
Longitude of natural origin	9° E	degree	No
Scale factor at natural origin	0.9996	unity	No
False easting	500000	metre	No
False northing	0	metre	No

+ Method [Transverse Mercator] [metadata](#)

+ Cartesian CS [Cartesian 2D CS. Axes: easting, northing (E,N). Orientations: east, north. UoM: m.] [metadata](#)

ED50 / UTM zone 32N[VALID]

Scope: Large and medium scale topographic mapping and engineering survey.

Data Source: OGP

Revision Date: 2005-05-27

Change ID: [EPSG::2005.180](#)

GML



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EPSG Geodetic Parameter Registry : Reports

Search Results (1 - 1 of 1 possible results)

[Report all results ?](#) | [Report selected results ?](#) | Entities per page:

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Navigating to the next page will clear your current reporting selections

Report	Name	Code	Type	Status	Area Description	Remarks / Description
☐						
☒	ED50 / UTM zone 32N	EPSG::23032	ProjectedCRS	Valid	Europe - between 6°E and 12°E - Denmark; Germany offshore; Italy; Netherlands offshore; Norway; Svalbard.	view

Navigating to the next page will clear your current reporting selections

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Search Results (1 - 1 of 1 possible results)

Report Options ?

What would you like to call the report?

Title:

What detail level would you like the report?

- ☐ Short report - no life cycle information
☒ Full report - all details of an entity

What style would you like for the report?

- ☒ OGP Default With Code
☐ OGP Default With Urn

generate report

cancel



EPSG Geodetic Parameter Registry : Reports

Projected CRS					
Name	ED50 / UTM zone 32N				
Identifier	EPSG::23032				
Aliases	Alias	Naming System	Remarks		
	(DK_ED50 / UTM - see alias remarks)	EuroGeographics Identifier	This EuroGeographics identifier is for a CRS similar to this but with CS axes in order north, east. The same identifier is also used for zone 33.		
	(IT_ED50 / UTM - see alias remarks)	EuroGeographics Identifier	This EuroGeographics identifier is for a CRS similar to this but with CS axes in order north, east. The same identifier is also used for zone 33.		
Life Cycle Status	Is Valid?	Yes			
	Retired?	No			
	Deprecated?	No			
Scope	Large and medium scale topographic mapping and engineering survey.				
Remarks					
Domain of Validity	Europe - between 6°E and 12°E - Denmark; Germany offshore; Italy; Netherlands offshore; Norway; Svalbard.				
Information Source					
Data Source	OGP				
Change Request	EPSG::2005.180				
Derived From	Base CRS name	ED50			
	Base CRS type	geographic 2D			
	Geodetic Datum	European Datum 1950 *** Alias(es): [ED50] ***			
	Prime Meridian	Greenwich	0°	degree	
	Ellipsoid	International 1924 *** Alias(es): [Hayford 1909] ***			
	Remarks	Adopted by IUGG 1924 in Madrid. Based on Hayford 1909/1910 figures.			
	Shape	Ellipsoid			
	Semi major axis (a)		6378388	metre	
	Inverse flattening		297	unity	
Map Projection	Name	UTM zone 32N			
	Operation Method	Transverse Mercator *** Alias(es): [Gauss-Kruger, TM, Gauss-Boaga] ***			
		Is the operation reversible?		Yes	
	Conversion Parameters	Parameter Name		Parameter Value or Parameter File	Unit of Measure
		Latitude of natural origin		0°	degree
		Longitude of natural origin		9° E	degree
		Scale factor at natural origin		0.9996	unity
		False easting		500000	metre
		False northing		0	metre
	Coordinate Axes	Order	Name	Abbrev	Unit of Measure
1		Easting	E	metre	east
2		Northing	N	metre	north



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