

The CEDRA Corporation's COMMAND OF THE MONTH

A monthly information bulletin

July 2010

FEATURED COMMAND
Mini Tool Palette for
Creating Features



Application Description

Those of you who deal with surveyors know how important point numbers are to them. Along with point codes and descriptions, point numbers are a critical component in collecting field data.

When post-processing survey data, many surveyors like to see these point numbers displayed on the screen. Additionally, if lines and/or curves are to be created, many times it will be done by connecting existing points. So that to create these lines and/or curves, some surveyors like to be able to specify point numbers, as opposed to simply picking points on the screen.

Recently we were asked as to whether we offered a simple tool for creating lines by specifying point numbers.

The CEDRA Solution

As usual, we gave the question some thought and came up with the idea of creating the CEDRA Mini Tool Palette, a smaller, simplified version of the CEDRA Tool Palette. This new dialog box would offer the user the ability to create points, lines, curves and polygons by specifying point numbers, as well as, picking points on the screen. Furthermore, the dialog box would offer the ability to echo or display geometric information pertaining to lines and curves, such as line length, bearing, arc length, chord length, central angle and so forth.

To handle the operation and display of the CEDRA Mini Tool Palette, the

CEDRA-DataFrame-Tools-3 toolbar was created, see Figure 1. The left-most tool, , in the toolbar handles the picking of points in the map area, while the

Command Of The Month bulletin

This month's issue addresses the CEDRA Mini Tool Palette, a new dialog box for creating point, line and polygon features.



Figure 1

The CEDRA-DataFrame-Tools-3 Toolbar

right-most tool, , handles the display of the CEDRA Mini Tool Palette.

Mini Tool Palette Overview

To display the CEDRA Mini Tool Palette, the CEDRA-DataFrame-Tools-3

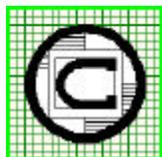
toolbar needs to be displayed. This is done by selecting the {Tools} [Customize...] command, then clicking in the square to the left of the text CEDRA-DataFrame-Tools-3.

Once this is done, the user can click the  tool shown in Figure 1. This tool operates like a light switch in that one click displays the Mini Tool Palette, while a second click of the tool removes the Mini Tool Palette from the screen.

Shown in Figure 2 is the CEDRA Mini Tool Palette. As can be seen, the palette

Figure 2

The Point Tab parameters in the CEDRA Mini Tool Palette



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offers six tabs. Each tab offers a specific functionality. The **Point** and **Dir/Dist** tabs enable the user to create a point feature. The **Line** tab enables the user to create a line feature, the **Arc** tab, a circular arc, the **Polygon** tab a polygon. The **Inverse** tab enables the user to inverse between two points to echo or display a line's length and bearing. If a radius or a center point is specified, the user is able to display circular arc information, such as radius, arc length, chord length and direction and central angle.

As a tab is selected certain data fields appear. The user simply enters the appropriate information for each of the fields, after which, the **Add** button is selected to create the desired feature.

The  tool shown in Figure 1 is not actually selected by the user. This tool becomes active when the user clicks the **P** button within the Mini Tool Palette. The **P** button indicates that a data field value is to be specified by making a "pick" in the map area.

If a "pick" is not to be made, the user should enter a point number indicating the coordinates to be used. When a point number is specified, the program searches all visible point layers for a matching point number. The fields or attributes PNT and PNTstr are used in this search. The first point feature with a matching value is used.

When a "pick" is made, the program displays the Northing, Easting and Elevation values in the data field with the character | delineating the values.

In addition to the coordinate information associated with the feature, the user is able to specify certain attribute data such as symbology, line style and so forth. Furthermore, the user is able to specify the layer for storing the feature.

The Mini Tool Palette is a modeless dialog box which means the dialog box remains displayed until it is closed by the user or when the right-most tool in the toolbar is selected when the Mini Tool

Palette is displayed. As such, the user is able to select other tools, with the Mini Tool Palette displayed, and then return to the Mini Tool Palette to complete an operation.

For example, the user could start defining a polygon feature with the **P** button under the **Polygon** tab, then change the display of the map area using native ArcMap functionality, after which, the **P** button could be re-selected to finish the definition of the polygon.

Presented below is a discussion of each of the Mini Tool Palette tabs and the various parameters within each tab.

Point Tab Parameters

With the **Point** tab, see Figure 2, the user is able to create a point feature at a specific coordinate. The coordinates can be explicitly entered or can be defined by making a "pick" in the map area.

This tab offers the same functionality provided by the |Point 2| tool, , in the CEDRA Tool Palette.

To create a point feature, the **Add** button should be selected. The feature is stored in the specified layer. If there is invalid or missing required data, an appropriate warning message will be displayed. At this point, the user can make the appropriate additions/modifications, after which, the **Add** button can be re-selected.

Data Line 1 - Point ID

Enter the point number or point identification to be assigned to the point. If a numeric point number is to be assigned, the value will be stored under the layer's PNT attribute. If an alphanumeric point number is to be assigned, the value will be stored under the PNTstr attribute.

Data Line 2 - ID Format

Select the radial button denoting whether the Point ID is purely numeric or contains alphanumeric characters.

Data Line 3 - Northing/Lat.

Enter the northing or latitude of the point to be created. Clicking the **P** button indicates that the value for this parameter is to be made from a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the coordinate value is displayed in this data field, as well as, the Easting/Long. data field.. This value is stored in the layer's Y attribute.

Data Line 4 - Easting/Lon.

Enter the easting or longitude of the point to be created. Clicking the **P** button indicates that the value for this parameter is to be made from a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the coordinate value is displayed in this data field, as well as, the Northing/Lat. data field. This value is stored in the layer's X attribute.

Data Line 5 - Elevation

Enter the elevation value to be assigned to the point. This value is stored in the layer's Z attribute.

Data Line 6 - Code

Enter the point code to be assigned to the point. This value is stored in the layer's PTCODE attribute. This value can be blank if so desired.

Data Line 7 - Description

Enter the point description to be assigned to the point. This value is stored in the layer's PTDESC attribute. This value can be blank if so desired.

Data Line 8 - Layer

From the choice list, select the name of the layer in which the point is to be stored. This value is stored in the layer's LAYER attribute.

Data Line 9 - Symbol

From the choice list, select the point symbol value to be assigned to the point. This value is stored in the layer's MRK attribute.

Data Line 10 - Pen

From the choice list, select the pen value to be assigned to the point. This value is stored in the layer's PEN attribute.

Dir/Dist Tab Parameters

With the **Dir/Dist** tab, see Figure 3, the user is able to create a point feature by specifying a direction and a distance from a base point. The base point can be specified by entering a point number or point identification explicitly or by making a "pick" in the map area.

This tab offers the same functionality provided by the |Point 3| tool, , in the CEDRA Tool Palette.

To create a point feature, the **Add** button should be selected. The feature is stored in the specified layer. If there is invalid or missing required data, an appropriate warning message will be displayed. At this point, the user can make the appropriate additions/modifications, after which, the **Add** button can be re-selected.

Data Line 1 - From Point

Enter the point number or point identification of the base point. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the base point is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 2 - Angle

Enter the direction to be applied from the base point

Data Line 3 - Distance

Enter the distance to be applied from the base point.

Data Line 4 - Elevation

Enter the elevation value to be assigned to the point. This value is stored in the layer's Z attribute.

Data Line 5 - Point ID

Enter the point number or point identification to be assigned to the point. If a numeric point number is to be assigned, the value will be stored under the layer's PNT attribute. If an alphanumeric point number is to be assigned, the value will be stored under the PNTstr attribute.

Data Line 6 - ID Format

Select the radial button denoting whether the Point ID is purely numeric or contains alphanumeric characters.

Data Line 7 - Courses

From the choice list, select the option denoting how multiple courses are to be treated. If only one course is to be defined, after the base point has been defined, then this parameter has no effect. However, if multiple courses are to be defined, the courses can be de-

finied by traversing or radially. The Traverse option indicates that the end point of the previous course acts as the base point for the current course. The Radial option denotes that the original base point serves as the base point for all courses.

Data Line 8 - Code

Enter the point code to be assigned to the point. This value is stored in the layer's PTCODE attribute. This value can be blank if so desired.

Data Line 9 - Description

Enter the point description to be assigned to the point. This value is stored in the layer's PTDESC attribute. This value can be blank if so desired.

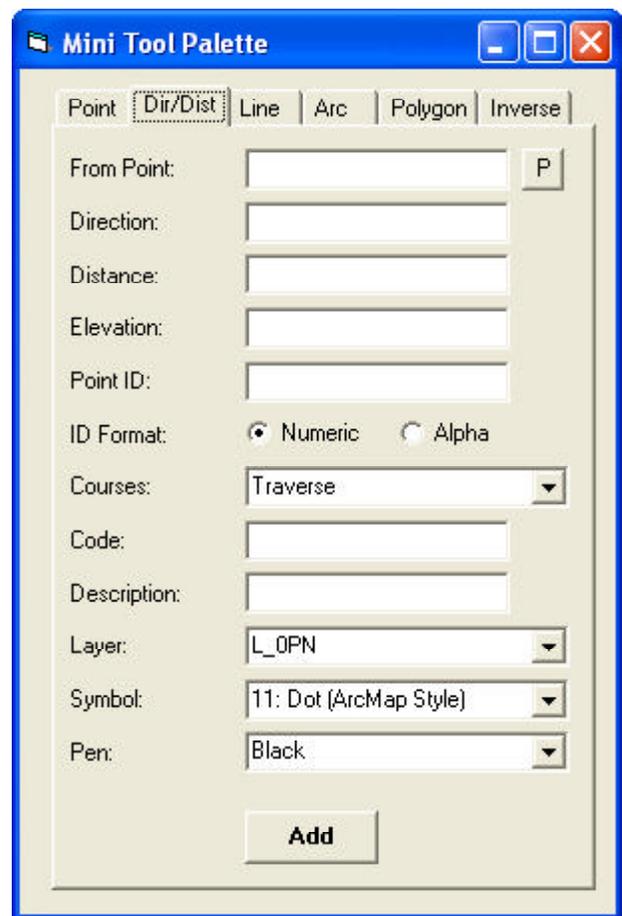


Figure 3
The Ang/Dist Tab parameters in the CEDRA Mini Tool Palette

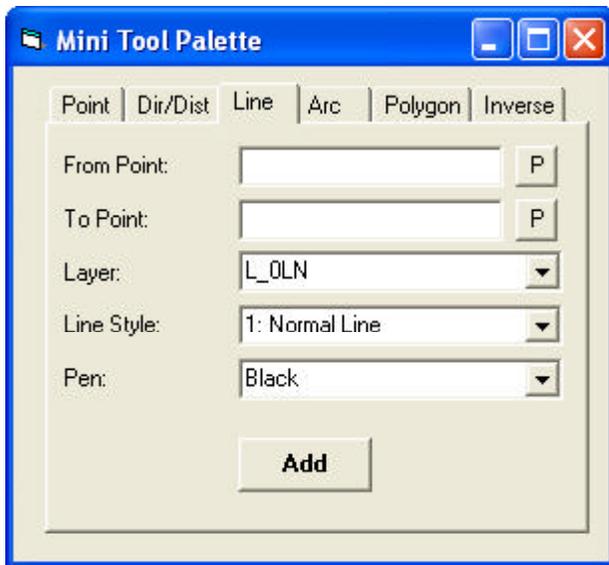


Figure 4

The Line Tab parameters in the CEDRA Mini Tool Palette

Data Line 10 - Layer

From the choice list, select the name of the layer in which the point is to be stored. This value is stored in the layer's LAYER attribute.

Data Line 11 - Symbol

From the choice list, select the point symbol value to be assigned to the point. This value is stored in the layer's MRK attribute.

Data Line 12 - Pen

From the choice list, select the pen value to be assigned to the point. This value is stored in the layer's PEN attribute.

Line Tab Parameters

With the **Line** tab, see Figure 4, the user is able to create a line feature by specifying two point numbers or point identifications explicitly or by making two "picks" in the map area.

This tab offers the same functionality provided by the |Line 1| tool, , in the CEDRA Tool Palette.

To create a line feature, the **Add** button should be selected. The feature is

stored in the specified layer. If there is invalid or missing required data, an appropriate warning message will be displayed. At this point, the user can make the appropriate additions/modifications, after which, the **Add** button can be re-selected.

Data Line 1 - From Point

Enter the point number or point identification of the start point of the line. The

PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the start point is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 2 - To Point

Enter the point number or point identification of the end point of the line. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the end point is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 3 - Layer

From the choice list, select the name of the layer in which the line is to be stored. This value is stored in the layer's LAYER attribute.

Data Line 4 - Line Style

From the choice list, select the line style value to be assigned to the line. This value is stored in the layer's LST attribute.

Data Line 5 - Pen

From the choice list, select the pen value to be assigned to the line. This value is stored in the layer's PEN attribute.

Arc Tab Parameters

With the **Arc** tab, see Figure 5, the user is able to create a curve feature by specifying: (a) the PC, PT and radius of a circular arc, or (b) the PC, PT and center of a circular arc. Depending upon what information is available, the user can decide which method to use.

This tab offers the same functionality provided by the |Curve 7| tool, , in the CEDRA Tool Palette.

To create a curve feature, the **Add** button should be selected. The feature is stored in the specified layer. If there is invalid or missing required data, an appropriate warning message will be displayed. At this point, the user can make the appropriate additions/modifications, after which, the **Add** button can be re-selected.

Data Line 1 - From Point

Enter the point number or point identification of the PC of the arc. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the PC of the arc is to be defined by making a "pick" in the map area. Once the **P** button has been

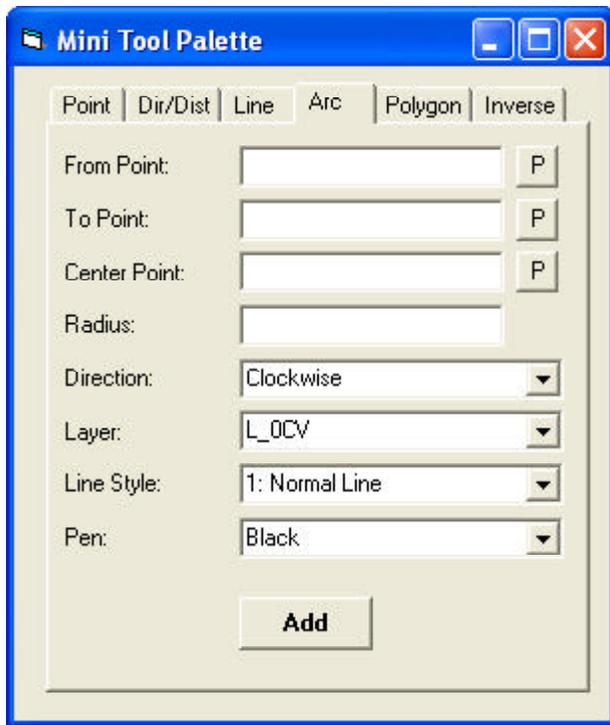


Figure 5

The Arc Tab parameters in the CEDRA Mini Tool Palette

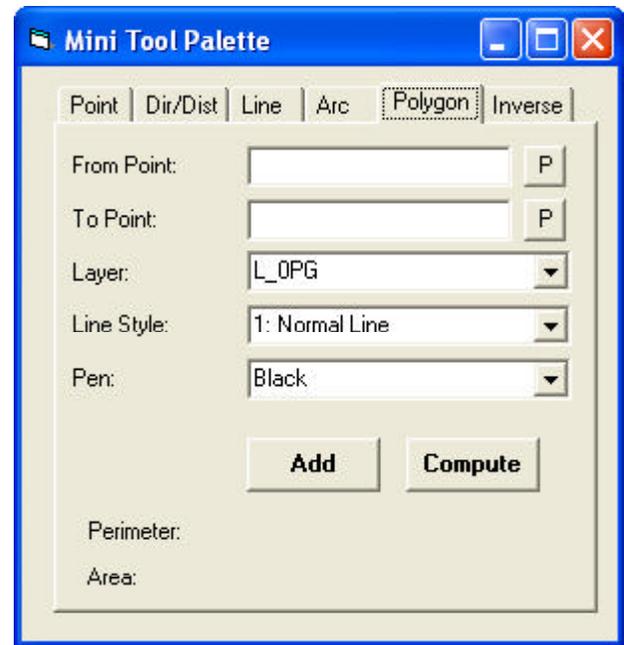


Figure 6(a)

The Polygon Tab parameters in the CEDRA Mini Tool Palette

selected, the user is able to make a “pick” in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 2 - To Point

Enter the point number or point identification of the PT of the arc. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the P button to indicate that the PT of the arc is to be defined by making a “pick” in the map area. Once the P button has been selected, the user is able to make a “pick” in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 3 - Center Point

Enter the point number or point identification of the arc’s center. The PNT and

PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the P button to indicate that the arc’s center is to be defined by making a “pick” in the map area. Once the P button has been selected, the user is able to make a “pick” in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

The user has the option of specifying: (a) the arc’s center point or (b) a radius value. Only one of these parameters needs to be specified. If both are specified, the radius value will govern, provided a nonzero value is specified.

Data Line 4 - Radius

Enter the radius (in world units) of the circular arc.

The user has the option of specifying: (a) the arc’s center point or (b) a radius value. Only one of these parameters

needs to be specified. If both are specified, the radius value will govern, provided a nonzero value is specified.

Data Line 5 - Direction

From the choice list, select the option denoting the direction of the circular arc. The Clockwise option denotes that a clockwise direction is to be applied from the PC to the PT in generating the arc, while the Counter-Clockwise option indicates a counterclockwise direction is to be used.

Data Line 6 - Layer

From the choice list, select the name of the layer in which the arc is to be stored. This value is stored in the layer’s LAYER attribute.

Data Line 7 - Line Style

From the choice list, select the line style value to be assigned to the arc. This value is stored in the layer’s LST attribute.

Data Line 8 - Pen

From the choice list, select the pen value to be assigned to the arc. This value is stored in the layer's PEN attribute.

Polygon Tab Parameters

With the **Polygon** tab, see Figure 6(a), the user is able to create a polygon feature by specifying: (a) a starting and ending point number or point identification range, or (b) by picking the vertices of the polygon. Under item (a) above, all points inclusive of the range as used in the polygon definition.

This tab offers the same functionality provided by the |Line 2| tool, , in the CEDRA Tool Palette when using the Polygon option.

To create a polygon feature, the **Add** button should be selected. The feature is stored in the specified layer. If there is invalid or missing required data, an appropriate warning message will be displayed. At this point, the user can make the appropriate additions/modifications, after which, the **Add** button can be re-selected.

To simply echo or display the area values, the **Compute** button can be selected. This is useful when a point number or identification range is specified.

When vertices are picked by the user using the **P** button, the program automatically updates the area of the polygon at the bottom of the dialog box. As such, the user should not use the **Compute** button under this mode of operation.

Data Line 1 - From Point

Enter the point number or point identification of the polygon's starting point. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the start point of the polygon is to be defined by making

a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 2 - To Point

Enter the point number or point identification of the polygon's ending point. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the end point of the polygon is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 3 - Layer

From the choice list, select the name of the layer in which the polygon is to be stored. This value is stored in the layer's LAYER attribute.

Data Line 4 - Line Style

From the choice list, select the line style value to be assigned to the polygon. This value is stored in the layer's LST attribute.

Data Line 5 - Pen

From the choice list, select the pen value to be assigned to the polygon. This value is stored in the layer's PEN attribute.

Notes

- a. When using the **P** button to define the vertices of the polygon (not the start point of the polygon), the tool remains active so that multiple vertices can be defined one after the other without having to re-select the **P** button.
- b. When using the **P** button to define the vertices of the polygon (not the start point of the polygon), the user is able to use the **A**, **D**, **I** and **M** keys on the keyboard to manipulate the vertices of the polygon.
- c. The **A** key on the keyboard can be used to convert a polygon side into a circular arc. To do so, the user moves the cursor to a location between two polygon vertices and depresses the **A** key. The dialog box shown in Figure 6(b) will appear. The user is able to specify: (a) a radius value, (b) an arc length and central angle or (c) a radius and central angle. Once the information has been specified, the **OK** button can be selected to generate the circular arc. The dialog box will remain active until the **Cancel** button is selected. In so doing, various values can be specified until the desired result is attained.

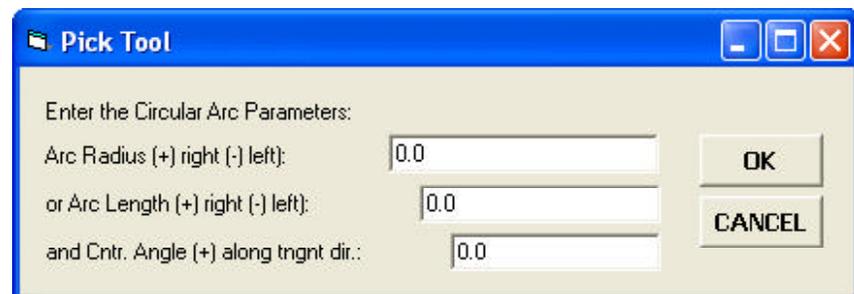


Figure 6(b)
Define Circular Arc Parameters for a Polygon side

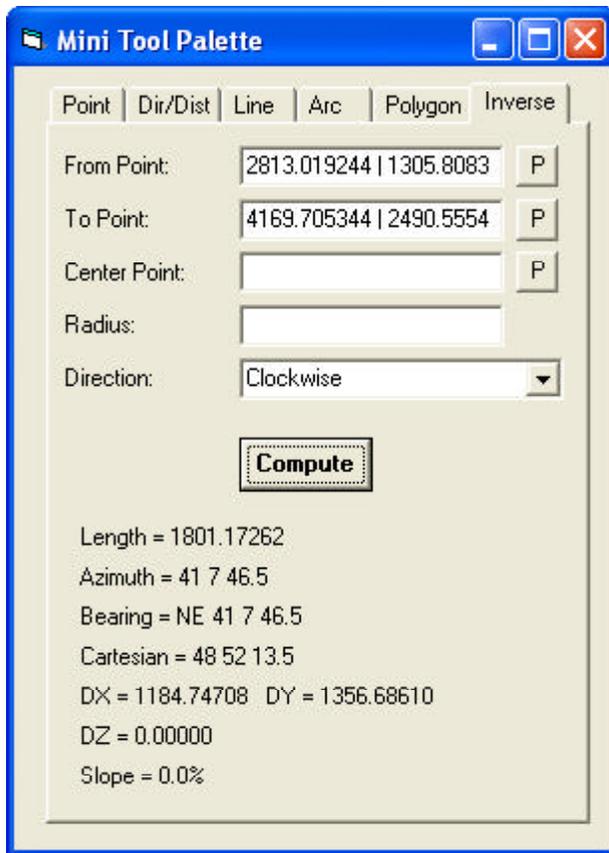


Figure 7(a)

The Inverse Tab parameters in the CEDRA Mini Tool Palette

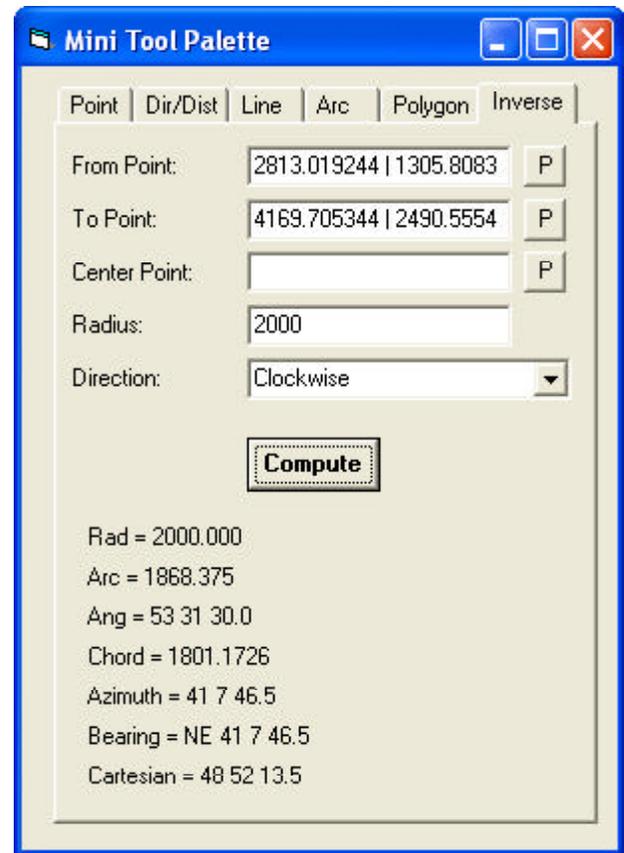


Figure 7(b)

The Inverse Tab parameters in the CEDRA Mini Tool Palette

- d. The **D** key on the keyboard can be used to delete a polygon vertex. To do so, the user moves the cursor on top of a polygon vertex and depresses the **D** key.
- e. The **I** key on the keyboard can be used to insert a vertex along a side of the polygon. To do so, the user moves the cursor to a location between two polygon vertices and depresses the **I** key.
- f. The **M** key on the keyboard can be used to move a polygon vertex. To do so, the user moves the cursor on top of a polygon vertex and depresses the **M** key. A prompt will appear in the status bar area of the application prompting the user to pick the new location for the vertex. At this point, the user moves the cursor to the desired new location and makes a “pick” in the map area using the left mouse button.

- g. Once an operation with the **A**, **D**, **I** and **M** keys has been performed, the program automatically updates the shape and area of the polygon at the bottom of the dialog box.

Inverse Tab Parameters

With the **Inverse** tab, see Figures 7(a) and 7(b), the user is able to inverse between two points to display geometric information pertaining to an implied line or circular arc. The points can be defined by: (a) explicitly entering point numbers or point identifications, or (b) making “picks” in the map area.

The **Compute** button can be selected to display the geometric information. If a radius or curve center has not been specified, the program will display geometric information pertaining to an implied line.

If a radius or curve center has been specified, geometric information pertaining to an implied circular arc will be displayed. Additionally, the program will display in the map area, a graphic element representing the implied line or circular arc. This graphic is deleted when another From Point is defined.

Data Line 1 - From Point

Enter the point number or point identification of the line’s starting point or arc’s PC. The **PNT** and **PNTstr** fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the location is to be defined by making a “pick” in the map area. Once the **P** button has been selected, the user is able to make a “pick” in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The

character | is used to delineate the individual coordinate values.

Data Line 2 - To Point

Enter the point number or point identification of the line's ending point or arc's PT. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the location is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

Data Line 3 - Center Point

Enter the point number or point identification of the arc's center. The PNT and PNTstr fields are searched for a match in all visible point layers.

Alternatively, the user can select the **P** button to indicate that the arc's center is to be defined by making a "pick" in the map area. Once the **P** button has been selected, the user is able to make a "pick" in the map area. Once this is done, the Northing, Easting and Elevation values are displayed in this data field. The character | is used to delineate the individual coordinate values.

The user has the option of specifying: (a) the arc's center point or (b) a radius value. Only one of these parameters needs to be specified. If both are specified, the radius value will govern, provided a nonzero value is specified.

Data Line 4 - Radius

Enter the radius (in world units) of the circular arc.

The user has the option of specifying: (a) the arc's center point or (b) a radius value. Only one of these parameters needs to be specified. If both are speci-

fied, the radius value will govern, provided a nonzero value is specified.

Data Line 5 - Direction

From the choice list, select the option denoting the direction of the circular arc. The Clockwise option denotes that a clockwise direction is to be applied from the PC to the PT in generating the arc, while the Counter-Clockwise option indicates a counterclockwise direction is to be used.

The SYMBOL Choice List

Shown in Figures 2 and 3 is a drop-down list whose label is **Symbol:**. The values that appear in this drop-down are contained in a file called **PointSymbols.txt**, a short excerpt of which is shown in Table 1. This file resides in the CEDRA distribution directory under the folder called FONTSWIN.

When the user makes a selection from the drop-down list, a numeric value is generated. This value is stored in the layer's MRK attribute, if present, and corresponds to the line number of the selection in the **PointSymbols.txt** file.

Since this file is an ASCII based text file, the user is able to modify this file using any word processor or text editor.

The LINE STYLE Choice List

Shown in Figures 4, 5 and 6(a) is a drop-down list whose label is **Line Style:**. The values that appear in this drop-down are contained in a file called **LineStyle.txt**, a short excerpt of which is shown in Table 2. This file resides in the CEDRA distribution directory under the folder called FONTSWIN.

When the user makes a selection from the drop-down list, a numeric value is generated. This value is stored in the layer's LST attribute, if present, and corresponds to the line number of the selection in the **PointSymbols.txt** file.

Since this file is an ASCII based text file, the user is able to modify this file using any word processor or text editor.

```
Do Loop
If Statement
Print
File
Read
Oval
Polygon
Cross (large)
Slash (large)

Cross (ArcMap Style)
Dot (ArcMap Style)
Square (ArcMap Style)
Triangle (ArcMap Style)
Circle (ArcMap Style)
Triangle (large)
Quadrilateral
Arrow Head

Slash
Circle (large)
Square
Tree
Swamp
Fire Hydrant (diag lines)
Power Pole
Star
Valve
Target
Boring
Half Filled Circle
Filled Circle
Fire Hydrant (w/ 3 lines)
```

Table 1
Snippet of the PointSymbols.txt File

```
Normal Line

Line/Circle
Property Line (w/ 3 dashes)
Line w/ arrows
Line w/ vert ticks
Railroad
Line w/ Up Chevron
Dashed - Type 1
Centerline - Type 1
Property Line (w/ 2 dashes)
Bar
Line w/ centered ticks
Dashed - Type 2
Long Dash - Type 1
Dash w/ 3 vert ticks
Dash w/ 4 vert ticks
Dash w/ 5 vert ticks
Line w/ filled rect
Dashed - Type 3
```

Table 2
Snippet of the LineStyles.txt File

The PEN Choice List

Shown in the various figures of the Mini Tool Palette is a drop-down list whose label is **Pen:**. The values that appear in this drop-down are contained in a file called **Colors.txt**, see Table 3. This file resides in the CEDRA distribution directory under the folder called **FONTSWIN**.

Black
Blue
Green
Yellow
Cyan
Brown
Orange
Red
Magenta
Gray

Table 3
Snippet of the Colors.txt File

Degrees, Minutes and Seconds. In this mode, the latitude and longitude values can be entered in one of the following modes:

Longitude
-105.61
105 36 39.19 W
W 105 36 39.19

Latitude
44.51
44 30 22.57 N
N 44 30 22.57

when degrees, minutes and seconds are specified, rather than decimal degrees:

- least one space (blank character) must separate the various values
- the direction parameter (N,S,E,W) can appear before or after the degree, minutes and seconds values
- a direction parameter value of S or W is the same as specifying a negative degree value

When the user makes a selection from the drop-down list, a numeric value is generated. This value is stored in the layer's PEN attribute, if present, and corresponds to the line number of the selection in the **PointSymbols.txt** file.

Since this file is an ASCII based text file, the user is able to modify this file using any word processor or text editor.

Notes

- a. The CEDRA Mini Tool Palette can be resized and repositioned as desired. The information regarding the size and position of the dialog box is stored in the **public.txt** file. This is a CEDRA generated file that contains certain parameter settings. In so doing, when the user invokes the Mini Tool Palette in a new session, the size and position of the dialog box in the previous session will be remembered.
- b. To display the point numbers or point identification values for a layer, native ArcMap functionality can be used. Specifically, **right-click** on the name of the layer in the Table of Contents and **select** the **Properties...** menu item. **Select** the **Labels** tab. From the Label Field drop-down list **select** the attribute to be used in generating labels, such as PNT or PNTstr.. **Click** in the square to the left of the Label Features in this layer text. **Click** the **OK** button.
- c. When using the **Point** tab, the user is able to enter latitudes and longitudes when the Distance Units for the map is set to Decimal Degrees or

- d. When using the **Point** and **Dir/Dist** tabs, if the Point ID parameter is blank and the ID Format parameter is set to Numeric, the program will store in the PNT attribute a value that is one higher than the current highest value in the PNT attribute. Additionally, in the PNTstr attribute a blank string will be stored.
- e. When using the **Point** and **Dir/Dist** tabs, if the Point ID parameter is blank and the ID Format parameter is set to Alpha, the program will store in

the PNT attribute a value of zero and a blank string in the PNTstr attribute.

- f. When using the **Dir/Dist** tab, the setting of the Direction Orientation property within the [**AVcad Properties...**] command controls the type of direction that is entered. The available settings for this property are Azimuth, Bearing and Cartesian.
- g. When using the **Arc** tab, if the user specifies a center point, the program will compute the radius by computing the distance from the Center Point to the From Point. The coordinates of the To Point will then be adjusted to reflect this radius value, maintaining the direction from the Center Point to the To Point.
- h. When using the **Add** button in the Mini Tool Palette, the user is able to select the {**Edit**} [**Undo**] command to delete the last feature created. The user can then return to the Mini Tool Palette and continue to work with the dialog box if so desired.

Summary

The CEDRA Mini Tool Palette is an ideal dialog box for those involved in surveying applications where a simplified set of feature creation tools are needed.

Users with a software support agreement should check with The CEDRA Corporation on how to obtain a software update so as to be able to utilize this new dialog box.

As always, users who have a need for functionality that is not presently available in CEDRA software should feel free to forward these requests to CEDRA, as well as, any other comments or suggestion you may have.

If you have a request for Command Of The Month, feel free to phone, fax or e-mail your request to The CEDRA Corporation.