

# How to Use Trimble GeoXT with ArcPad 7



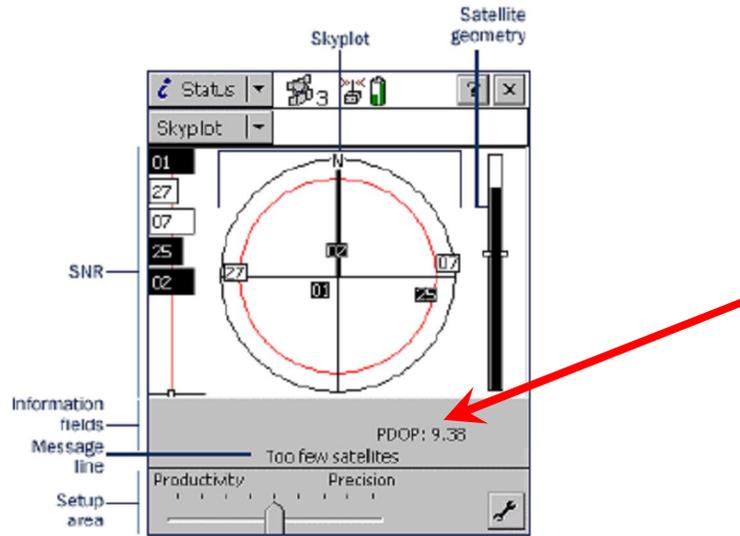
Developed by Scott Ralston

<http://skralston.com/Scott/>

May 2006

1. Turning on the GPS controller

- a. You can activate the GPS controller in the Trimble unit without using ArcPad if you want to check GPS reception. However this is not a required step before using ArcPad.
- b. Click on the start menu and choose GPS Controller
- c. A screen similar to this should appear



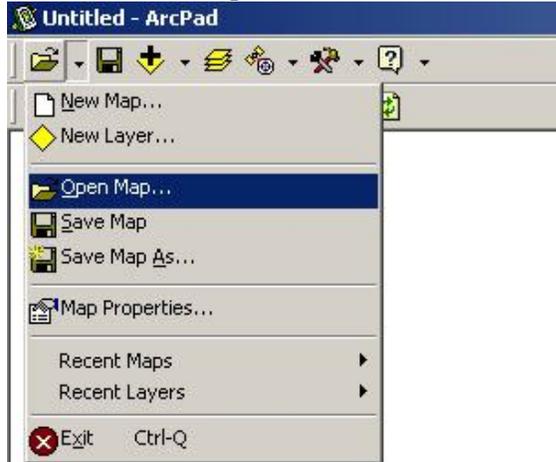
- d. Give the unit a little time to acquire satellites. Facing south will better the chances of acquisition. Also avoid obstructions such as trees or buildings.
- e. The Productivity/Precision bar can be adjusted if necessary. More productivity means less trouble acquiring satellites but the positioning is less precise.
- f. PDOP is the accuracy.

2. Open ArcPad 

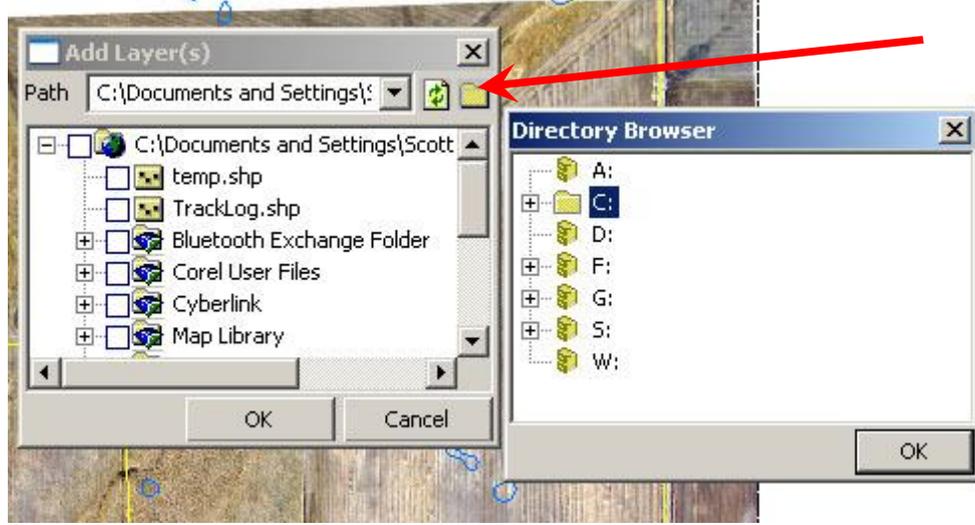
- a. Use the start screen for choices of opening a new or existing map or use the standard methods below.



3. Open an existing map
  - a. Click the folder icon or the file dropdown list

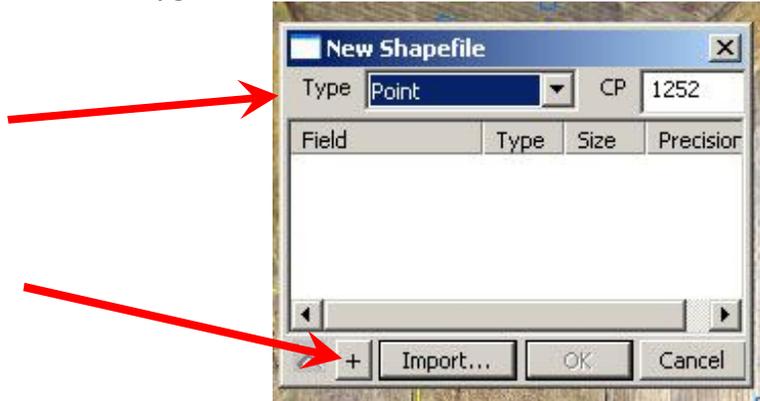


- b. Navigate to the file you want to open and open it. You can also use file explorer on the start menu and find the \*.apm file and double tap it to open it in ArcPad.
4. Or start a new map.
  - a. A blank map is created when you open the program or by clicking the new map icon  in the folder>New drop down menu.
5. Add Data
  - a. Add layers to your map by clicking the add data button 
    - i. Navigate to the location of the data
    - ii. If the data does not appear in the layers list you may have to navigate to a different folder by clicking the folder icon to get the full directory.
    - iii. Check the layers you want to add and hit OK

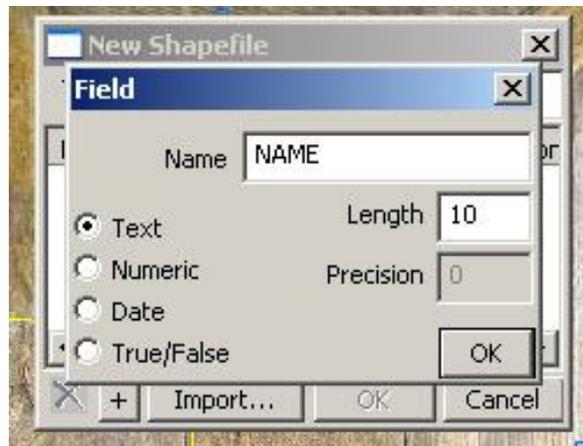


- b. Create a new layer by clicking the new shapefile layer button in the folder>New drop down menu 

- i. Under type choose what type of layer you are creating (Point, PolyLine or Polygon)

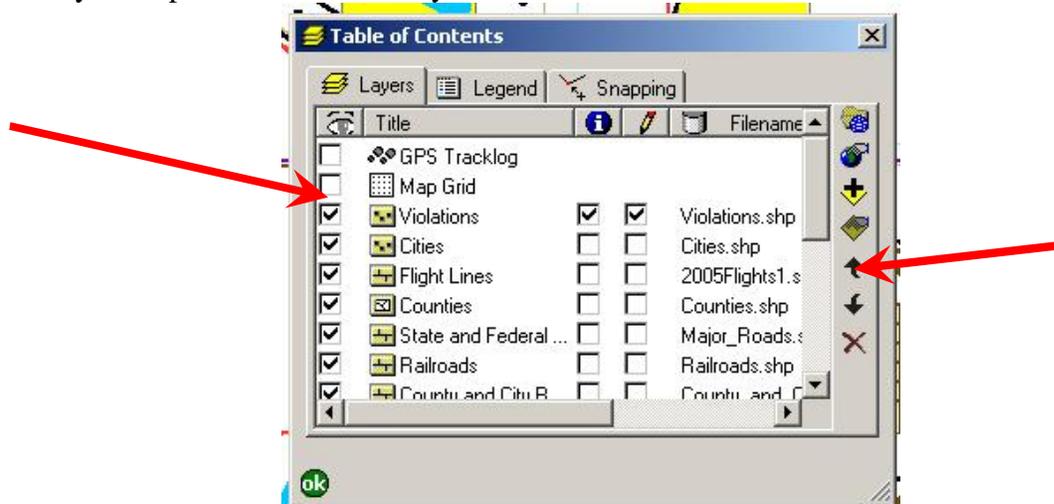


- ii. Click the + button to add at least one field. A field is a column in the attribute table and is used to add a description for the data points you collect.
- iii. Give the field a name, choose the maximum number of characters you can type (length) and choose data type (text, number etc.) Default values are fine if desired.

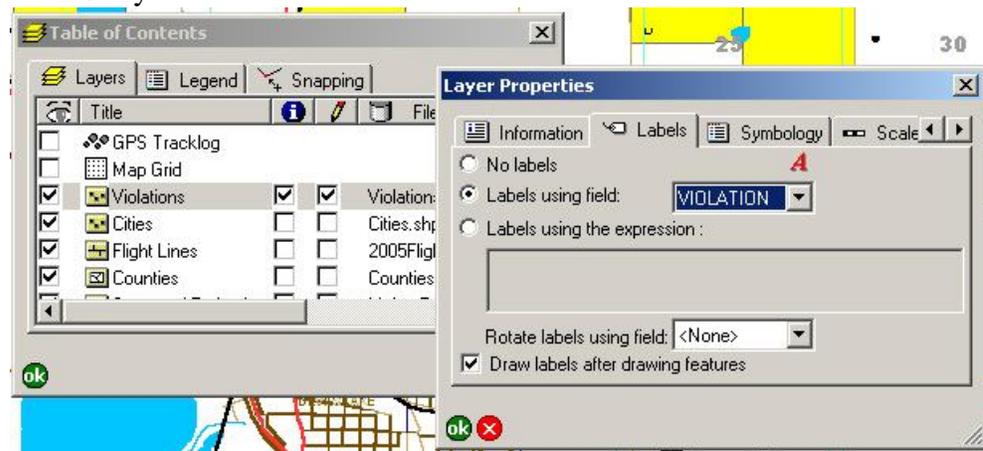


- iv. Hit OK and OK again
- v. Choose where you want to save the data. On the Trimble units store all data on the "Disk" not in the main memory. Also preferably store in the "My Documents" folder on the "Disk". On the new 2006 version of the Trimble there is no "Disk" option. In this case the My Documents folder is the disk.

6. Layer Properties – Click the layers button 

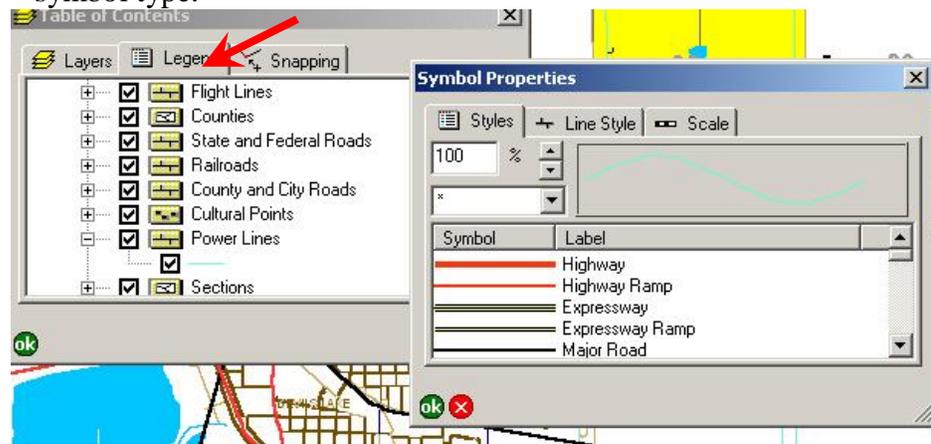


- a. Turn visible layers on or off
  - i. Check or uncheck the box in the left eye column
- b. Change layer order
  - i. Change which layer is on top of another by highlighting the layer and click the up or down arrows to change the order
- c. Identification
  - i. Change which layers will be identified with the identify tool  by check the box in the  column.
- d. Editing
  - i. Change which layer you will edit (collect gps points or polygons in) by checking the box in the editor column 
- e. Layer properties
  - i. Change options for labels or symbology by double tapping on the layer you want to change. Choose the appropriate tab for the task you want to modify



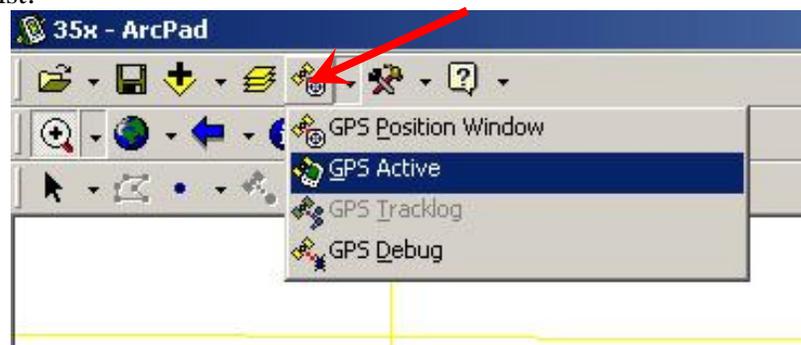
f. Legend Properties

- i. Symbology and layer properties can also be changed in the Legend tab. Expand the layer you want to change and click the symbol to edit the symbol type.

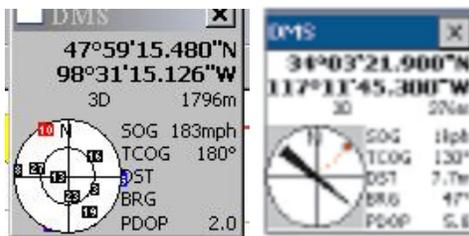


7. Activate the GPS in Arcpad

- a. Hit the GPS button  to activate the GPS or choose activate from the GPS drop down list.

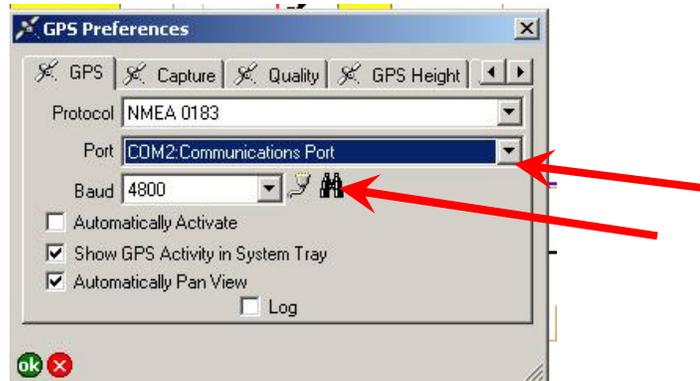


- b. GPS window shows speed and PDOP. Taping the window can change the view to a compass. This window can be close if desired.



- c. Cross hairs  show position
- d. Troubleshooting the GPS

- i. If the GPS controller (Step 1) has acquired a position but ArcPad can not find a position:
  1. Check GPS setting by taping the dropdown list next to the GPS button  and select the GPS Preferences button . Make sure for the Trimble unit that the COM port is set to COM2 and Baud is 4800. The protocol should be NMEA
  2. Using the Find button  may automatically detect the GPS in some cases.



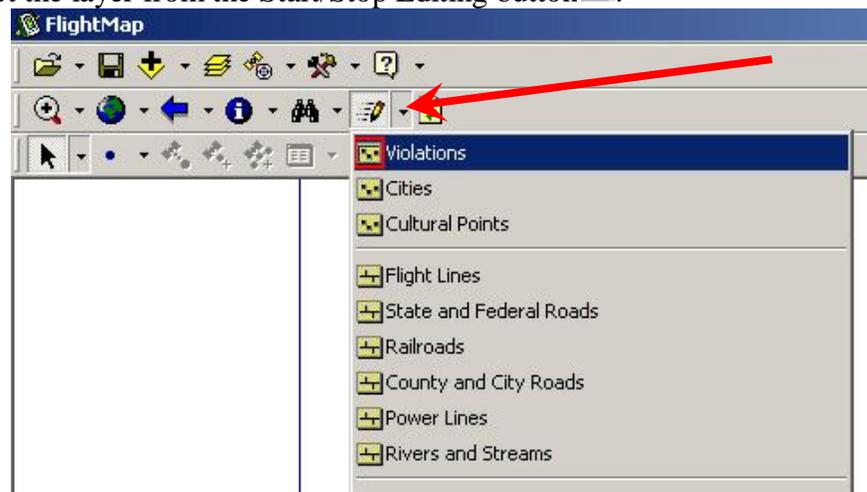
3. If the map was created in ArcGIS and exported but did not have a projection defined before exporting it, the GPS may not work. The best way to solve this in the field is to create a new blank ArcPad Map (Step 4), activate the GPS, then import the data layers you need (Step 5) and save it as a new map.

## 8. Navigation

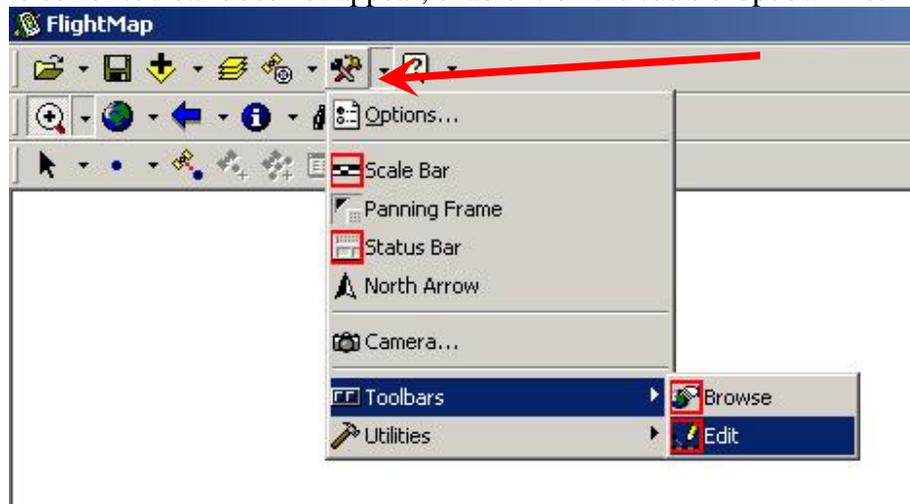
- a. Use navigation tools to zoom in , zoom out  or pan . These are available in the zoom drop down list
- b. The extent drop down list can also be used for other navigation options including “ Center on GPS” which will automatically track and pan the page as you move with the GPS.
- c. Automatic Map Rotation  can be turned on under the GPS  dropdown menu. This will orient the top of the map/screen to the direction of travel instead of always oriented north. This will improve orientation but may slow the refresh rate of the GPS unit if too many large files are loaded.

## 9. Editing / Collecting points.

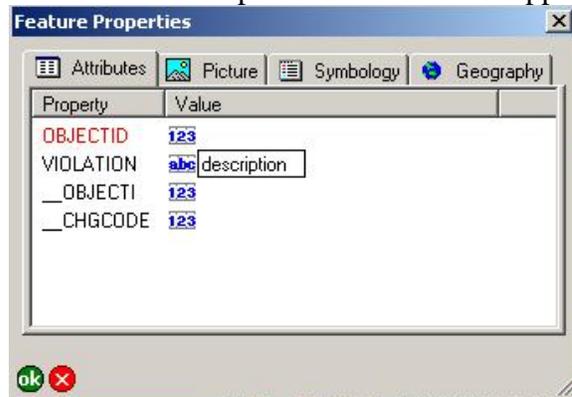
- a. The GPS must be on and position acquired before collecting points
- b. Choose the layer you want to add points or polygons to by checking the edit column  in the layers menu  next to the appropriate layer (Step 6). Or select the layer from the Start/Stop Editing button .



- c. If the editor toolbar does not appear, enable it on the tools dropdown list.

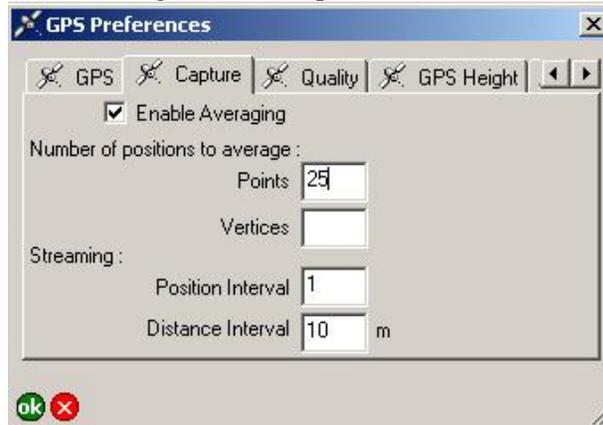


- d. To collect a manual point choose the point button  and tap on the screen where you want to place the point.
- e. To collect a GPS point choose the Capture GPS point button .
- f. Once a point is captured a “Feature Properties” window will appear



- i. Double or triple tap the “abc” to type a field description for the point and hit enter when done typing
- ii. If you don’t want a description just hit ok (NOT X to close or the point will not be taken!)
- g. If you are editing a polygon layer use the same methods as a point but choose polygon  on the editor toolbar and use the Add GPS Vertices button  to capture the vertices of the polygon. Use either the single vertex option or the streaming vertex option. Tap the green  Arrow on the bottom of the screen to finish the polygon.
- h. Feature field descriptions can be viewed or edited later by selecting the feature with the selection tool  and hit the feature properties button .
- i. Features can be deleted by selecting it with the selection tool  and hitting delete  on the feature properties drop down list.
- j. Uncheck the editing option  in the layers menu  to stop editing a layer and save the edits. Or tap the Start/Stop Editing Button .
- k. To improve accuracy of collecting GPS points, enable averaging of points.

- i. This will take multiple readings and average them to get a more accurate location.
- ii. The GPS must remain stationary while all points are taken
- iii. Tap the GPS Preferences button  under the GPS  dropdown list and select the capture tab.
- iv. For an accurate reading at least 25 points is recommended.

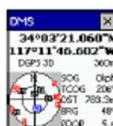


- v. When capturing averaged points a percent captured number will be visible in the feature properties box. Do not close that box until the percentage reached 100% or the point will not be saved.

10. To save the map tap the save button  or choose Save As  on the folder drop down menu.

11. Menu Key

### GPS POSITION WINDOW



**SATELLITE SKY PLOT**  
Shows the almanac of which satellites should be available.  
Black: available and used for calculating the GPS position  
Blue: available but not used  
Red: unavailable.  
Tap the Satellite Skyplot to display the Signal Chart.

#### GPS POSITION COORDINATES

Tap and hold the coordinate display to change the coordinate system:

- Map Projection
- DMS (dd°mm'ss.sss")
- DMM (ddd°mm.mmm")
- DD (dd.dddddd°)
- UTM (Universal Transverse Mercator)
- WGS84 DMS (ddd°mm'ss.sss")
- WGS84 DMM (ddd°mm.mmm")
- WGS84 DD (dd.dddddd°)
- MGRS (Military Grid Reference System)

#### GPS MODE

- NOFIX: no position
- 2D: x, y position
- 3D: x, y, z position
- DGPS 2D/3D: real-time Differential GPS
- RTK fix/float: Real Time Kinematic fixed or float solution
- PPS 2D/3D: Precise Positioning Service

#### ELEVATION

Tap and hold the elevation display to change units:  
Altitude (meters or feet)  
Depth (meters or feet)

#### NAVIGATION INFORMATION

- SOG: Speed Over Ground
- Tap and hold the COG display to change the reference:  
TCOG: True North Course Over Ground  
MCOG: Magnetic North Course Over Ground
- DST: Distance to destination
- BRG: Bearing to destination

#### POSITION MEASURE OF QUALITY

- Tap and hold the display to change the measure:
- PDOP: Position Dilution of Precision
- HDOP: Horizontal Dilution of Precision
- VDOP: Vertical Dilution of Precision
- TDOP: Time Dilution of Precision

- HPE: Estimated Horizontal Position Error
- VPE: Estimated Vertical Position Error
- EPE: Estimated Position Error
- SATS: Satellites used in solution
- DAGE: Differential data age
- DSID: Differential reference station ID



**SIGNAL CHART**  
Shows a bar chart of the relative signal strength of the satellites in the almanac. A red bar indicates the satellite is unavailable.  
Tap the Signal Chart to display the Compass.



**COMPASS**  
Shows the GPS direction with a black arrow and direction to destination in red.

### MAIN TOOLBAR

- Open Map** Open an ArcPad Map (a file with an .apn extension).
- Save Map** Save the current ArcPad map.
- Add Layer** Add one or more layers to the current map.
- Table of Contents** Open the Table of Contents dialog box.
- GPS Position Window** Open or close the GPS Position Window.
- Tools** Open the ArcPad Options dialog box.
- Quick Reference Help** Open the ArcPad Quick Reference.

#### OPEN MAP DROPDOWN LIST

- New** Display a sub-menu for creating a new map, shapefile, QuickForm, graphics layer, or photo layer.
- Open Map** Open an ArcPad Map (a file with an .apn extension).
- Save Map** Save the current ArcPad map.

- Clear Rotation** Clears the map rotation so that the map is "north up".

#### TOOLS DROPDOWN LIST

- Options** Open the ArcPad Options dialog box.
- Scale Bar** Display or hide the scale bar.
- Panning Frame** Display or hide the map panning frame.
- Status Bar** Display or hide the status bar.
- North Arrow** Display or hide the north arrow in the map view.
- Camera** Open the camera tool.
- Toolbars** Display a sub-menu containing all the toolbars in ArcPad.
- Utilities** Display a sub-menu containing utility tools.

#### UTILITIES DROPDOWN LIST

- Pack Shapefile** Pack a shapefile by removing records flagged for deletion.
- Reproject Shapefile** Reproject a shapefile to another projection and/or datum.
- Export Projection Information** Export ArcPad's projection information into CSV and text files.
- Run Script** Open the Script dialog box.

#### HELP DROPDOWN LIST

- Quick Reference Help** Open the ArcPad Quick Reference.
- User Guide** Open the User ArcPad guide (PC only).
- Reference Guide** Open the ArcPad Reference Guide (PC only).
- ESRI Support Center** Go to the [support.esri.com](http://support.esri.com) website, using the default Internet browser.
- About ArcPad** Open the About ArcPad dialog box.
- About Extension** Display a sub-menu listing all loaded ArcPad extensions.

### BROWSE TOOLBAR

- Zoom In** Zoom in on map using the pen.
- Zoom to Full Extent** Zoom to the full extent of the map.

- Go Back to Previous Extent** Zoom back to the previous extent you were using.
- Identify** Activate the Identify tool.
- Find** Open the Find tool.
- Start/Stop Editing** Display a sub-menu containing all the editable layers in the ArcPad map. Tapping a layer toggles its editing state.
- Refresh** Redraw the map.

#### ZOOM IN DROPDOWN LIST

- Zoom In** Zoom in on map using the pen.
- Zoom Out** Zoom out on map using the pen.
- Pan** Pan the map using the pen.
- Rotate Map** Set the map rotation angle.

#### ZOOM FULL EXTENT DROPDOWN LIST

- Fixed Zoom In** Zoom in on the center of the map by 25%.
- Fixed Zoom Out** Zoom out on the center of the map by 25%.
- Zoom To Selected** Zoom to the extent of the selected feature.
- Center on GPS** Center the map on the current GPS position.
- Zoom to Full Extent** Zoom to the full extent of the map.
- Zoom to Layer** Zoom to the extent of a particular layer in the map.

#### GO BACK TO PREVIOUS EXTENT DROPDOWN LIST

- Go Back to Previous Extent** Zoom back to the previous extent you were using.
- Go to Next Extent** Zoom forward to the next extent in the extent history.
- Create Bookmark** Create a spatial bookmark
- Zoom to Bookmark** Zoom to an existing spatial bookmark.

#### IDENTIFY DROPDOWN LIST

- Identify** Activate the Identify tool.
- Measure** Measure distances in the map view in "point mode".

- Save Map As** Save the current ArcPad map with a new name and/or in a different folder.
- Map Properties** Open the Map Properties dialog box.
- Recent Maps** Display the nine most recently opened maps.
- Recent Layers** Display the nine most recently added layers.
- Exit** Close ArcPad.

#### NEW SUB-MENU

- Map** Close the current map and create a new map.
- Shapefile** Create a new shapefile and load it into the current map.
- QuickForm** Create a custom form for an existing shapefile.
- Graphics Layer** Create a new graphics layer and load it into the current map.
- Photo Layer** Create a new photo layer and load it into the current map.

#### ADD LAYER DROPDOWN LIST

- Add Layer** Add one or more layers to the current map.
- Add Internet Server** Add an ArcIMS Image service as a layer to the current map.
- Geography Network** Go to the [www.geographynetwork.com](http://www.geographynetwork.com) website, using the default Internet browser.

#### GPS POSITION WINDOW DROPDOWN LIST

- GPS Position Window** Open or close the GPS Position Window.
- GPS Active** Activate or deactivate the GPS.
- GPS Tracking** Start or stop storing GPS points in the tracking shapefile.
- Rangefinder Active** Activate or deactivate the Rangefinder.
- GPS Preferences** Open the GPS Preferences dialog box.
- Rangefinder Preferences** Open the Rangefinder Preferences dialog box.
- GPS/Rangefinder Debug** Open or close the GPS and Rangefinder Debug window.
- Automatic Map Rotation** Automatically rotates the map to "course up" when the GPS is active.

- Radial Measure** Measure radial distances in the map view using the pen.
- Freehand Measure** Measure distances in the map view in "freehand mode".
- Hyperlink** Activate the Hyperlink tool.
- Go To** Activate the Go To tool.
- Advanced Select** Activate the Advanced Select tool.

#### FIND DROPDOWN LIST

- Find Features** Open the Find tool.
- Clear Selected Feature** Unselect the selected feature.

#### START/STOP EDITING DROPDOWN LIST

- Point Features Target Layers** Display the editable point feature layers.
- Line Features Target Layers** Display the editable line feature layers.
- Polygon Features Target Layers** Display the editable polygon feature layers.
- Multi-Features Target Layers** Display the editable layers which support multiple feature types.

### EDIT TOOLBAR

- Select** Activate the Select tool.
- Point** Activate the point feature type for data capture.
- Capture Point using GPS** Capture a point feature in the editable point layer using the current GPS position.
- Add GPS Vertex** Capture a single vertex in the current polyline or polygon feature using the current GPS position.
- Add GPS Vertices Continuously** Continuously capture vertices in the current polyline or polygon feature using the current GPS position.
- Feature Properties** Open the Feature Properties dialog box (or custom edit form) for the selected feature.
- Offset Point** Activate offsets for point data capture.

#### SELECT DROPDOWN LIST

- Select** Activate the Select tool.

	<b>Select and Vertex Editing</b>	Activate the Select and Vertex Editing tool.
	<b>Select at GPS Position</b>	Select the feature at the current GPS position.
	<b>Center on Selected Feature</b>	Center the map on the selected feature without changing the current map scale.
	<b>Zoom to Selected Feature</b>	Zoom to the selected feature.
	<b>Go To Selected Feature</b>	Set the selected feature to be the current destination for navigation.
	<b>Clear Selected Feature</b>	Unselect the selected feature.

#### POINT DROPDOWN LIST

	<b>Point</b>	Activate the point feature type for data capture.
	<b>Line</b>	Capture a straight line feature using the pen.
	<b>Polyline</b>	Activate the polyline feature type for data capture and start a new line feature.
	<b>Freehand Line</b>	Capture a freehand line feature using the pen.
	<b>Rectangle</b>	Capture a rectangle polygon feature using the pen.
	<b>Polygon</b>	Activate the polygon feature type for data capture and start a new polygon feature.
	<b>Ellipse</b>	Capture an ellipse polygon feature using the pen.
	<b>Circle</b>	Capture a circle polygon feature using the pen.
	<b>Freehand Polygon</b>	Capture a freehand polygon feature using the pen.
	<b>Text Point</b>	Capture a text feature relative to a point, using the pen.
	<b>Text Line</b>	Capture a text feature relative to a line, using the pen.
	<b>Text Polygon</b>	Capture a text feature relative to a polygon, using the pen.
	<b>Text Rectangle</b>	Capture a text feature relative to a rectangle, using the pen.
	<b>Text Ellipse</b>	Capture a text feature relative to an ellipse, using the pen.

#### FEATURE PROPERTIES DROPDOWN LIST

	<b>Feature Properties</b>	Open the Feature Properties dialog box (or custom edit form) for the selected feature.
	<b>Insert Vertices</b>	Insert new vertices to the selected polyline or polygon.
	<b>Append Vertices</b>	Add new vertices to the end, or tail, of the selected polyline.
	<b>Move Feature</b>	Move the selected feature.
	<b>Rotate Feature</b>	Rotate the selected polyline or polygon feature.
	<b>Scale Feature</b>	Change the size of the selected polyline or polygon feature, relative to the original size.
	<b>Resize Feature</b>	Change the size of the selected polyline or polygon feature.
	<b>Delete Feature</b>	Delete the selected feature.

#### OFFSET POLYLINE/POLYGON DROPDOWN LIST

	<b>Offset Point</b>	Activate offsets for point data capture.
	<b>Offset Polyline/Polygon</b>	Activate left or right offsets for polyline or polygon data capture.
	<b>Linear Traverse</b>	Activate the linear traverse mode for capturing a new polyline or polygon feature.
	<b>Radial Traverse</b>	Activate the radial traverse mode for capturing a new polyline or polygon feature.
	<b>Set Reference Point A</b>	Set a reference point, A, for capturing a single point offset.
	<b>Set Reference Point B</b>	Set a second reference point, B, for capturing a two point offset.
	<b>Segment Polyline</b>	Activate adding new polylines which start at the end of the selected polyline.
	<b>Repeat Attributes</b>	Activate copying of attributes from the previous feature into the new feature.

#### COMMAND BAR

	<b>Lock</b>	Disables the ArcPad application from pen or mouse input.
	<b>Save Geometry Changes</b>	Save geometry changes to an existing feature.
	<b>Proceed to Attribute Capture</b>	End the geometry capture of a new feature and proceed to capturing the feature's attributes.
	<b>Undo</b>	Undo the last edit made to a feature.

	<b>Pen Toggle</b>	Enable or disable use of the pen for capturing new features.
	<b>Cancel</b>	Cancel edits to an existing feature's geometry, or cancel capture of a new feature.

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#### ArcPad Resources

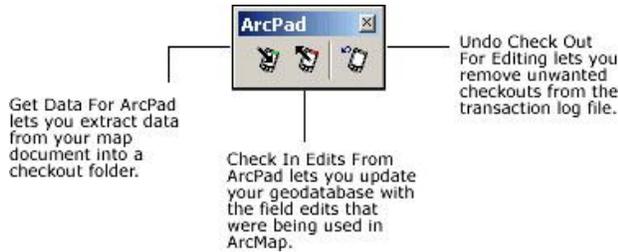
Visit [www.esri.com/arcpad](http://www.esri.com/arcpad) for:

- The latest information on ArcPad.
- Updates and downloads.
- Technical Support Knowledge Base.
- ArcPad Discussion Forum.

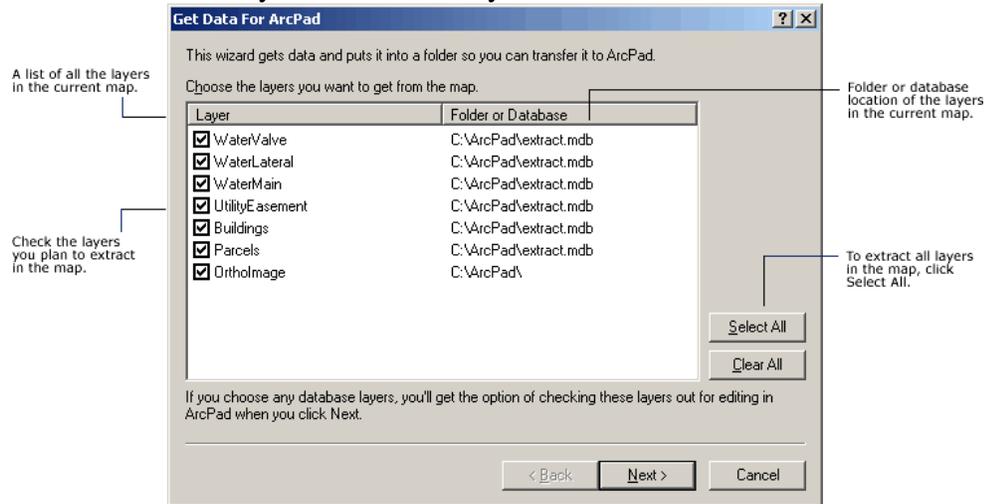


## Exporting ArcGIS Maps to ArcPad on a PDA or Trimble

1. You need:
  - a. A PDA or Trimble with ArcPad 6 or 7
  - b. Cradle connecting the PDA or Trimble to you PC
  - c. Microsoft Active Sync software
2. Turn on your PDA or GPS and place it in the cradle
3. Your PC should detect the unit and open Microsoft Active Sync. If not you will have to manually open the program.
4. Open ArcMap
  - a. Create a new map or open an existing map with the data you want to export to ArcPad.
    - i. The map **MUST HAVE A COORDINATE SYSTEM DEFINED** or it may cause problems in ArcPad.
  - b. Enable the ArcPad Toolbar available in the View > Toolbars Menu



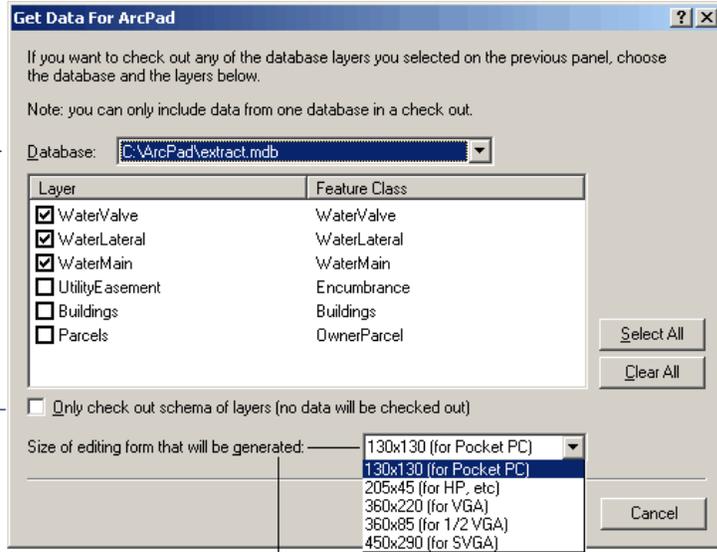
- c. Click the Get data for ArcPad button
- d. Check the boxes next to the layers you want to include in your map. Notice too many image files will make very large file sizes and may not work well on the mobile device so only choose the data you need.



- e. If your map contains geodatabase layers you will have an option of which parts of the database you want to export. If you are only dealing with shapefiles you do not need to worry about this.

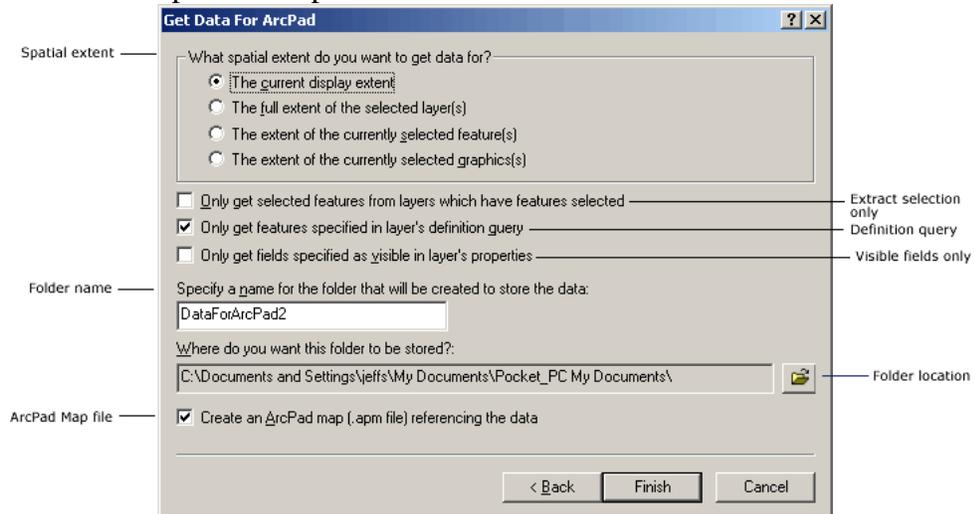
If your map contains layers from a geodatabase, this panel lists each of the databases. Select the geodatabase and corresponding feature layers that you want to update in ArcPad.

If you plan to collect new data in the field, you can extract just the schema of the layers you want to update by checking the schema option.



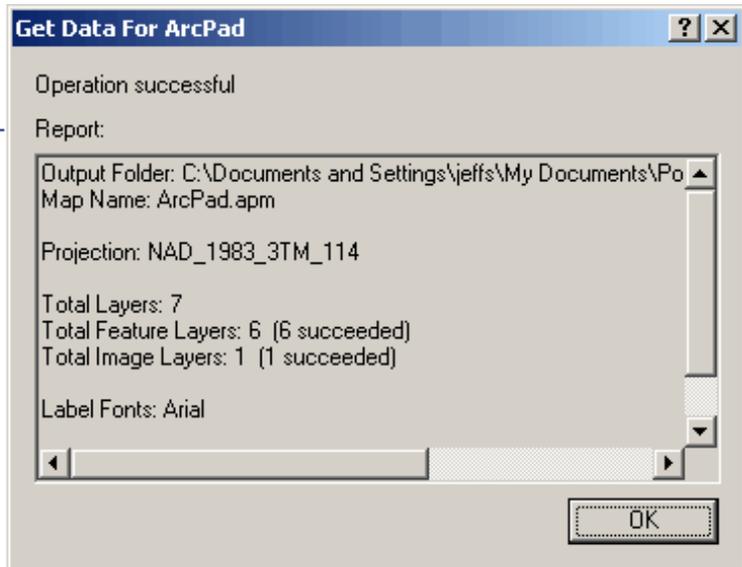
The size of the editing form that will be generated.

- f. Next define your output options.
  - i. For extent you may want to use the current display extent. This means only the data you see on your screen now in ArcMap will be exported to ArcPad. Everything else will be clipped off in the output file. This can be a good way to reduce the file size you are exporting. PDA,s and Trimble units have limited memory space.
  - ii. For most uses you can leave default settings for the feature and field options
  - iii. All the map data will be exported to a folder. You must specify a folder name and location. Make the folder name intuitive to the project such as "LakeAlice". To keep tract of data sent to each GPS unit in the DL WMD office set the folder location to G:/GPS/GPS Unit Name/
  - iv. Check the box for Create ArcPad map or only the data will be exported and you will have to create a map yourself in ArcPad.
  - v. Click Finish and wait. If there are large files it may take a minute or more to compile and export the data.

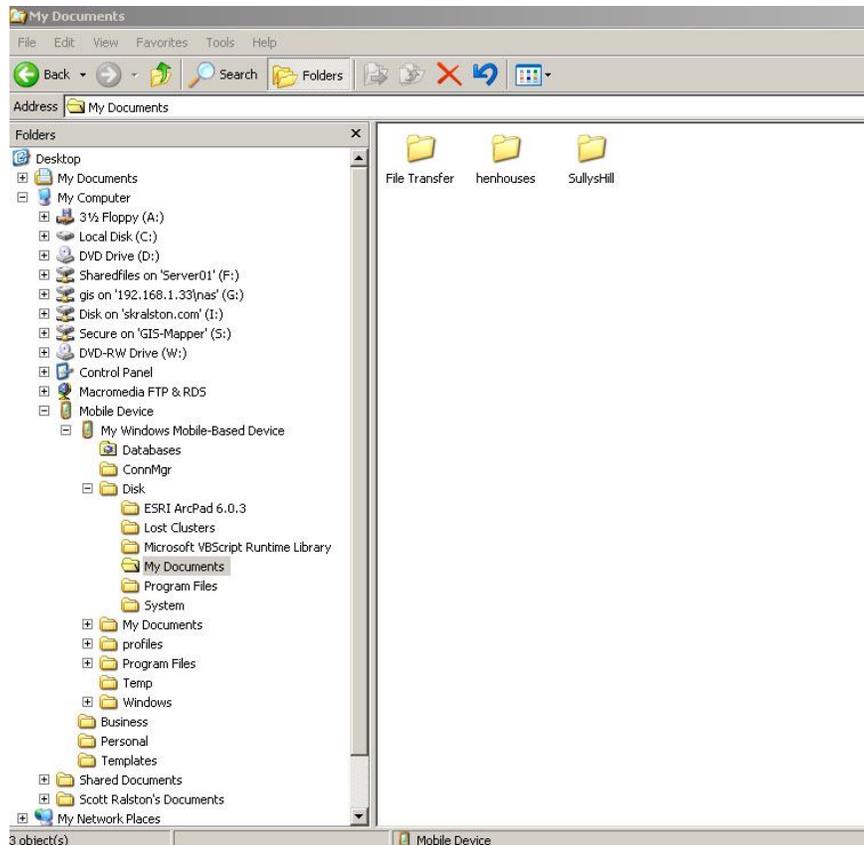


- g. Check the summary dialog box to make sure everything exported successfully.
  - i. If more than one layer has the same file name there may be a conflict and those layers will not export. You must rename one of the conflicting files and re-export it.

Summary that details a report of the extraction you completed.



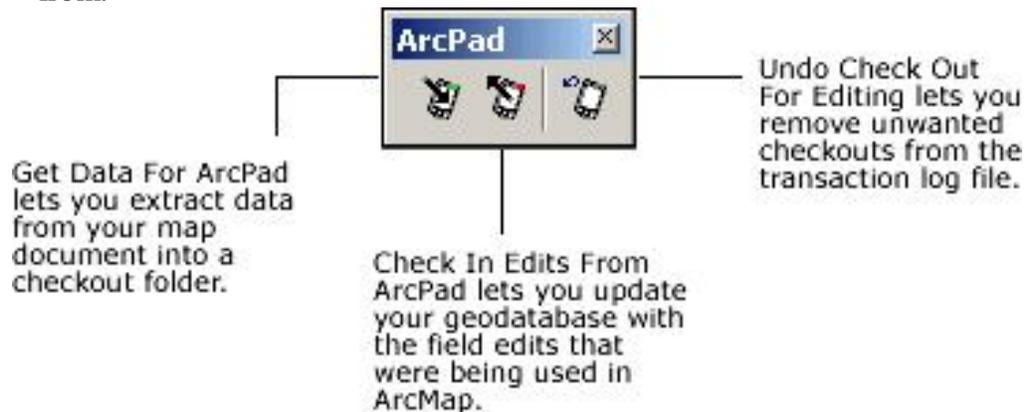
- 5. ArcPad 7 users may be automatically directed to transfer data to the mobile device. If so follow directions onscreen and see step 6c below for location to store the data when prompted. If you are not automatically prompted follow the steps below.
- 6. Open Windows Explorer to transfer the data to the Mobile Device.
  - a. Navigate to the location you saved the ArcPad folder (*G:/GPS/GPS Unit Name/ProjectName/*)
  - b. Right click on the folder and choose copy
  - c. Within “My Computer” navigate to the Mobile Device (GPS Unit or PDA) and find the location you want to store the data and hit paste.
    - i. On the Trimble units you want to store the files on the “Disk/My Documents”. Notice there is more than one My Documents folder so choose the one on the Disk.
    - ii. On a PDA such as the Garmin Ique you want to store the data on the SD card



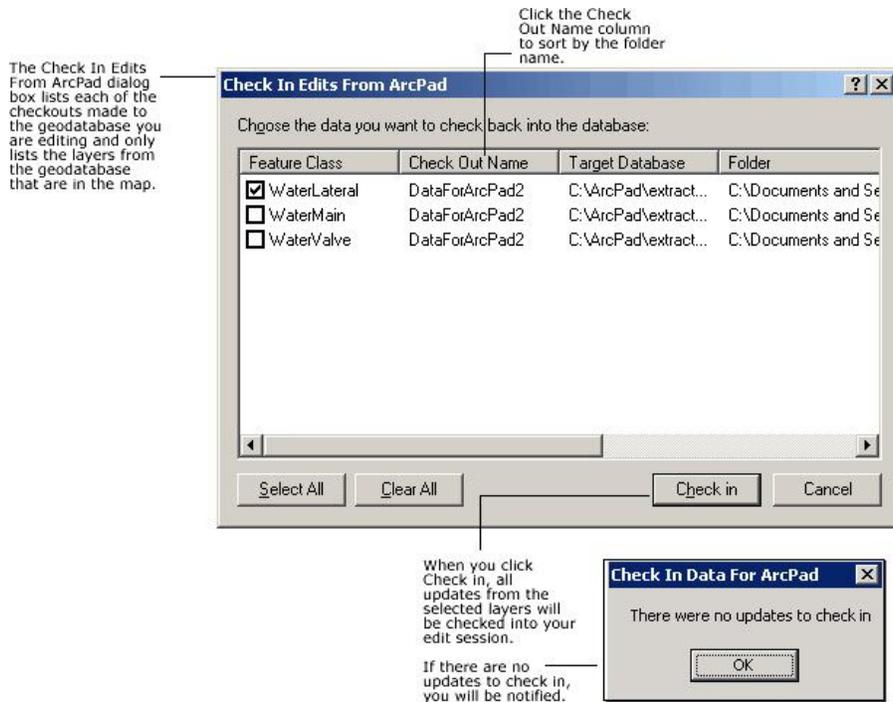
- d. Once you paste Microsoft Active Sync will take over and send the data to the mobile device. This may take time.
7. You may now use the open the map you created in ArcPad on your mobile GPS unit and collect data as needed.
8. It is **HIGHLY** recommended you open the map on the unit and check to see if all the data you need is there **BEFORE** leaving the office.

## Importing Data from ArcPad on a PDA or Trimble to ArcGIS

1. Check the Mobile GPS Unit
  - a. Save any, edits or changes you made to the map. Close ArcPad by choosing exit on the file menu. Do not just hit the X button as this only minimizes the program.
  - b. Keep the power on and place the unit in the cradle connected to your PC
  - c. Microsoft Active Sync should find the device and connect to it.
2. Open Windows Explorer
  - a. Navigate to the mobile device and the folder containing the data you collected (location as described in part 6c of the Lesson 8 on Exporting to ArcPad)
  - b. Select the whole folder or just the individual files you modified and choose copy.
  - c. Navigate to the original location on the computer where the files were stored such as *G:/GPS/GPS Unit Name/ProjectName/* and choose paste, overwriting the old files.
3. Open ArcMap
  - a. If the ArcPad map was not created and exported from ArcMap then save the desired layer to any location you wish and develop a new map as needed. If the data was exported to ArcPad as described above in the Export lesson, you must follow one of the following methods to import your data.
  - b. Open the original map you created before exporting.
  - c. If the data you exported came from an existing file, use the ArcPad toolbar “Check In” option.
  - d. To use this option you must be editing the original layer that the data came from.



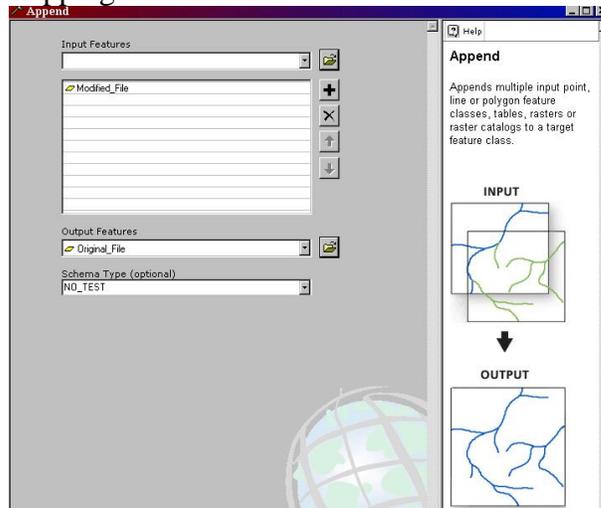
- i. Follow on-screen directions



- e. If the file was not checked out from an existing file or the check in option does not work you have a few options.
- i. If the file from ArcPad contains ALL original features from the original data layer as well as those you collected with the gps then delete the old shapefile and copy and paste the updated file in the desired storage location. Notice, If only part of the shapefile visible in the maps extent was exported, not all original features may be part of the exported file and you should use one of the following options.
  - ii. If the exported file contains features you collected from the GPS and SOME original features but does NOT contain ALL features from the original file you must copy new features to the existing shapefile.
    1. With the original file open in ArcMap, use the Add Data button to add the modified shapefile from *G:/GPS/GPS Unit Name/ProjectName/filename.shp* or wherever you downloaded to from your GPS or PDA.
    2. Start editing the GPS version of the shapefile (highlight it in the table of contents and hit the x-tools edit button ) , select all the new or changed features  , hit copy from the Edit menu. Switch to editing the original shapefile and choose paste from the Edit menu.
  - iii. If the GPS file contains ONLY new features and does not have any features from the original shapefile you can append the files together.
    1. With the original file open in ArcMap, use the Add Data button to add the modified shapefile from *G:/GPS/GPS Unit Name/ProjectName/filename.shp* or wherever you downloaded to from your GPS or PDA. Open the ArcToolbox  and use

Data Management>General>Append Tool to merge the new files into the old file.

2. This does work with files that contain some or all of the original files as well but it will produce two copies of overlapping features



4. When finished with the file on the GPS and done merging the data back to its original location, delete the files off the GPS unit and from the *G:/GPS/GPS Unit Name/ProjectName/* using windows explorer to avoid storage size limitations or file clutter for the next user.