# THE GEOGRAPHIC CALCULATOR

### The Global Coordinate Transformation Tool!

## ENABLING GEOSPATIAL DATA MANAGEMENT ACROSS YOUR ORGANIZATION





#### EXPANDED DATABASE SUPPORT

Calculator supports all ODBC databases permitting reading from and writing to MS Access, MS SQL Server, MySQL, Oracle, Postgres and more. ESRI Spatial database conversions are available through the ArcGIS Extension. The new Spatial Connect Module supports read/write of ESRI Geodatabase, ArcSDE, Personal and File Geodatabase, Oracle and PostGIS Spatial Databases.

#### SEISMIC SURVEY 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.

## ENHANCED 3D COORDINATE SUPPORT



Translate LiDAR, DEMs and any 3D data with dozens of Geoids including VDatum. Users can also create an offset from a Geoid to hone in accuracy!

#### WITH ENTERPRISE TOOLS TO ENHANCE GEOSPATIAL PROJECTS

- Support and Display of EPSG "Area of Use" Polygon data, allowing the user to visually see on a map where a coordinate system or transformation is intended to be used
- Improved Vertical Coordinate system handling providing flexible transformation options when working with high accuracy elevation based data
- New Land Survey Summary job for generating printed layouts in Canadian survey systems
- Uses GeoCalc.XML, the largest and most comprehensive data source available
- ATS summary sheets displaying well positions in the context of the Township and Range grid
- New search tool for searching data loaded in a Point Database Conversion job
- Updated Esri toolbar with geodetic area calculation tools
- Area Cropper and Layer Splitter Crop your vector data and select only the layers you want
- Supports all types of Geospatial data including vector, raster, CAD, LiDAR, DEMs and Spatial Databases
- Admin tools to set jobs and workspaces, managing work across your enterprise uniformly
- ArcGIS extension utilizes Blue Marble geodetic tools directly in the ArcMap environment
- Includes all the features of the Geographic Transformer and Spatial Connect modules

# TRANSFORM COORDINATE, VECTOR, CAD, RASTER, 3D, LIDAR, DEMS, DTEDS AND SPATIAL DATABASES

The Geographic Calculator has replaced the Blue Marble Desktop in name and functionality. If you need to reproject points, vector or raster data types, the Geographic Calculator supports a wide range of file formats with support from one of the largest geodetic data sources. We're pleased to include tools that enable the geospatial software user to streamline their workflow and share jobs, workspaces and projects with users in different locations.

Convert individual map files or batch process an entire folder! The leading map and file formats are supported including the latest AutoCAD as well as DGN, KML, GML (simple features), XLS support and more.

## EXTENSION TO GLOBAL MAPPER USE THE GEOCALC LIBRARY IN GLOBAL MAPPER

With the integration of The Geographic Calculator into Global Mapper v16 or higher, users can enable the entire GeoCalc coordinate library to be used in Global Mapper. Or if you want to control what your users see for coordinate objects use custom view files and "Area of Use" polygons to send them a limited version. Leverage vertical systems and the unlimited size of the GeoCalc library for highly accurate GIS work. A perfect companion to LiDAR processing.

#### THE MOST COMPREHENSIVE DATA SOURCE AVAILABLE!

- Over 3500 pre-defined projected coordinate systems
- Over 1200 datum shifts
- Over 400 horizontal datums
- Over 80 various unit definitions
- A dozen vertical datums (necessary for LiDAR transformations)
- Full matches to ESRI, MapInfo, Autodesk and many more
- Define your own coordinate systems!

## HORIZONTAL TIME DEPENDENT POSITIONING

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





## BLUE MARBLEGEOGRAPHICS

MIND THE GAP BETWEEN WORLD AND MAP®

77 WATER STREET, HALLOWELL, MAINE 04347 USA 800.616.2725 / +1.207.622.4622 / FAX: 207.622.4656 44° 17' 15.40" N, 69° 47' 24.55" W, WGS84

#### FEATURES

#### NEW & ENHANCED FEATURES

- New support for Magnetic Declination
- Powerful new Administrative Tools
- New Geoid Creation ability in conjunction with Global Mapper v16
- New 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.
- New 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
- New search tool for searching data loaded in a Point Database Conversion job
- New preference settings allow for swapping the display order of Northing/Easting and Latitude Longitude
- 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
- 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) \*\*
- SEGP184, SEGP190
- 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)

#### IMAGE REFERENCE FORMATS

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

#### SEISMIC SURVEY

- SEG P1 (\*.seg)
- Shell Processing System (\*.sps)
- UKOOA P1/90 (\*.uko)
- SEG P1/11 (\*.p111)
- Note: Also supports import/export of custom variants via the Seismic Survey Format Wizard.
- Import only

### 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, or Geoid 12a
- Worldwide EGM96, EGM08, OSU91A
- And Much More......



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