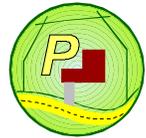


The CEDRA Corporation's COMMAND OF THE MONTH

A monthly information bulletin

June 2005

FEATURED COMMAND
Deed Transcription



Application Description

In the April issue we discussed how to create a parcel using the Create a Parcel tool, . That issue generated a good deal of response, out of which a suggestion was made that it would be good to be able to make a change to a course of a new or an existing parcel, and have the parcel redrawn. In addition, it was suggested that the error of closure ratio be displayed, and stored with the parcel as well.

The CEDRA Solution

Being that it is CEDRA's policy to listen to their users, the developers at CEDRA took the suggestion and modified the Create a Parcel tool to address the suggestion. The modification involved the addition of a new option to the Method of Parcel Definition choice list, and the creation of the Parcel and Traverse Course Entry Form. This form can be used in the creation of a new parcel, as well as in the editing of an existing: (a) parcel, (b) polygon or (c) polyline.

Unfortunately due to the limitations of Avenue, the modifications which have been made are available only for ArcGIS users, at this time. The ArcView GIS implementation is still being researched as to the feasibility of incorporating these modifications.

Create a Parcel Tool - Operation

Shown in Figure 1 is the CEDRA-AVparcel-Tools toolbar for ArcGIS users. The first tool in the toolbar is the Create a Parcel Tool.



Figure 1
CEDRA-AVparcel-Tools Toolbar for ArcGIS Users

The operation of this tool is the same as before, with the exception that a new option, "Transcribe Deed with Table", has been added to the Method of Parcel Definition choice message box (see Figure 2).

Command Of The Month bulletin

This month's issue addresses how to transcribe a deed using the Parcel and Traverse Course Entry Form.

Step 1: Start Point Selection

Once the tool is activated, the user is prompted to pick the start point of the parcel or traverse to be defined. This "pick" must be either: (a) on top of an existing point feature, or (b) near the appropriate endpoint of an existing line feature.

Step 2: Parcel Definition Selection

Once the pick has been made, the



Figure 2
Method of Parcel Definition Query

Method of Parcel Definition choice message box of Figure 2 is displayed.

The new option that has been added to the choice list is called "Transcribe Deed with Table". It is this option that enables the user to define a traverse, or a parcel using the Parcel and Traverse Course Entry Form.

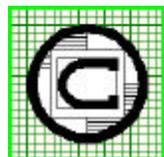
Step 3: Start Point Confirmation

Once the "Transcribe Deed with Table" option has been selected, the user is asked to confirm the feature, which was found based upon the pick made in Step 1. Figure 3 illustrates a typical Yes/No/Cancel message box that would be displayed.



Figure 3
Feature Selection Confirmation Query

Selecting the Cancel button will abort the command, while selecting the No button will force the command to try to find another feature within close proximity to the pick made under Step 1, at which point, the feature confirmation process repeats.



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Selecting the Yes button results in the command prompting the user for the Parcel Identification Number (PIN).

Step 4: PIN Assignment

Shown in Figure 4 is a typical multi-input message box that would be displayed for PIN assignment.



Figure 4
PIN Assignment Message Box

Depending upon the Parcel ID Form that is active, the “look” of Figure 4 will vary. In this example the *Alphanumeric* Parcel ID Form is active. Every parcel or traverse that is defined must be assigned a PIN. If the user is not interested in assigning a PIN, then a “dummy” PIN can be entered. The reader is referred to the April issue for more information pertaining to PIN Assignment.

Once the PIN has been entered, the Parcel and Traverse Course Entry Form shown in Figure 5 will be displayed.

Step 5: Parcel/Traverse Definition

When defining a new parcel, and hav-

ing entered the PIN, the Parcel and Traverse Course Entry Form contains a blank table (the large gray area in the middle of the form in Figure 5), into which, the user can add, delete and edit records. These records correspond to the courses comprising the parcel or traverse. That is to say, for every parcel or traverse course there needs to be a corresponding record in the table.

Step 6: Parcel/Traverse Termination

After the form has been displayed, the user interacts with the form defining the appropriate courses. Once all of the courses have been defined, the user should click at the:

- OK button to create the parcel or traverse, or
- Cancel button to abort the command and loose all of the specified data.

More information regarding the definition of the courses, and termination of the Parcel or Traverse is presented later on.

Parcel/Traverse Definition - Overview

At the top of the form, there are three groups of headings which provide the user the ability to create: (a) Lines, (b) Tangent Curves, and (c) Non-Tangent Curves. In creating a curve (tangent or

non-tangent) the user has the ability to specify various parameters. Depending upon what information is at hand, the user enters the data under the appropriate column.

Type	Code	Data
Line	A	Line direction
		Line length
Tangent Curve	C	Radius
		Arc length
	D	Radius
		Chord length
E	Radius	
	Central angle	
Non-tangent Curve	B	Chord direction
		Chord length
		Curve radius
	F	Chord direction
		Curve radius
		Arc length
G	Chord direction	
	Curve radius	
	Central angle	

Shown in Table 1 is a summary of the parameters that are required to create a specific type of course.

As can be seen from Table 1, as well as, the top of the Parcel and Traverse Course Entry Form, a Tangent Curve is

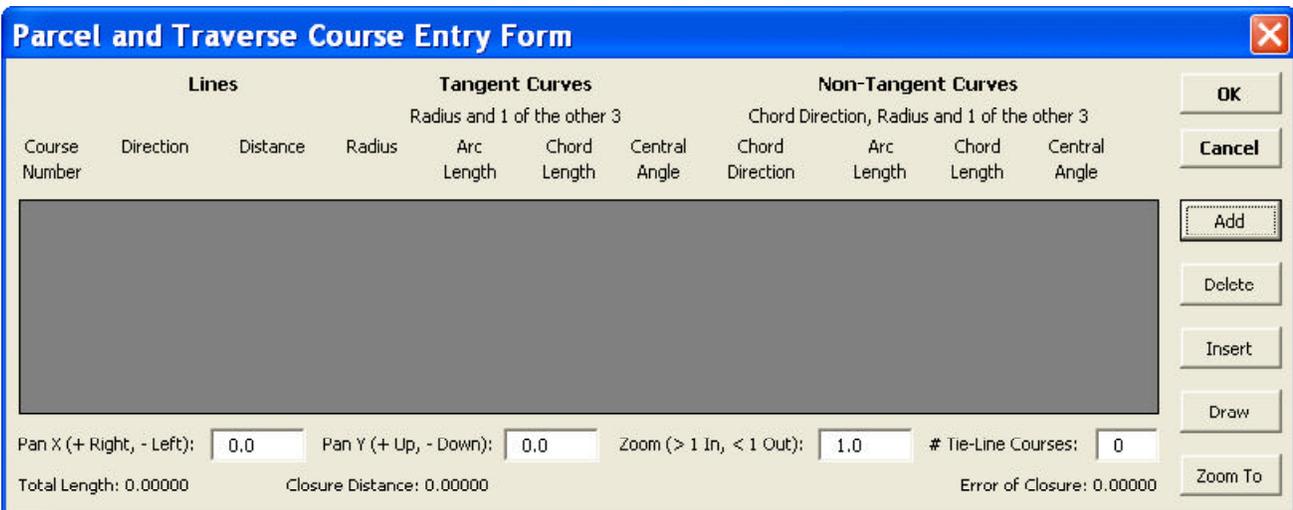


Figure 5 - Parcel and Traverse Course Entry Form upon Initial Display for a New Parcel or Traverse

defined by specifying the *radius* and one of three other parameters, *arc length*, *chord length* or *central angle*.

To create a non-tangent curve, the user must specify the *chord direction*, *radius* and 1 of three other parameters, *arc length*, *chord length* or *central angle*. Note that the radius for a non-tangent curve is entered under the Radius column, which appears under the Tangent Curve group.

The large gray area in the middle of the form represents the table where the records will appear. Should the parcel or traverse contain more courses than can fit in the table, a vertical scroll bar will appear on the right side of the table.

Below the table are two rows. The first row enables the user to change the current view by panning and/or zooming in or out. In addition, the user is able to specify the number of records which correspond to the parcel or traverse tie-line. If there is no tie-line, this value will be zero. If there is a tie-line, the number of records which make up the tie-line should be entered in this field. Note that the tie-line records must appear at the top of the table. That is to say, the tie-line courses precede the parcel or traverse courses.

The second row is for display purposes only. As can be seen, the table will echo the:

- Total length of the parcel or traverse,
- Closure distance, and
- Error of closure ratio.

The error of closure ratio is computed by taking the total length of the parcel, excluding the length of the tie line, if any, and dividing it by the closure distance (the distance from the end point of the last parcel course to the POB of the parcel). The error of closure is then displayed as the inverse of this quotient. If the parcel is closed, the message *Parcel is Closed* will appear in place of the error of closure ratio.

On the right side of the form are the buttons which enable the user to: (a) add, (b) delete and (c) insert records into the table. In addition, the user has the ability to draw or display the parcel or traverse, as well as, zoom to the extent of the parcel or traverse.

Note that the display of the parcel or traverse will not appear until the user (a) selects the Draw button or (b) depresses the Enter key after entering course data.

Getting Started - Adding Records

The first step in defining a parcel or traverse is to add records to the table. As stated earlier, each record in the table corresponds to a course in the parcel or traverse. For example, a four sided parcel would have four records displayed in the table. When the user selects the Add button, a single record is added to the table. The course number is automatically assigned to the row and can not be altered by the user.

In defining a parcel or traverse, the user has the option to:

- Add all of the records comprising the parcel or traverse, one after the other with blank data, by selecting the Add button in succession. After which, the user returns to enter the course data for each of the records, or
- Add a few records as per above, and repeat the process until all courses have been entered, or
- Add a record with its course data, one course at a time, until all courses have been entered.

Entering Data

Once the records have been added, the user clicks in the appropriate column, on the appropriate row, and enters the course data. Should the user wish to alter any of the data, the user simply clicks in the appropriate column and row and reenters the desired data.

The user is able to utilize the arrow keys to move from cell to cell in the table, as well as, the Tab key to advance to the cell to the right of the current active cell.

Note that when entering data the current active cell will have its text highlighted in a bold font. When this condition occurs, the user *must depress the Enter key* prior to being able to select any of the buttons, or data fields (other than table cells) on the form. The reason for this is that when the current active cell is highlighted in a bold font the table has the focus, and in order to change the focus the Enter key must be depressed.

Record Deleting

To delete or remove a record from the table, the user clicks in the Course Number column on the row to be deleted. The row will then become highlighted. Once the row is highlighted, the Delete button can be selected, at which point, the record will be removed. Note that the course numbers will be updated to reflect the deletion of the record. Furthermore, the row will remain highlighted, so that, the Delete button could be re-selected to delete additional rows without having to having to perform a re-select.

Note that once a record has been deleted, its deletion cannot be undone. In the case of an inadvertent course deletion, the deleted record should be inserted as described below.

If the Draw button is selected after the record is deleted, the display will reflect the course deletion.

Inserting a record

To insert a new record in the table, the user clicks in the Course Number column on the row which is to appear below the new record. That is to say, the new record is inserted above the selected row. For example, to insert a course between courses 4 and 5, the user should click at the 5th course record.

Once the row is highlighted, the Insert button can be selected, at which point, the new record will be added to the table, and the course numbers will be updated to reflect the new record. Furthermore, the new row that was just added will become highlighted, so that, the Insert button could be re-selected to insert another row without having to perform a re-select.

When one or more rows have been inserted, the user may proceed to populate the appropriate course cells with the desired data.

If the Draw button is selected after the record is inserted, the display will reflect the course insertion.

Displaying the Parcel or Traverse

To display the parcel or traverse, the user can either: (a) select the Draw button, or (b) depress the Enter key after specifying a parameter in the table. Until one of these two operations is performed, no graphics will appear in the map display area.

By utilizing this approach, the user is able to mass enter data without having to wait for the display to be redrawn. Should the user wish to verify the entered data by viewing the results, the user simply depresses the Enter key or selects the Draw button, at which point, the command will display the courses which have been defined.

Highlighting a Course

To highlight a specific row (course), the user must click in the Course Number column of the desired row. In so doing, the row will become highlighted within the table. If the user had selected the Draw button, the corresponding element in the map will be highlighted in addition to the row. When the Draw button is selected, or the Enter key depressed, the command draws the parcel or traverse using the course data that has been specified. The graphic elements which are generated and displayed on

the map are placed in a list. When a row is highlighted, the command checks to see if there is a corresponding graphic for the row. If there is, the graphic is highlighted on the map. In so doing, the user is able to graphically determine where in the parcel or traverse the course resides.

Regarding the highlighting of courses in both the table and the map, note the following:

- Only one course or row can be highlighted in the table at a time.
- If rows are highlighted in the table successively, all of the selected courses will be displayed highlighted in the map.
- To de-highlight the map display, click the Draw button in the form.
- To de-highlight the table, click in any cell within the table, and depress the Enter key.

Zooming to the Extent

To quickly zoom to the extent of the parcel or traverse, the Zoom To button can be selected. This command will alter the view so that the current parcel or traverse fills the map display with a 10% margin. The panning and zoom data fields below the table can be used to further modify the display. Note that after specifying a pan or zoom value, the Draw button must be selected in order to change the view.

Note that once the Parcel and Traverse Course Entry form is displayed, the ArcMap view manipulation tools cannot be used. To alter the view display, the user may use any of the Zoom (>1 In, <1 Out); Pan Y (+ Up, - Down); or Pan X (+ Right, - Left): data fields at the bottom of the table by entering the appropriate zoom and/or pan values followed by picking the Draw button.

In using these three data fields, keep in mind that they work in unison. For example, if you only wish to pan to the left, you should enter:

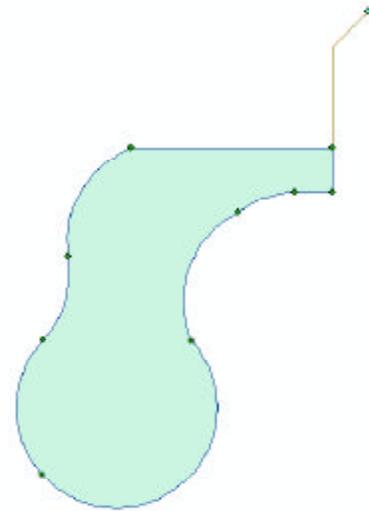


Figure 6
Sample Parcel

- The desired negative distance in map units in the Pan X (+ Right, - Left): data field,
- 0.0 in the Pan Y (+ Up, - Down): or Pan X (+ Right, - Left): data field, and
- 1 in the Zoom (>1 In, <1 Out): data field.

Example - Sample Parcel

As an example of using the new form let us consider the parcel shown in Figure 6. As can be seen, the parcel is comprised of a tie-line, which has two courses, while the parcel itself is comprised of nine courses containing both line and curve elements. The curve elements which are displayed in the sample parcel represent all of the possible types of curves that can be created.

In getting started, we will assume that the user has an established point somewhere in the map. As such, invoke ArcMap, and either load an existing point theme or create a new point feature at some arbitrary location.

Once this is done, display the Create a Parcel tool by activating the CEDRA-AVparcel-Tools toolbar.

Lines			Tangent Curves				Non-Tangent Curves			
Course Number	Direction	Distance	Radius and 1 of the other 3			Chord Direction, Radius and 1 of the other 3				
			Radius	Arc Length	Chord Length	Central Angle	Chord Direction	Arc Length	Chord Length	Central Angle
1	sw 45	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ne 0	-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	nw 90	200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pan X (+ Right, - Left): 0.0 Pan Y (+ Up, - Down): 0.0 Zoom (> 1 In, < 1 Out): 1.0 # Tie-Line Courses: 0

Total Length=350.00000 Distance to Close=271.50176 DX=235.35534 DY=135.35534 Error of Closure 1:1

Figure 7 - Parcel and Traverse Course Entry Form or Table

At this point we are ready to begin the deed transcribing process. We assume that the upper right corner of the sample parcel shown in Figure 6 is the point of commencement (POC), so that:

1. Select the Create a Parcel tool.
2. Make a pick at the existing point feature, to display the choice list message box of Figure 2.
3. Select the “*Transcribe Deed with Table*” option, and then click at the OK button.

At this point, the command will query the user for confirmation of the feature selection.

4. Click at the Yes button to confirm the selection of the feature.

The command will now prompt for the parcel PIN. Depending upon which parcel PIN format is currently active, the user will see either Figure 4, or some variation of Figure 4.

5. Enter any desired PIN, and then click at the OK button.

At this point, the Parcel and Traverse Course Entry Form of Figure 5 will appear.

6. Click the Add button three times to add three records to the table.

These records correspond to the two courses in the tie-line and the first course in the parcel. The first course in the parcel is the course which begins at the end of the tie-line and proceeds due west (the horizontal line).

7. Enter the values shown in Figure 7 under the Direction and Distance columns in the table for all three courses. To enter the course data:
 - Click in the cell under the Direction column of the first row.
 - Enter the direction **sw 45**.
 - Click the Tab key to move to the cell to the right.
 - Enter the length **50**.

Repeat the above four steps for the second course of the tie line and the first course of the parcel, substituting the appropriate values.

Once the last value has been entered, depress the Enter key to force the command to display the tie-line and the first course in the parcel.

Note that the arrow keys can be used to move from cell to cell within the table, and as shown, the Tab key can be used to move to the cell to the right of the current active cell.

In addition, note at the bottom of the table the following information that has been displayed:

- The total length of the three courses that have been introduced,
- The closure distance from the end of the last course to the starting point,
- The DX and DY components of the closure distance, and
- The closure error ratio.

This information is updated every time the parcel or traverse is drawn. There is no limit to the number of times the parcel or traverse can be drawn. Note that as of now we have not identified which courses comprise the tie line. Hence, the closure information is not the actual closure information of the actual parcel.

8. Click the Add button eight times to add eight more records to the table.

These records correspond to the remaining courses comprising the parcel. Note that a vertical scroll bar will appear, so that, the user can scroll up or down to review the course data.

Lines			Tangent Curves				Non-Tangent Curves			
Course Number	Direction	Distance	Radius and 1 of the other 3			Chord Direction, Radius and 1 of the other 3				
			Radius	Arc Length	Chord Length	Central Angle	Chord Direction	Arc Length	Chord Length	Central Angle
4		0.0	-100	0.0	0.0	0.0	sw 30	0.0	125	0.0
5		0.0	100	90	0.0	0.0		0.0	0.0	0.0
6		0.0	-100	0.0	135	0.0		0.0	0.0	0.0
7		0.0	-100	0.0	0.0	180		0.0	0.0	0.0
8		0.0	100	0.0	0.0	0.0	ne 20	150	0.0	0.0
9		0.0	100	0.0	0.0	0.0	ne 70		0.0	35
10	ne 90	37.38037	0.0	0.0	0.0	0.0		0.0	0.0	0.0
11	ne 0	43.83159	0.0	0.0	0.0	0.0		0.0	0.0	0.0

Pan X (+ Right, - Left): 0.0 Pan Y (+ Up, - Down): 0.0 Zoom (> 1 In, < 1 Out): 1.0 # Tie-Line Courses: 2

Total Length=1179.67700 Distance to Close=0.00000 DX=0.00000 DY=0.00000 Parcel is Closed

Figure 8 - Parcel and Traverse Course Entry Form or Table

9. Enter, as was done for the three courses above, the values of the remaining courses as shown in Figure 8 under the various columns in the table.

Once the last value has been entered, depress the Enter key to display the courses.

The tie-line and the parcel should now appear as shown in Figure 6. If not, review the course data in the table to make sure all data was properly entered.

Since we have finished the entry of all tie line and course data, it is time to review the parcel closure information. If the parcel was closed, the message Parcel is Closed would appear in the low right corner of the table. But as of now, we have not identified the number of courses that comprise the tie line from the POC to the POB. Hence, our next step is to do that.

10. Click in the # Tie-Line Course: data field, enter the value 2 denoting the number of courses at the top of the table that comprise the tie line, and then depress the Enter key. Note, if there is no tie-line, the value in this data field must be zero.

The Parcel is Closed message should now be displayed in the low right corner.

As an exercise, the user may wish to change the value 43.83159, which is the length of the last course in the parcel, to be 43.0. Thus:

- Click in the cell containing the value 43.83159,
- Enter the value 43.0,
- Depress the Enter key to force the parcel to be redrawn, and then
- Review the Distance to Close, and the Error of Closure values.

The intent of this exercise is to demonstrate the information that is displayed when a parcel does not close. Once this exercise has been completed, change the distance value back to 43.83159.

11. Click the OK button in the form to terminate the data entry, and display the parcel confirmation message box of Figure 9.

12. Click the Yes button to terminate and confirm the parcel definition.

Figure 9 Parcel Confirmation Query

Parcel Termination

Since the parcel represents a closed figure, the parcel confirmation query of Figure 9 is posed. Selecting the No button will abort the command. All data entered will be lost. Selecting the Yes button will create either a simple polygon, or an AVparcel parcel polygon. The type of feature that is created is based upon how the user responded to the Create Topology parameter in Figure 4. A response of No to this parameter results in a simple polygon being established. This polygon will be stored in the current active layer. A response of Yes will result in an AVparcel parcel polygon being created.

If the parcel does not form a closed figure, the choice list message box of Figure 10 will be displayed. It can be seen from Figure 10 that the user has a variety of choices in determining how to terminate the parcel definition.

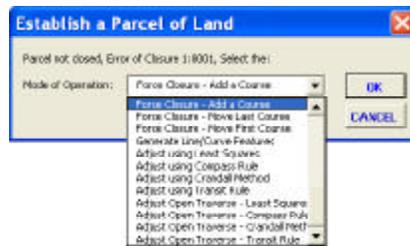


Figure 10
Non-Closed Parcel Choice List

The first option “*Force Closure - Add a Course*” terminates the parcel definition by adding a course whose end point will match the start point of the first course in the parcel. This saves the user from having to enter the final course in the parcel definition. It also ensures that the parcel is closed, thereby, eliminating any need to perform a parcel adjustment.

The second option “*Force Closure - Move Last Course*” closes the parcel by moving the end point of the last course entered to the start point of the first course in the parcel. This option can be used when the deed data does not close, and it is not desired to perform a parcel adjustment.

The third option “*Force Closure - Move First Course*” closes the parcel by moving the start point of the first course entered to the end point of the last course in the parcel. This option can be used when the deed data does not close, and it is not desired to perform a parcel adjustment.

The fourth option “*Generate Line/Curve Features*” enables the user to create line and/or curve features for the courses that have been specified. This option can be used when an open figure (string or traverse) is being defined, or when the user simply wants to create line and curve features, and not a polygon feature. The line and curve features that are created under this option are stored in the current active layer.

The remaining options appearing in the choice list enable the user to adjust closed figures (parcels) and open strings

(traverses), using the Least Square, Compass Rule, Crandall or Transit Rule methods. Options 5, 6, 7 and 8 should be used on figures that are closed, while options 9, 10, 11 and 12 should be used solely on open figures (traverses).

The reader is referred to the April issue for more information pertaining to the types of adjustments mentioned above.

Command Termination

Should the user select the Cancel button on the Parcel and Traverse Course Entry Form, see Figure 5, and if the table contains any records, the parcel termination query shown in Figure 11 will be posed. Selecting the:



Figure 11
Parcel Termination Query

- No button will return the user to the form.
- Yes button will cancel the command, and any data that was entered will be lost.

Database Fields

When a simple polygon or an AVparcel parcel polygon is created with the Create a Parcel tool, within the polygon theme (layer), the command will introduce, if they are not present, seven fields called:

CLOSED,
CLOSE_DIST,
CLOSE_DX,
CLOSE_DY,
CLOSE_AZ
CLOSE_BEAR and
CLOSE_ERR.

The domain of the CLOSED attribute will be either YES or NO, with:

- YES indicating that the data entered in defining all of the parcel courses resulted in a closed figure.
- NO indicating that the said data did not create a closed figure, and that an adjustment had to be performed in order to close the parcel.

The other six attributes identified above contain information pertaining to the error of closure from the last course endpoint towards the first point (POB) of the parcel along with the error of closure ratio.

Edit a Parcel Tool - Operation

Once a polygon has been created (be it a simple polygon or an AVparcel parcel polygon), it sometimes becomes necessary to modify the existing feature. To assist the user in performing this editing, the user is able to employ the third tool in the CEDRA-AVparcel-Tools toolbar, the Edit a Parcel Tool, .

Although a full description of this tool is outside the scope of this bulletin, we wish to address some of the tool’s capability since it relates to the modifications made to the Create a Parcel tool.

The operation of the Edit a Parcel Tool is the same as before the modifications were made to the Create a Parcel tool, with the following two exceptions:

- The command now provides for the editing of polyline and simple polygon features.
- Two new options, which are called *Parcel Sides with Table* and *Parcel Sides - Deed Data with Table* (see Figure 15) have been added to the command’s Methods of Editing Parcels choice message box.

These enhancements have been added to take advantage of the new Parcel and Traverse Course Entry Form.

Step 1: Feature Selection

Once the tool is activated, the user should pick the polyline, simple poly-

gon or AVparcel parcel polygon to be edited. Once the “pick” has been made, the program will prompt the user for confirmation (see Figure 3).

Step 2: Editing Mode Selection

Once confirmation is given, and if a:

Polyline is Selected

The user will be prompted for the mode of editing. Shown in Figure 12 is the choice list message box that is displayed.



Figure 12
Polyline Editing Mode Query

Selecting the Cancel button will abort the command, while selecting the OK button will result in the program displaying the Parcel and Traverse Course Entry Form. In this case, the table within the form will contain predefined records which correspond to the sides that the command computes from the geometry of the polyline.

Shown in Figure 16, is the Parcel and Traverse Course Entry Form with a table containing data corresponding to a se-

lected polyline. The user is now able to review the data and make any appropriate modifications.

Simple Polygon is Selected

If the layer or theme in which the simple polygon resides contains the Print_Key field, or its alias (as defined in the *pin.txt* file), the user will be prompted to confirm the editing, see Figure 13.



Figure 13
Polygon / Parcel Confirmation Query

Once confirmation is given, or if the Print_Key field or its alias does not exist, the user will be prompted for the mode of editing. Shown in Figure 14 is the choice list message box that is displayed.

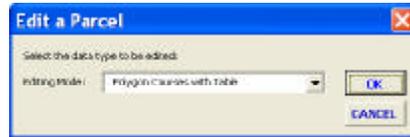


Figure 14
Polygon Editing Mode Query

Selecting the Cancel button will abort the command, while selecting the OK button will result in the program displaying the Parcel and Traverse Course Entry Form, similar to the one shown in Figure 16. In this case, the table within the form will contain records corresponding to the sides which the command computes from the geometry of the polygon. The user is now able to review the data and make any appropriate modifications.

AVparcel Parcel Polygon is Selected

If an AVparcel parcel polygon is selected, the user will be prompted to confirm the editing as shown in Figure 13.

One confirmation is given, the user will be prompted for the mode of editing. Shown in Figure 15 is the choice list message box that is displayed. Note the *Parcel Sides with Table* and *Parcel Sides - Deed Data with Table* options.

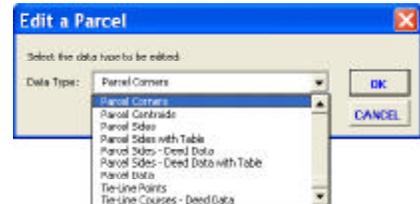


Figure 15
Method of Parcel Editing Choice List

Parcel and Traverse Course Entry Form											
Lines			Tangent Curves				Non-Tangent Curves				
Course Number	Direction	Distance	Radius	Radius and 1 of the other 3			Chord Direction, Radius and 1 of the other 3				
				Arc Length	Chord Length	Central Angle	Chord Direction	Arc Length	Chord Length	Central Angle	
1	NW 39 44 36.6	327.07274	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
2		0.0	80.568	0.0	0.0	0.0	NE 25 38 27.6	0.0	0.0	0.0	72.571
3	NE 45 0 0.0	24.315942	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
4	NE 30 57 49.5	20.051439	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
5		0.0	-121.683	0.0	0.0	0.0	NE 19 5 36.6	0.0	0.0	0.0	45.756
6	NE 0 0 0.0	30.949142	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
7		0.0	-347.663	0.0	0.0	0.0	NW 9 27 44.4	0.0	0.0	0.0	13.822
8	NW 37 52 29.9	39.208279	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0

Pan X (+ Right, - Left): 0.0 Pan Y (+ Up, - Down): 0.0 Zoom (> 1 In, < 1 Out): 1.0 # Tie-Line Courses: 0

Total Length=1077.21991 Distance to Close=954.68262 DX=247.51593 DY=922.03838 Error of Closure 1:1

Figure 16 - Parcel and Traverse Course Entry Form with Data from a Selected Feature

These new options enable the user to edit an existing parcel using the Parcel and Traverse Course Entry Form. The *Parcel Sides with Table* option will display the geometric data for the parcel sides which comprise the parcel, while the *Parcel Sides - Deed Data with Table* option will display the deed data associated with the parcel sides which comprise the parcel.

Selection of either of these two options will result in the display of the Parcel and Traverse Course Entry Form. Depending upon which option is selected, the data in the table within the form will vary.

Step 3: Reshaping Confirmation

Once the Parcel and Traverse Course Entry Form is displayed, the user is able to review and modify the data as desired. The use of the form is the same as that described in the Create a Parcel Tool discussion.

Once the user has reviewed the data and wishes to terminate the command, the user can select the Cancel button, which will abort the command, or the user can select the OK button, which will result in the query shown in Figure 17 being displayed.

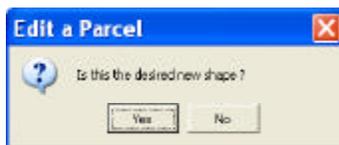


Figure 17
Editing Confirmation Query

Selecting the No button will leave the selected feature unaltered, while selecting the Yes button will alter the shape of the selected feature as per the data shown in the form.

Summary

In terms of parcel creation and editing, the table approach offers the user the ability to view all of the parcel or traverse

course data in its entirety, whereas previously, only the current course was displayed. In addition, the ability to change any course's data and have the parcel or traverse redrawn is a tremendous help in defining or editing the parcel or traverse.

As mentioned at the outset of this bulletin, the modification to the Create a Parcel tool was a direct result of user suggestion. As a point of information, close to 30% of all enhancements made to CEDRA software are a direct result of user input. As such, if you feel there needs to be a "tweak" or a new command implemented, feel free to pass the suggestion along. There is a good chance that your suggestion would be incorporated.

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