FeatureToolBar : Help Documentation

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About FeatureToolBar

Version

FeatureBar V1.1

Copyright

This application (FeatureToolbar) was developed based on a previous tool named FeatureBar for MicroStation Geographics.

Special Thanks

My many thanks go out to following people who contributed in a wide variety of ways to the development of this application.

FeatureToolBar includes a VBA code (Autorun.mvba) that was originally writed by Gerald Hernandez, president of Geospatial Paradigm Solutions, Inc in order to perform some options like enable the Database connection from Map Interoperability, automatically fit view when opening Design Files, etc.

I would like to thak you to all Bentley colleagues and especially to colleagues in Brazil:

Carlos Nobuo
João Salisso
Fernando Moreira

About this Macro

This application (FeatureToolBar) was developed to work as an add-on application on top of Bentley Map Enterprise, Bentley Map Standalone and/or Bentley Map for MicroStation. This application would run on any Bentley Map Platform that is version V8i SS2 or higher, but to get optimal performance, it is best suited for Bentley Map V8i SS3.

Note: These macros are supplied as is. These applications do not come with support. Bentley Systems Inc., and the author of these programs assume no liability for damages direct, indirect, or consequential, which may result from the use of this programs. Use this application at your own risk.

Program Location Paths

FeatureBar is developed in VBA. This application need to be installed on the local computer. There are two files that need attention:

- FeatureToolBar.mvba
  - **PATH:** Local Workspace\Projects\vba
- FeatureToolBarHelp.pdf
  - **PATH:** Local Workspace\Projects\vba

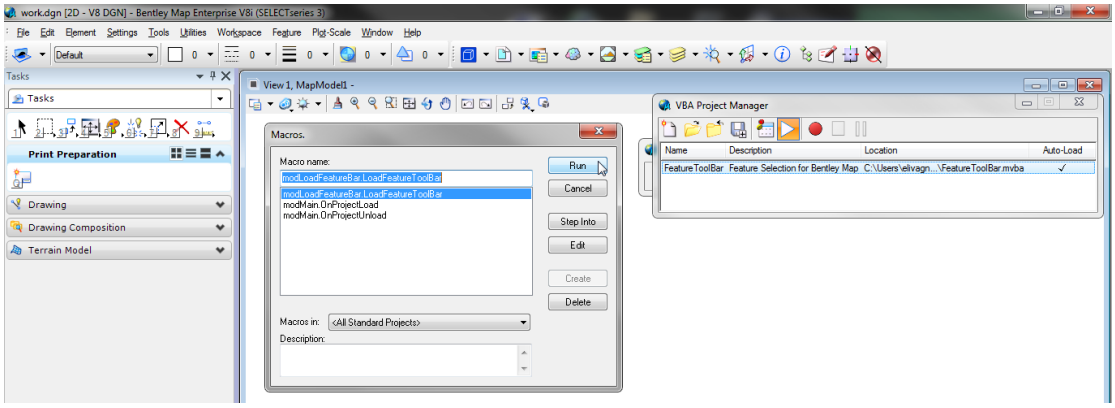
FeatureBar : Layout

Activation Of FeatureToolBar

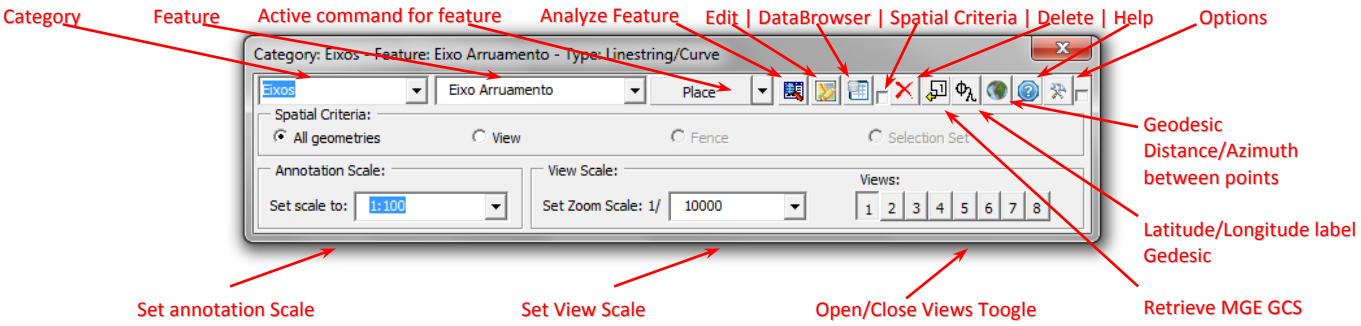
To activate FeatureToolBar on a client, run the following command from the Bentley Map keyin, or use the VBA Project Manager dialog to browse and load the application.

>>vba run [FeatureToolBar]modLoadFeatureBar.LoadFeatureToolBar.

In order to enable some feature like automatically database connection when opened design files, the Auto-Load option must be enabled.



FeatureToolBar Options

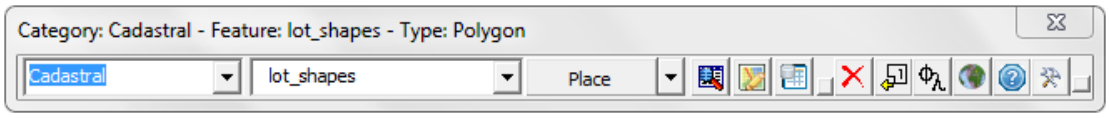


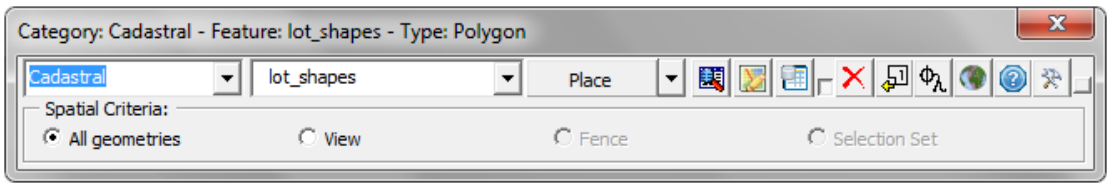
FeatureToolBar (Continued)

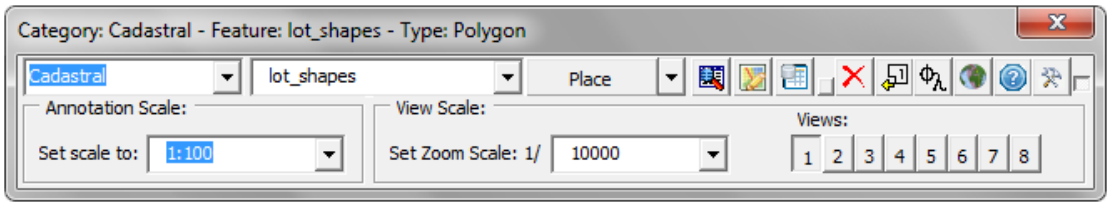
The figure above shows the layout of all the functions of FeatureTooBar. They are all listed below and explained in detailed later in this document.

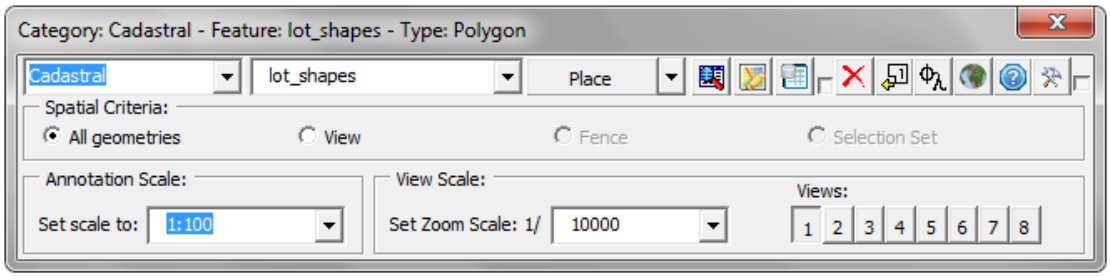
- Choose Category
- Choose Feature
- Place Feature
  - Option : Place Feature
  - Option: Promote Feature
- Analyze XFM Feature
- Edit method
- Open DataBrowser for active feature
- Show / Hide Spatial Criteria Menu
  - All geometries
  - View
  - Fence
  - Selection Set
- Delete Element
- Retrieve MGE Coordinate Systems definitions
- Place Longitude/Latitude labels
- Geodesic Distance/Azimuth between points
- Help
- Show / Hide Menu
  - Annotation Scale
  - View Scale
  - Views Toogle

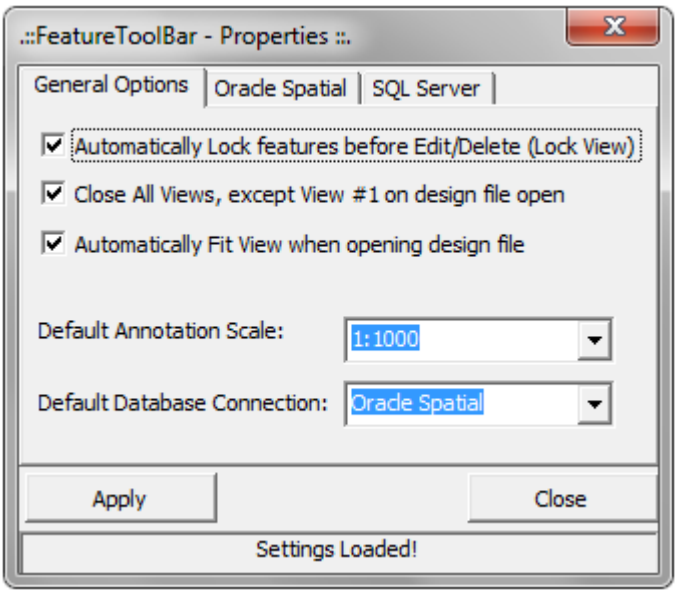
These figures below shows the different views of FeatureToolBar and the Extend Options dialog.

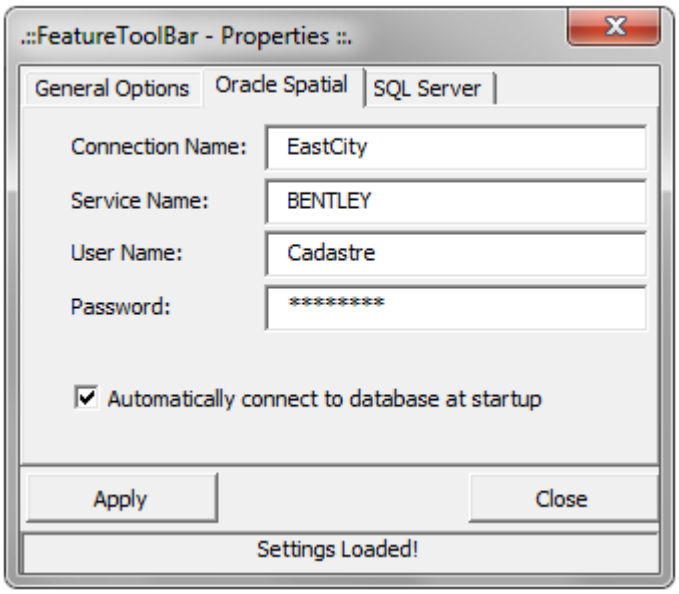


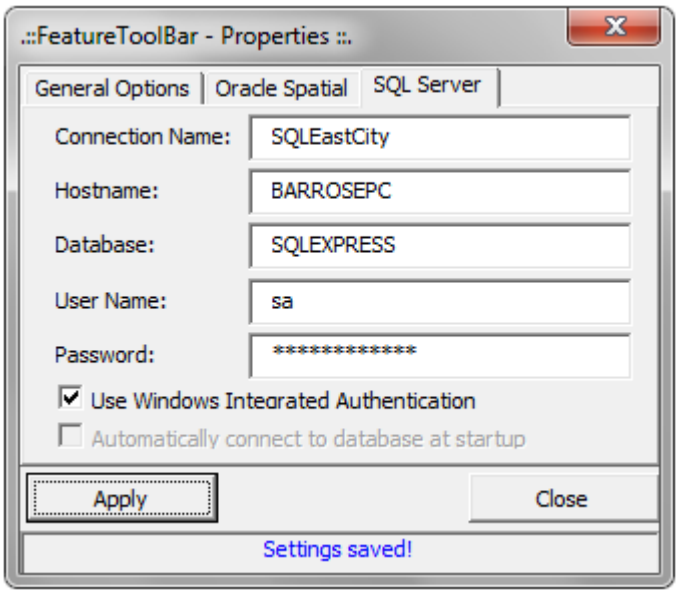


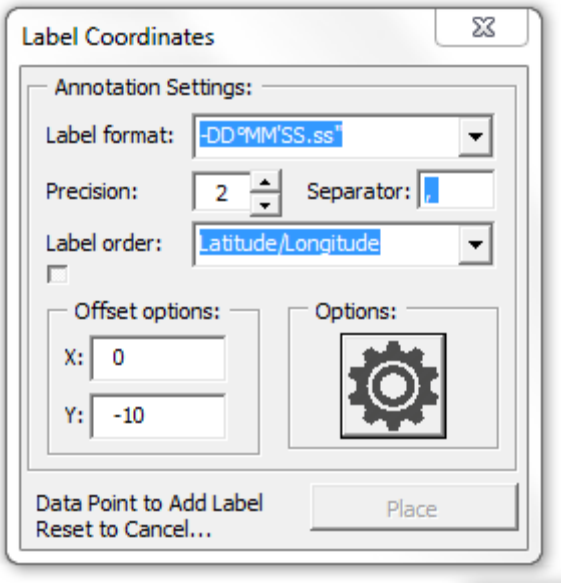


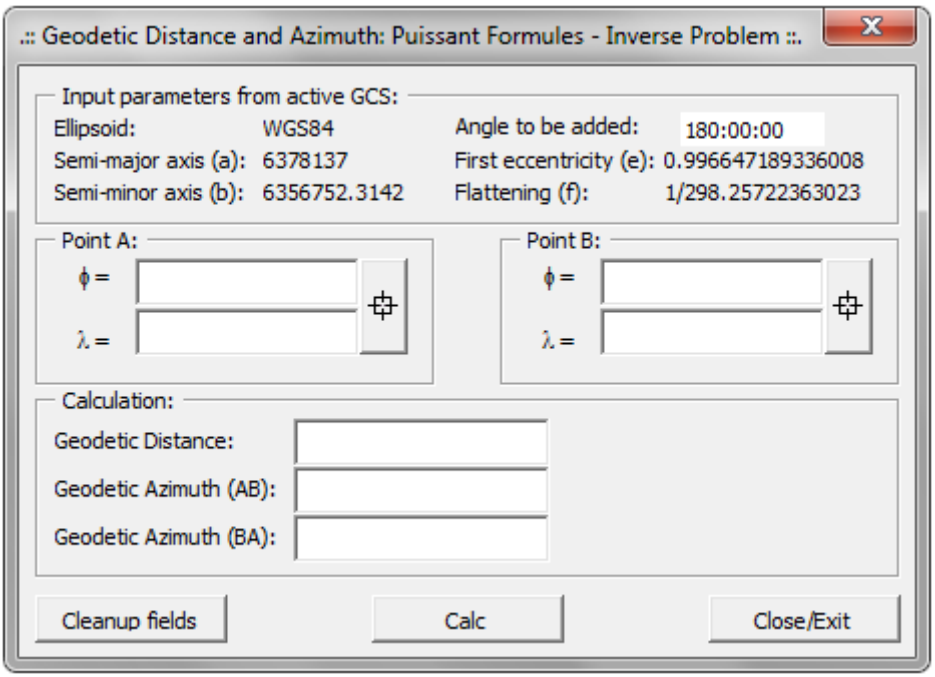





.::FeatureToolBar - Properties ::.
General Options
Oracle Spatial
SQL Server
Connection Name:
EastCity
Service Name:
BENTLEY
User Name:
Cadastre
Password:
****
Automatically connect to database at startup
Apply
Close
Settings Loaded!


.::FeatureToolBar - Properties ::.
General Options
Oracle Spatial
SQL Server
Connection Name:
SQLEastCity
Hostname:
BARROSEPC
Database:
SQLEXPRESS
User Name:
sa
Password:
****
Use Windows Integrated Authentication
Automatically connect to database at startup
Apply
Close
Settings saved!

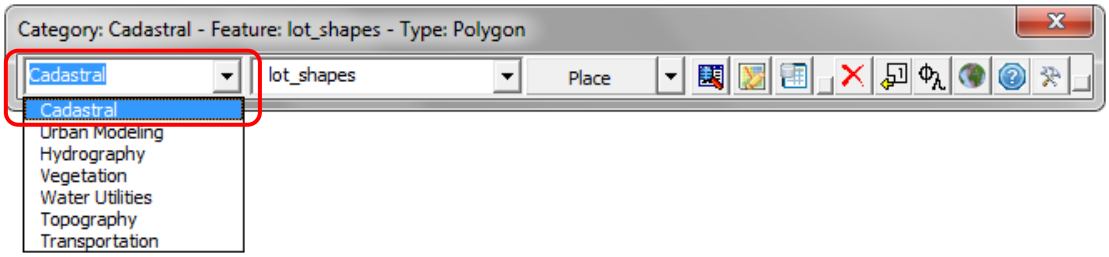

Label Coordinates
Annotation Settings:
Label format:
-DD°MM'SS.ss"
Precision:
2
Separator:
Label order:
Latitude/Longitude
Offset options:
X:
0
Y:
-10
Options:
Data Point to Add Label
Reset to Cancel...
Place


.:: Geodetic Distance and Azimuth: Puissant Formules - Inverse Problem ::.
Input parameters from active GCS:
Ellipsoid: WGS84
Semi-major axis (a): 6378137
Semi-minor axis (b): 6356752.3142
Angle to be added: 180:00:00
First eccentricity (e): 0.996647189336008
Flattening (f): 1/298.25722363023
Point A:
ϕ =
λ =
Point B:
ϕ =
λ =
Calculation:
Geodetic Distance:
Geodetic Azimuth (AB):
Geodetic Azimuth (BA):
Cleanup fields
Calc
Close/Exit

FeatureBar : Layout Detailed

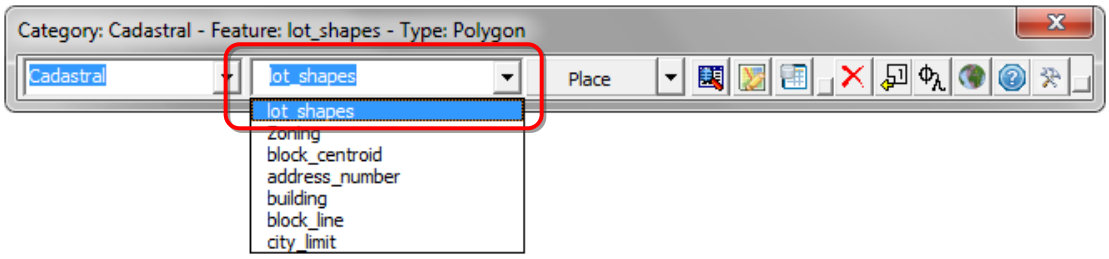
Select Category

This is a drop down list of all the “Categories” in the Category section in the active project. The user can select any category in this list to make this category active as shown below.



Select Feature

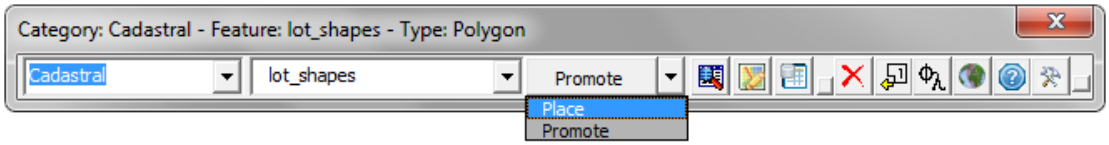
When the user has selected an active category the feature drop down list would be automatically populated with all the features available in this active category. The user can now select any feature listed to him, to make this feature active as shown below.



Place/Promote Feature

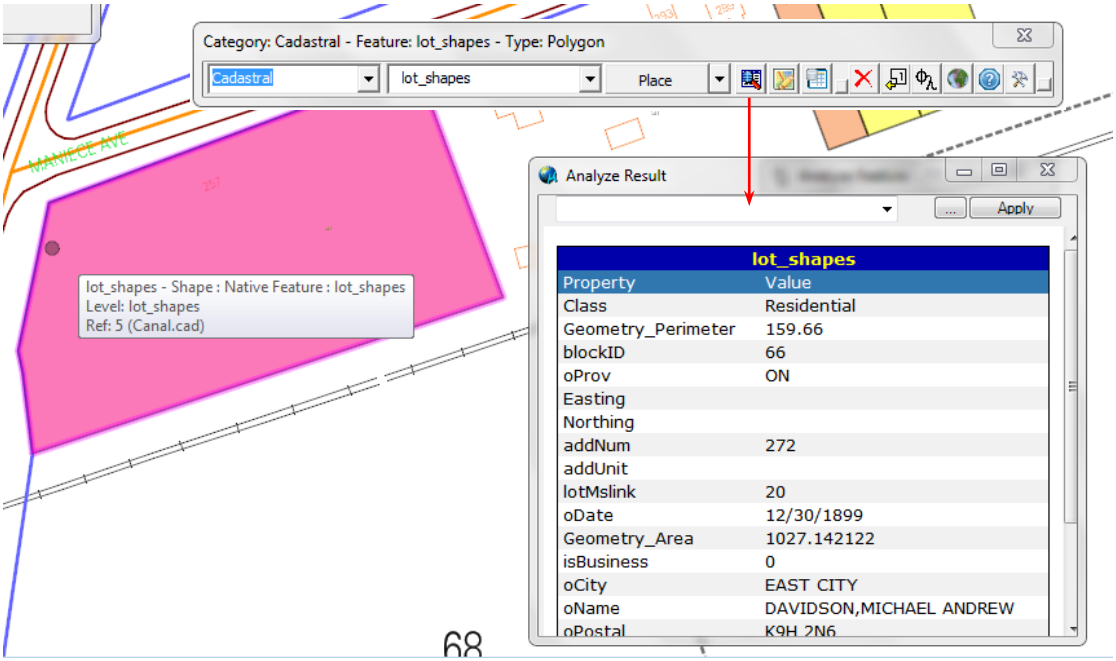
The place feature button consists out of three buttons in the drop down list, eg.

- Place Feature
  - Activate the active feature Place metadata operation, if there’s no Place metadata for active feature, Bentley Map will raises an error.
- Promote Feature
  - Activate the active feature Promote metadata operation. If there’s no Promote metadata for active feature, Bentley Map will raises an error.



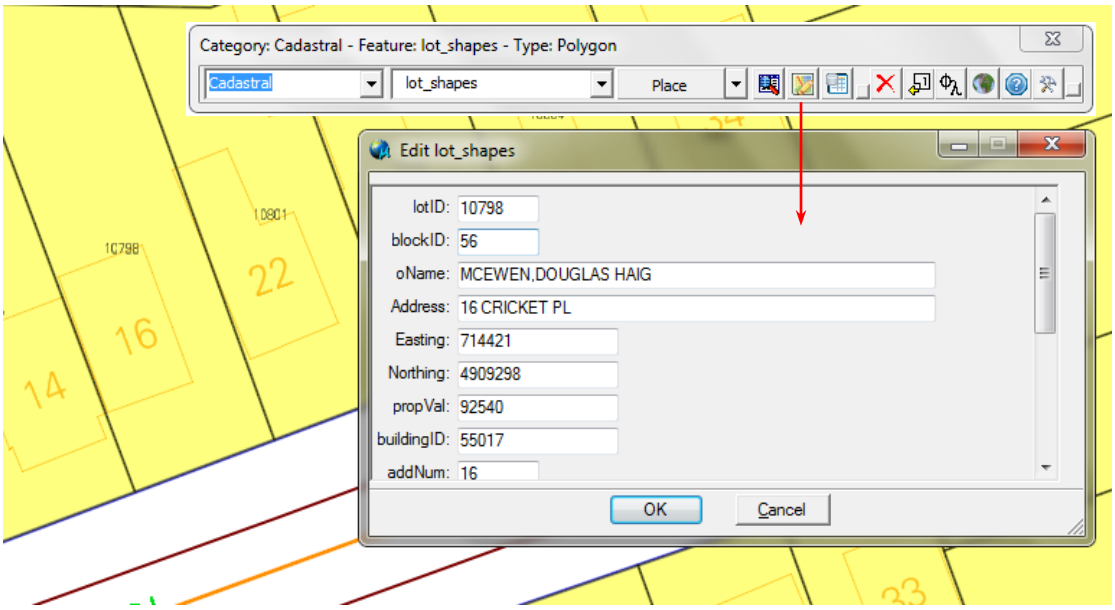
Analyze feature

This function is a shortcut for the standard Bentley Map Analyze function, which is used to review feature properties. Results are output to a dynamically created HTML page. This page is defined by the style sheet located at: \Program Files\Bentley\GeospatialExtension\xml\xslt\default.xslt.



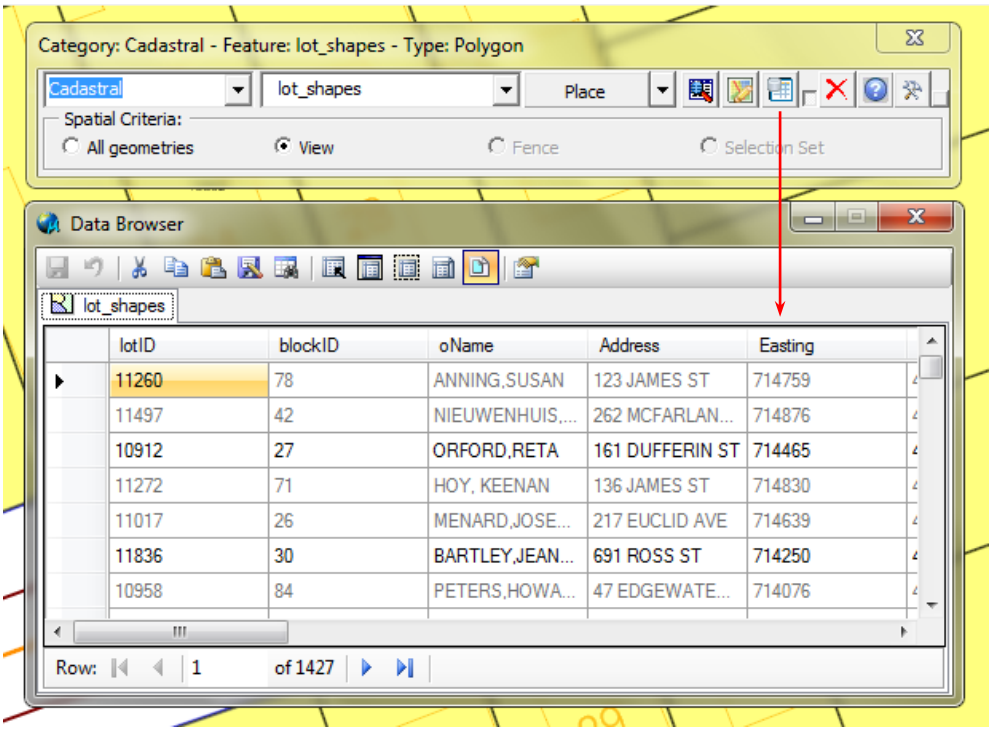
Edit XFM Feature

This function call the standard Bentley Map Edit XFM function, which is used to start the edit tool associated with the selected feature.



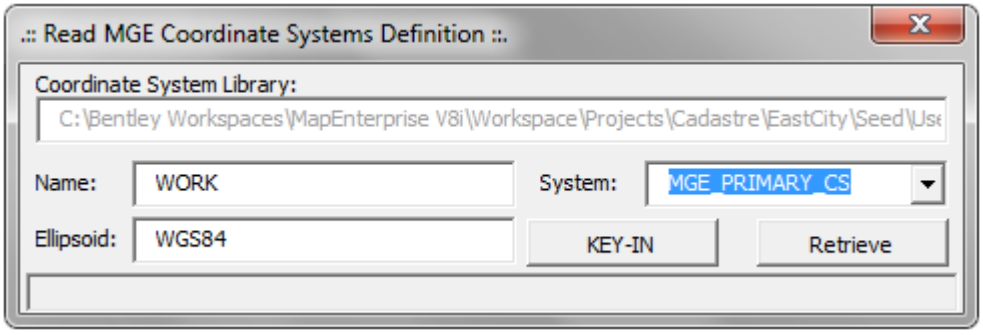
Open DataBrower for Active Feature

This function open the data browser showing the contents of the active feature, using the following KEY-IN: MAP QUERY BROWSE FEATURE=FEATURE.NAME. Also it's possible to determine the spatial criteria.



Retrieve MGE Geographic Coordinate System

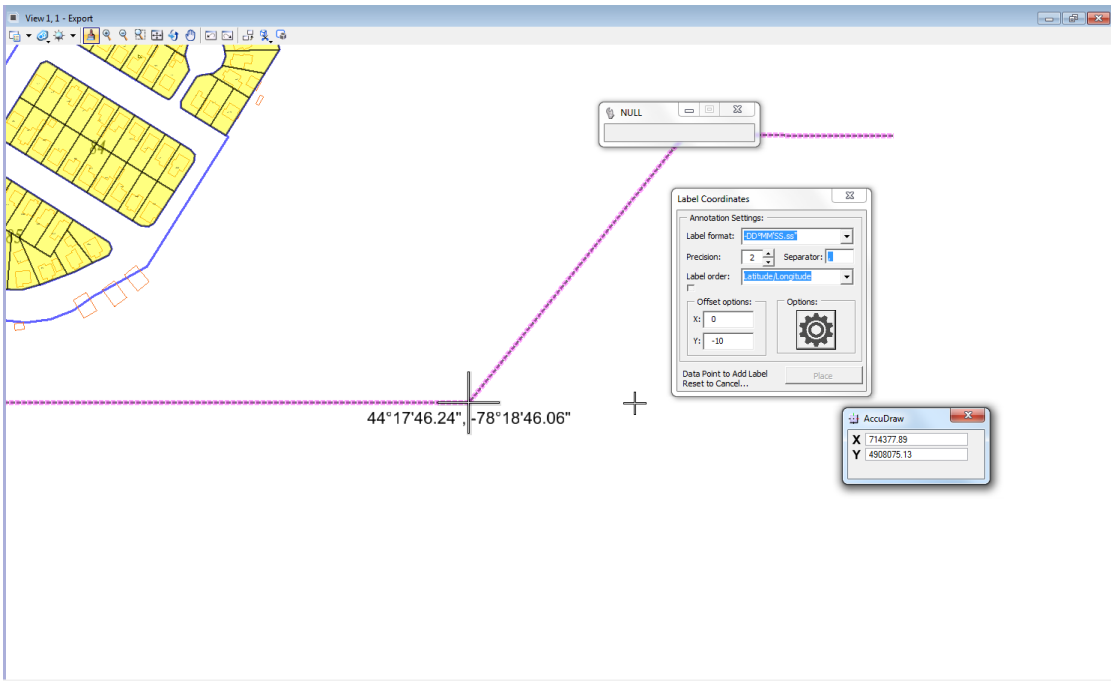
This function shows a form that runs the KEY-IN: MAPCSUTILITIES READMGE to retrieve a valid MGE coordinate system.



Place Latitude/Longitude labels

This VBA application was developed to generate text labels containing latitude/longitude values based on the currently geographic coordinate system and was based on the key-in: label reference from MicroStation Geographics and Bentley Map V8 XM

This tool use the currently active text settings: font, height, width, justification.

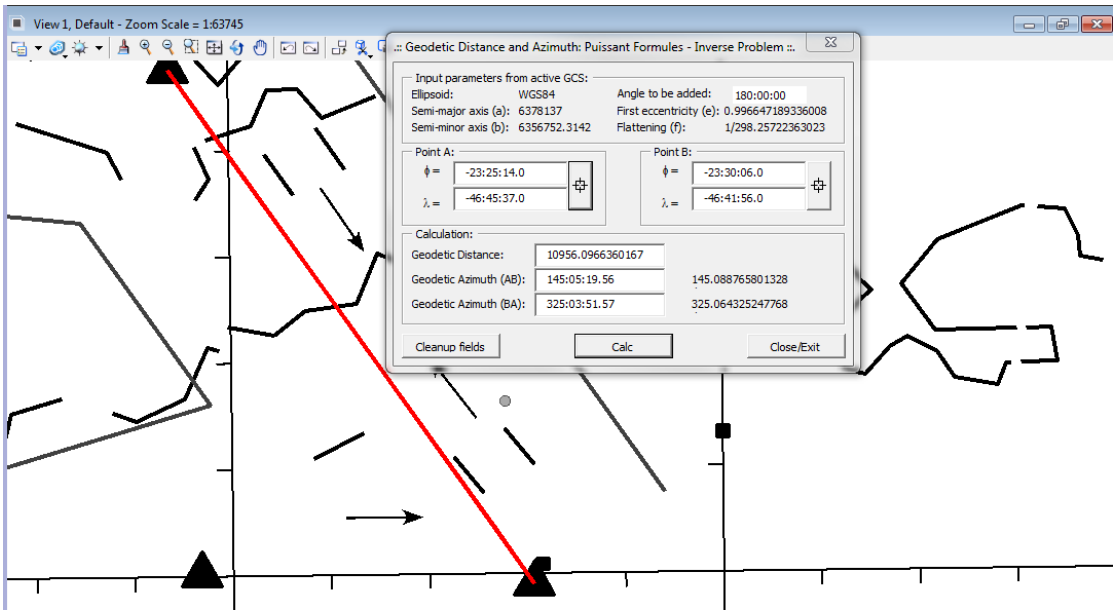


To execute this tool outside FeatureToolBar, use this key-in:

vba run [FeatureToolBar]modMain.PlaceGeoLabelAnnotation

Determine Geodesic Distance/Azimuth between points using Puissant formules

This is a first version of a MVBA application to determine the Geodesic Distance, Geodesic Azimuth between two points using MicroStation V8i SS3/ Bentley Map V8i SS3.This VBA application was developed to determine the geodesic distance and azimuth between two points using the Puissant formulation and was based from the tool 'Great Circle' available in MicroStation Geographics and Bentley Map V8 XM.



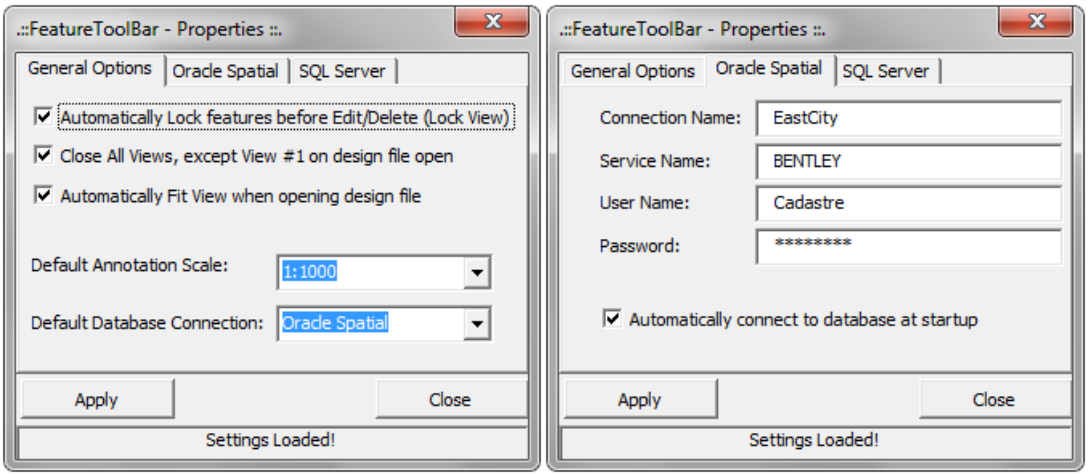
To execute this tool outside FeatureToolBar, use this key-in:

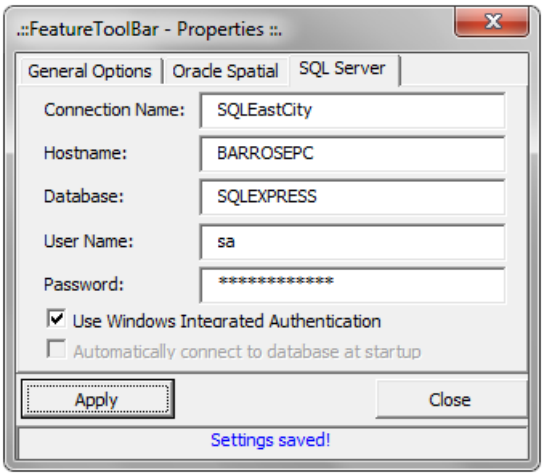
vba run [FeatureToolBar] modMain.LoadFrmDistanceAzimuthGeodetic

Note: This application was developed using equations originally derived by Puissant in the 18th century. They have been extended and used by a number of different geodetic organizations for their position computation work. These equations are not derived with great rigor and are not usually used for lines greater than 100 km in length.

Show Extended Settings

When pressing this button the “Show Extended Settings” a new dialog appears. With this the user can toggle the following options:





General Options:

- Automatically Lock features before Edit/Delete (GDI LOCK VIEW);
- Close All Views, except View #1 on design file open;
- Automatically Fit View when opening design file;
- Sets the defaul Annotation Scale to set each time design is opened;
- Default Database Connection: use this option to setup the default connection to be opened by default;
- Configure Oracle Spatial Connection: Use this options to configure the connection parameters to allow automatic connection during design file open operations.

Note 1: For both Oracle and SQL Server, If you leave the field “Connection Name” blank, the connection will not be opened as a Named Connection in Bentley Map.

Note 2: The password will be encrypted stored inside the configuration file.