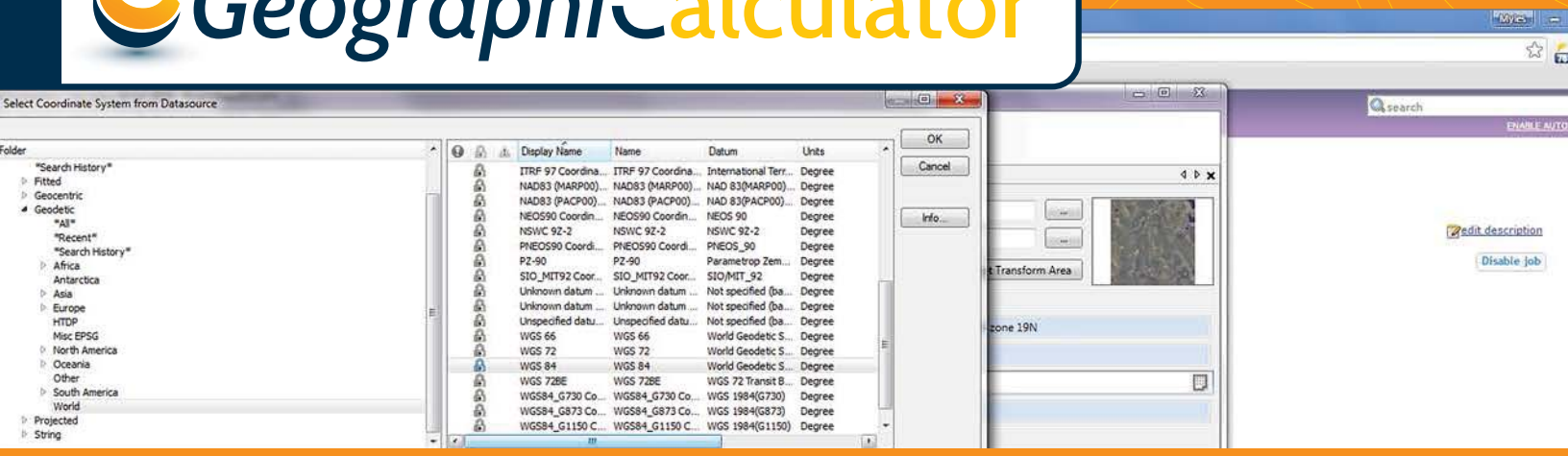
GeographiCalculator



Mind the gap between world and map

Geospatial Data Management

Geographic Calculator is the standard-bearer in the field of geomatic calculation and transformation. Built on the foundation of the largest database of geodetic definitions and coordinate system parameters commercially available, this powerful software is designed to ensure accuracy and consistency in any geospatial data management process.

FILE AND DATABASE SUPPORT

With support for some 60 raster and vector file formats, all types of ODBC and spatial Databases, Geographic Calculator can process large volumes of data efficiently and reliably. Calculator also features a very powerful point database job that mimics much of the functionality and look of MS excel spreadsheets.

SEISMIC SURVEY QUALITY ASSURANCE JOBS

The Seismic Survey conversion allows users to access, maintain, and convert SEG, SPS, and UKOOA formatted ASCII data faster and more efficiently. Quickly define custom reader rules to clean up improperly formatted data, convert multiple records types in the same file with a single pass and convert grid and geodetic record sets in a single pass.

ADMINISTRATIVE TOOLS

Geographic Calculator includes a powerful set of customizable administrative tools allowing data managers to establish standard coordinate system and transformation rules and parameters that can be quickly and easily deployed to all users. These rules and controls can be locked down with passwords and saved as workspaces to be used in Calculator, Global Mapper or ArcGIS.

3D COORDINATE SUPPORT

The Geographic Calculator includes more vertical transformations and geoid definitions than any other GIS software. Support for vertical and horizontal tranformation enables accurate 3D data processing particularly useful for LiDAR files, digital elevation models, and other terrain modeling. Pair the Calculator with Global Mapper and you can even make your own Geoid models.

SOFTWARE HIGHLIGHTS

- Interactive or single point conversion
- Point database spreadsheet processing
- Vector file transformations
- Unmatched variety of vertical datum support
- Seismic survey geomatic tools
- Area of use polygons and accuracy tags for reliability
- Powerful CAD support
- Time-dependent transformations
- Spatial database read and write access
- Always current EPSG geodetic database support
- Support for the new GeoCalc geodetic registry
- Support for GeoCalc geodetic database
- Custom geoid creation with Global Mapper
- Customizable data source containing:
  - Over 5,000 coordinate systems
  - Over 450 horizontal datums
  - Over 120 vertical datums
  - Over 1,600 coordinate transformations

Blue Marble GEOGRAPHICS
Mind the gap between world and map ™

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Extension to Global Mapper

ADVANCED PROJECTION MANAGEMENT

Geographic Calculator's geodetic datasource can now be accessed from within Global Mapper, Blue Marble's easy-to-use, affordable GIS software. This integration of extensive GIS format support, powerful spatial analysis tools, and advanced geodetic processing provides a multifaceted geomatically enabled GIS toolkit. GeoCalc mode can be enabled in Global Mapper when an active license of Geographic Calculator is present on the same computer. Global Mapper also offers the ability to view, create or modify geoid models as well as import them into the Calculator datasource as a new vertical transformation model.

HORIZONTAL TIME DEPENDENT POSITIONS

Calculator also supports Horizontal Time Dependent Positioning (HTDP) models, which provide the means to predict and adjust for data transformations related to movements of the Earth's crust over time.

Features

RECENT ENAHANCEMENTS

- Access to the online GeoCalc Geodetic Registry for continual geodetic datasource updates
- Improved Point Database Conversion with separate interfaces for Conversion, Forward/Inverse, Scale & Translate, Best Fit, and Derive Datum Shift
- User-friendly Start Page with Job Guide
- Support for Magnetic Declination
- Geoid Creation ability in conjunction with Global Mapper
- Streamlined menus for the Projection and Transformation interface
- Support and Display of EPSG "Area of Use" Polygon data. Allows the user to visually see on a map where a coordinate system or transformation is intended to be used
- Integration of the Geographic Calculator into Global Mapper v16 or higher, users can perform geodesic calculations on over 250 different file types along with advanced analysis and data visualization capabilities
- Improved Vertical Coordinate system handling providing flexible transformation options when working with high accuracy elevation-based data
- Land Survey Summary job for generating printed layouts in Canadian survey systems
- Enhanced PDC interface to calculate bounds of loaded data and filter coordinate systems and transformations
- Point Database and Vector Data Conversion jobs now support manually specified transformations with Scale, Translation, and Rotation parameters
- ATS summary sheets displaying well positions in the context of the Township and Range grid
- Tool for searching data loaded in a Point Database Conversion job
- And Much More...

ArcGIS Extension

- Define coordinate transformations in ArcMap by area of use using both the Esri Projection Engine and Blue Marble's GeoCalc engine
- Switch between geodetic definitions in the Blue Marble data source and those in ArcGIS Utilize your GeoCalc custom definitions in ArcGIS
- Compare data conversion results from ArcGIS and Blue Marble right in the Arc interface
- Convert any feature class supported by ArcGIS with the Blue Marble GeoCalc datasource

Data Formats

VECTOR FORMATS

- ArcSDE, Personal and File Geodatabase
- ASCII text (including custom text file formats – UKOOA, for example)
- AutoCAD support through AutoCAD 2010 (.dwg, .dxf)
- Blue Marble Layers (.bml) *
- dBase (.dbf)
- Digital Line Graph (.dlg) *
- Esri ArcInfo Export (.e00)
- Esri ArcInfo Generate (.gen)
- Esri Geodatabase
- Esri Shapefile (.shp)
- Excel (.xls)
- Geospatial PDF (.pdf) *
- GML Simple Features – Ver 3.1.1 (.gml)
- Google Keyhole Markup Language (.kml)
- GPX Data File (.gpx)
- LiDAR Data Exchange – Ver 1.0 - 1.4 (.las)
- MapInfo Import (.mif)
- MapInfo Table (.tab)
- Microstation Design (.dgn)
- MS Access (.mdb)
- ODBC databases including MS SQL, MS Access, Oracle, MySQL, Postgres
- Oracle database
- PostGIS database
- S-57 (.000) *
- Shell Processing Support
- Spatial Data Transfer Standard (catd.ddf) *
- TIGER/Line (.rt1) *
- Velocity File (.txt)

RASTER FORMATS

- ARC Digitized Raster Graphics (.img..ovr) *
- BIL/HDR Raster Dataset (.bil) *
- Bitmap Files (.bmp)
- BSB v3 – KAP (.kap) *
- BSQ Files (.bsq) *
- Compressed ARC Digitized Raster Graphics *
- Enhanced Compressed Wavelet (.ecw)
- JPEG (.jpg)
- JPEG 2000 (.jp2)
- LizardTech MrSID (.sid)
- Portable Network Graphics (.png)
- TIFF and GeoTIFF (.tif)

**Import only*

IMAGE REFERENCE FORMATS

- Blue Marble (RSF)
- BIL/HDR Reference Files (.HDR)
- ECW Reference File Format (ERS)
- Internal Referencing (GeoTiff, ECW, MrSID,
- JP2, CADRG, ADRG, DOQQ, etc.)
- MapInfo Raster (TAB)
- World files (various file extensions)

SEISMIC SURVEY

- OGP P1/11
- SEG P1 (.seg)
- Shell Processing System (.sps)
- UKOOA P1/90 (.uko)
- SEG–Y

Note: Also supports import/export of custom variants via the Seismic Survey Format Wizard.

MOST COMPREHENSIVE DATA SOURCE

- Over 5000 pre—defined projected coordinate systems
- Over 1800 coordinate transformations
- Over 500 horizontal datums
- Over 150 vertical datums (necessary for LiDAR transformations)
- Over 80 various unit definitions
- Full matches to ESRI, MapInfo, Autodesk and many more
- Define your own coordinate systems!

Map Projections

- Albers Equal–Area Conic
- Azimuthal Equal Area
- Azimuthal Equidistant
- Behrmann
- Belgium 72
- Cassini
- Craster Parabolic
- Danish System 34
- Double Stereographic
- Equal-Area Cylindrical
- Equidistant Cylindrical
- Fuller (Dymaxion)
- Gall-Peters
- Gall Stereographic
- Lambert Conformal Conic (1 parallel, 2 parallel & Extended)
- Hammer Aitoff
- IMW Polyconic
- Krovak
- Laborde
- MGRS (Military Grid Reference System)
- Oblique Mercator Azimuth
- Polyconic
- Robinson
- Stereographic
- Mercator Variant C
- And much more ...

Datum Transformations

HORIZONTAL

- Best Fit using the Geographic Calculator
- Canadian National Transformation (NTv2)
- DMA Multiple Regression Equations
- Molodensky
- NGS HARN, NGS NADCON
- Ordnance Survey Great Britain – OSTN02
- Seven Parameter Bursa/Wolfe
- Ten Parameter Molodensky–Badekas
- And much more ...

VERTICAL

- Australia – AUSGEOID 98, AusGeoid2009
- Canadian – CVGD28, Vertical Geoid2013
- Colombia – GEOCOL 04
- Denmark – DVR90
- Finland Geoid – FIN2000N00
- France and Corsica – RAC09, RAF09
- Great Britain – OSTN02
- Japan – Japan Height Datum via GSIGEO2005
- The Netherlands – NLGEO2004
- South Africa – SAGEOID2010
- United States – NAVD88, NGVD29 via Geoid 99, Geoid 03, Geoid 09, Geoid 12a, or Geoid 12b
- Worldwide – EGM96, EGM08, OSU91A
- And much more ...