HERITAGE DIGITAL TOOLKIT Users Guide

v102303

For 3900 and 5500 iPAQ series

Written by:

Kent A. Schneider

Drew Selig

Rodney Snedeker

For technical assistance, contact:

Kent A. Schneider, 678-427-7473, kaschneider@fs.fed.us

Drew Selig, 828-257-4209, dselig@fs.fed.us

Rodney Snedeker, 828-257-4255, rsnedeker@fs.fed.us

Velicia Bergstrom 318-473-7043, vbergstrom@fs.fed.us

Getting to Know your Heritage Digital Toolkit

Welcome to the world of Heritage mobile computing. The Users Guide will take you through each step you need to know to make your Heritage Digital Toolkit work successfully for you. The idea behind the "one box" Toolkit is simple: to get all the data typically collected during a survey into digital format and into one iPAQ "box" by the end of each survey day. The data can be then be uploaded from the field by cell phone to the user's home server or computer or uploaded by landline from office or alternate work place.

There are many innovative features of immediate use for conducting archeological survey and controlling the quality of your data. Among them is the ability to bring up a georeferenced .jpg of your survey area as a background image on your iPAQ. When you connect your GPS to your iPAQ, you will actually see your movements on the background image as you move across the ground. The time and cost savings of "one box" technology for archeology are enormous.

We recognize that our goal of mainstreaming the Heritage Digital Toolkit into the agency depends a lot on how easy it is for Users to make the Toolkit components work for them time after time with no interruptions. We figure we have one shot at making this work the very first time for you. Therefore, a visually loaded, plain language, easy to understand Users Guide is a critical component of the Toolkit. We believe the extent to which the Users Guide is intelligible or unintelligible to users will be the deciding factor in whether they go on to use the Kit or walk away from it. If you have problems following any part of this Guide, please make a note and pass them along to Drew Selig (<u>dselig@fs.fed.us</u>, 828-257-4209), Kent Schneider (<u>kaschneider@fs.fed.us</u>, 678-427-7473) or Rodney Snedeker (<u>rsnedeker@fs.fed.us</u>, 828-257-4255). Call us if you have immediate problems that you can not solve.

Heritage Digital Toolkit Components.

Your Heritage Digital Toolkit has the following physical components:

- 1. IPAQ 3955 (or higher) with Targus leather carrying case
- 2. Dual-Slot PC Card Expansion Pack with compact flash adapter
- 3. Kingtson 5.0 gb pc card type II hard drive
- 4. Trimble GPS Pathfinder Pocket GPS receiver
- 5. Connecting cable for GPS to iPAQ
- 6. Opti-Logic Laser Rangefinder
- 7. Seiko SmartPad for Pocket PC
- 8. Automobile adaptor to charge IPAQ
- 9. Pelican 1440 Case

Your Toolkit is shipped to you in one carton. Please check to make sure your carton contains:

- 1. IPAQ in its original unopened box
- 2. IPAQ leather carrying case
- 3. Opti-Logic Laser Rangefinder
- 4. Software and instructions and compact flash adapter
- 5. Pelican case

The ziplock bag contains the following items:

- 1. TerraSync software
- 2. SmartPad2 software
- 3. 3.5" floppy with archsite1.ddf file which is your GPS archeology data dictionary, and ArcView extension "geojpeg.avx" (see *Working Through the GPS Setups* below)
- 4. GPS Pathfinder Pocket Getting Started instructions
- 5. Dual-Slot PC Expansion Card instructions

Your Pelican case contains the GPS receiver, Dual-Slot PC Card Expansion pack, Kingston hard drive, and automobile adapter for charging your IPAQ when you are traveling. The software for the IPAQ is in the unopened IPAQ box. All other software is in the ziplock bag. If any items listed above is missing, please contact Drew or Kent.

Getting Started

Unpack your Toolkit components and lay them out on a table. Have your laptop or desktop computer a 2-3 feet away from the IPAQ cradle (it's in the IPAQ box, take it out and set it up but do not connect to your laptop or desktop until the IPAQ instructions tell you to do so).



No software has been loaded for two reasons. First, some of the software settings you will make when connecting your IPAQ to your computer will reside on your

computer so the two need to be "compatible". Second, you need to become familiar with the software on both the IPAQ and your computer in order to be successful in making the Heritage Digital Toolkit work for you. By installing the software yourself, you will gain a better understanding of connectivity and how the Kit components work. We have one caution at this point. Please make sure that your IPAQ, once it has been loaded with the software, stays connected to a power source, preferably from its cradle. If your IPAQ completely loses power, the software will be wiped out and you will have to reload all the software. The IPAQ battery is good for several days. However, we have discovered that electromagnetic energy from as-yet unknown sources may turn on your IPAQ without your knowledge.

A. Check the software on your laptop or desktop.

The first rule is you must have administrative privileges to load the software into your computer. If you do not have these privileges, get your network administrator to give you those rights and perhaps work with you throughout the software loading and testing process. The second rule is, make sure you have ArcView 3.2a and GPS Pathfinder Office 2.90 loaded and running. You must have these two programs to use your Heritage Digital Toolkit to its maximum power.

B. Loading Your Software.



Rule 1: make absolutely certain that you keep in a permanent place – a place that you can access quickly - the software keys (such as serial number, authorization number) for each software product. For example, the TerraSync Serial Number and Authorization Key are found on a tab glued to the CD case. Copy these numbers down and save them. If you have to reload any software you must have these numbers to make the software work.

Rule 2: always take copies of your software and key numbers with you when you are going to use the Kit in a field setting. Sometimes, inexplicably, software may become corrupted or disappear. Having your software available for load/reload will save you time and money.

Make sure your iPAQ is firmly seated in its cradle, the cradle is connected to your computer, and the iPAQ and computer are synced.

There are 3 sets of software (IPAQ, Terrasync, SmartPad) and 2 files (Archsite1 and ArcView extension "geojpeg.avx" on 3.5 floppy disk) you will need to load. The loading sequence is very important! Both Terrasync and SmartPadII want Com 1 but TerraSync must get there first. So load TerraSync before you load SmartPadII.

1. Load the IPAQ software first. Follow the Step by Step starter's guide.

2. Next, <u>load the Terrasync</u> software for your GPS unit. Follow the instructions closely since you will be loading to your laptop or desktop and your IPAQ.

3. Load the <u>SmartPad software</u>. Read the instructions, because you will be loading software into your IPAQ, that is connected to your laptop or desktop. We found loading the SmartPad software to be somewhat tricky. Do not load the software that comes in the box! Go to <u>http://www.siibusinessproducts.com/support/inklinksoft.html</u> and download version 3.2 (it's free). Version 3.2, which is required for 5400 series, gets the software installed quickly and it converts handwriting to text in case you want that option.

To load your software:

Visit the website above and download InkNote Manager 3.2 software

Put in your HARDWARE number without the -02 when requested

Put in your SOFTWARE key when requested. The SOFTWARE key number that you must have when requested during installation of 3.2 is: 4210502090121TS2

When you go to load the software, you will be asked for the HARDWARE serial number which is located underneath the pad of paper in the Smartpad case. You can not put in the entire number but the instructions don't tell you that. You can only put in a maximum of 8 numbers. So here's a tip. Our hardware S/N number on a label in our Smartpad is US01099716-02. Yours will be something like that. *Do not put in the -02*. Just enter the first 2 characters and 8 numbers. When you

enter it, another window comes up and asks you to CONFIRM the SOFTWARE number. That number is not printed anywhere, it's available only by a phone call to their technical services. But here it is: the universal software number is 4210502090121TS2.

To make the IPAQ see the Smartpad, the 3900 series requires the installation of a driver update that fixes the infrared communication problems for the IPAQ. This file update can be downloaded from Compaq at the following site. Follow the installation instructions. If you are asked to replace a .dll, click yes.

http://www.compaq.com/support/files/handheldiPAQ/us/download/15800.html .

Now that you have successfully loaded your iPAQ, pick it up; go to Start/Settings/Connection/Beam. In Beam, make sure the receiving box is **not** checked. Click OK and do a soft reset of your iPAQ. Now go to Start, Ink Note Manager, File (bottom line), About. Make sure you have version 3.2 or higher. Click OK in the box. You are still in InkNote Manager, so go to Setup/Select pen hardware and make sure Smartpad is **checked**. Click OK. Go to Setup/Tablet Properties and make sure the "Tablet active when checked" box is checked. Click OK. You should now be ready to write on your SmartPadII tablet.

General information about using Smartpad II can be found at

http://www.siibusinessproducts.com/support/index.html.

4. Load the Archsite1.ddf file from your 3.5" floppy into your iPAQ. This file serves as your data dictionary when you are collecting GPS and other data during your field survey. In addition to your GPS data, you can tag your photographs and field notes to your field positions. To load the file, make sure your iPAQ and laptop/desktop are synced. Insert the floppy disk into your laptop/desktop. Open two Windows Explorers and point one on the 3.5" floppy. Point the other Windows Explorer to mobile device...terrasync. Copy the file archsite1.ddf from the floppy to the mobile device...terrasync directory.

 Load the extension geojpeg.avx into your laptop or desktop computer directory at C:/fsapps/esri/av_gis30/ArcView/ext32/. This file captures the screen image you make of your project area in ArcView and let's you put it into your iPAQ as a georeferenced .jpg.

Checking the Status of your iPAQ

Let's begin by checking the programs on your IPAQ. While it is in its cradle and synced with your laptop/desktop, remove the pointer from its pouch on the top of the IPAQ and touch "Start" at the top left of the IPAQ screen. Make sure you see "InkNote Manager" in the list of files. Next, with this screen open touch "Programs". Make sure you see "TerraSync" in the list of programs. Click the "X" on the top right of the screen to exit.

Now let's check your power settings. Touch "Start" in the upper left corner, then "Settings" at the bottom, then "System", then double-touch "Power". Here you will see the information on your main battery and on the battery of any peripherals you may have attached to your IPAQ. For example, slide on your Expansion pack and note its battery power. If low, let it fully charge. Keep your IPAQ and its peripherals, such as your yellow GPS unit, fully charged.

Working Through the GPS Setups

To help you understand how to create and use georeferenced .jpgs and work your way through the menus, we have prepared the following Setups for you to use. Try them and let us know any problems you encounter.

CAUTION: You must copy ArcView extension "geojpeg.avx" from floppy to C:/fsapps/esri/av_gis30/ArcView/ext32/ in order to make georeferenced .jpgs

1. To Make a Background DRG (digital raster graphic, such as a quad) or a DOQ (digital orthoquad) from MRSID or JPG on Lap/Desktop

AV 3.2 File

Extension

Click on MRSID Click on JPEG (JIF) Image Support Click on TIF 6.0 Image Support Click on Export GeoJPG

OK

New

Add Theme or click (+ icon)

Data Source Type: change to Image Data Source

Change drive to source where DOQ or DRG is located

Double click to bring up DOQ or DRG .sid .tif or .jpg file

Check the box next to the image in the left pane to turn it on

Zoom to selected project area

Go to Pathfinder Office

In Select Project

click New

name your project (note the directory is pfdata)

Go to AV 3.2

Click Export to GeoJPEG button on button bar to right of help arrow

In Image Quality, select 100

In Export box, change directory to C:\pfdata\...your project name

OK

Export Complete

OK

Go to Pathfinder Office

Options

Coordinate System

Set System, Zone, Datum to match your JPEG

Set Coordinate Units to meters (UTM doesn't use feet)

OK

File

Background

In "Load Background Files" click Add

In "Add Background Files" select your project name from "Look in" in

Pfdata directory

Double click your JPEG

Your file is now in "Load Background Files", make sure it's

checked

OK

View

Map

Layers

Check your JPEG box if it is not already checked

OK

2. To put Georeferenced JPEG on IPAQ

after you have set the Coordinate System under Options above

Utilities

Data Transfer

Change Device to GIS data logger on Windows CE

Click Send

Click Add, then Background

Check box to select Background Files to Transfer

Click OK

Click file to highlight

Click Transfer All

Click Close

3. To put collected data onto background map in IPAQ

Terrasync

Status

Data

New

Existing File

Select your file

Open

Choose your feature

Data

Мар

Layers

Background File

Background

Select your .jpg or .bmp

OK

To bring up a different file from the current one you're looking at:

Data

•

Close

Select another file

4. To View GPS Data on Laptop in Pfinder Office

Get data from IPAQ to Laptop

Pfinder Office on Laptop

Utilities

Data Transfer

Add

Data File

Click files you want to transfer OR transfer all highlighted

files

Open

Transfer All

Close

File

Background

Check box with your background jpg

OK

View

Open

Select a file (see highlighted files which are the ones just transferred or select a .ssf or .cor)

Open

View

Мар

Click on Feature Properties icon

Click on Position Properties icon

To unselect background

File

Background

Uncheck .jpg of background image

View

5. To View GPS Data on Laptop in ArcView

Get data from IPAQ to Laptop

Pfinder Office on Laptop

Utilities

Data Transfer

Add

Data File

Click files you want to transfer OR transfer all highlighted

files

Open

Transfer All

Close

Get GPS data into SHAPEFILES

Pfinder Office on Laptop

Utilities

Export

Select your rover files (.ssf)

Select Output Folder (defaults to the one you're in)

In "Choose an Export Setup" select "Sample ArcView Shapefile setup"

Open ARCVIEW

New (brings up View 1)

File

Extensions

Check box JPG (JFIF) Image Support box

OK

Add Theme

Set Data Source Type to Feature Data Source

Go to

C:\pfdata\...get your GPS file(s)

Click to make active

Set Data Source Type to Image Data Source

Go to

C:\pfdata\...get your .jpg map

Move .jpg map beneath .shp files, click to turn on

In your View, make sure the background .JPEG is on the bottom and the

shape file(s) are above it.

6. To Differentially Correct GPS file on Laptop

Utilities

Differentially correct

Click on Rover (SSF) file you want to correct

Click Internet Search

Pick closest base station

OK

Continue

Yes

Ok

Close

File

Open (automatically highlights cor file

Open

File

Background

Click on Pfdata \ldots ...ssf

Click on your jpg of background image

Ok

View

Map

Technical notes

When creating a background DOQ or DRG, make certain that your System, Zone and Datum are correct and that your Coordinate Units, if you are using UTM, is set to meters. There are 4 coordinate systems: UTM 27, UTM 83, State Plane 27, State Plane 83. Only State Plane is in feet. If you do not get an image on your IPAQ, the likely reason is you have not correctly set your coordinate units.

Field Deployment

Now that you have successfully created an image on your IPAQ, let's hook up your mobile computing Kit and try it out. We recommend you develop and test your skills in a test area near your office.

1. *Collecting GPS Data with Your iPAQ*. Make and load a new georeferenced image of your test area into your iPAQ. Your GIS administrator likely has a DOQ or DRG of your test area. If not, you can log onto <u>www.geocomm.com</u> (select "GIS DATA" tab) and get what you need. Make sure your yellow GPS signal processor is fully charged.

Coordinate System	OK	Cancel
Select By:	Coordinate Syst	tern and Zone
System:	UTM	*
Zone:	11	North 👻
Datum: NAD 1	927 (Conus)	-
Altitude Reference	e:	
F	Height Above Ellipsoid ((HAE) 👻
Altitude Units:	Meters	+
Coordinate Units	Meters	•
Display USNG:	O	fí 🗸
	L.	

Here is an example of Coordinate System settings. We loaded a georeferenced jpg of the San Dimas Technology and Development Center area into our iPAQ. The coordinate information in the

Terrasync/Setup/Coordinate System menu is:

System:	UTM	
Zone	11 North	
Datum:	NAD 1927 (Conus)	
Altitude Units	HAE	
Coordinate Units	Meters	
Display USNG	Off	

Go outdoors to your near test area, put on the hat with the antenna nested in it, and connect the GPS to the iPAQ's bottom port. Put the yellow processor in your pocket. Turn on the iPAQ. Tap Start/Programs/ and tap Terrasync. On the top left of the screen, tap Status/Setup. If the keyboard screen appears at any time and it is in your way, click the X in the lower right hand corner to minimize it. Tap Coordinate System. Here is where you enter the coordinate system, zone, datum, and coordinate units for your

georeferenced jpeg. You must have this information correctly entered in order to make the GPS work for you.

Once your coordinate system has been set up, tap GPS in the upper right box to turn on the GPS. Allow the unit to establish an Almanac (it will say so). Then, tap Setup in the upper left hand corner, then Data. Tap the dropbox in Dictionary Name, then tap Arcsite1/Create. Tap Site point, then Create. Look at the top message bar. You will see a satellite icon, a battery icon, and a pencil icon next to which are numbers that increment meaning you are collecting GPS data. Note the word "Pause" in upper right of the screen. If you tap the word "Pause" you will see "Resume". This menu works in reverse logic meaning when it's in Pause you are collecting data and when it's in "Resume" you have temporarily stopped collecting data. Tap "Pause" and note that the unit stops logging data. Tap "Resume" to show "Pause" and logging (data collection) starts again.

Collect 90 points.

While it is collecting, fill out the menu. Turn on the keyboard if it's not already up by tapping the keyboard icon at the bottom bar and type in your FS#, component, Recorded by, leave subsurface test blank, Photo, and sketch blank for now.

While it is still collecting, tap the dropdown arrow next to "Data" in the upper left corner and select Map. You will now see your georeferenced map with your exact position displayed by a flashing "x". Before you reach 90 points, tap the dropdown arrow next to "Map" and select "Data". When you reach 90 points, tap OK, which returns you to the Arview1 menu.

You have successfully logged a site point.

Now tap Site Area, tap "create" and immediately tap Pause to suspend GPS data collection while you fill in the FS# and other data. You want to stop the GPS unit from collecting data because you want to log the area while you are moving, not while you are standing still typing in the site information. When you are ready to walk over the boundary of your Site area, tap "Pause" to return to "resume" and immediately begin walking. While walking you can tap Data and tap Map to watch your position change as you log your site area. You may wish to collect additional points and areas to enhance your GPS collecting skills. When done, tap the "X" in the upper left hand corner and you will see the message "Are you sure you want to close the file and exit the application?" Tap "yes" which closes this file. Note that you have automatically exited "Terrasync" and returned to the main iPAQ menu. To check your iPAQ battery power, tap the flag icon in the upper left corner; tap Settings/System/Power in the lower left corner. If you are finished collecting GPS data, disconnect the GPS cable.

Congratulations. You have successfully logged a site point and a site area and stored the information in the iPAQ. To download and view your data on your lap/desktop, follow the instructions above in *Working Through the GPS Setups, 4. To View GPS Data on Laptop in Pfinder Office*.

2. *Working with SmartPad II*. This remarkable tool allows you to record your field notes and site sketches in your hard-copy field book while capturing what you write digitally as .INK files. These are not editable, but can be converted to .jpg, bmp, or .png (portable network graphics) files. Using Velcro, you can affix your field/transit book to the writing pad area to record your records. The SmartPadII pen is the digitizer and should be handled with care. There are 2 spare ink cartridges in a pouch on the left lower corner of the book. A single AAAA battery runs the pen. Replacements can be purchased at Radio Shack.

Open your SmartPadII book and place your iPAQ in its proper location on the left hand side of the book and position your field notebook to the right. For practice, you may wish to use the notepad that comes with SmartPadII and affix your field notebook later. On your iPAQ tap Start/InkNote Manager. Your iPAQ screen displays a split window with the word "Categories" in the top half and "Note name, size, Create date" beneath it. Remove the cap from your SmartPadII pen. You have two choices. If you start writing on the note pad, SmartPadII automatically changes screen to a lined page capturing your pen actions. Or you can tap File/New and a lined page pops up ready for your use. The "ink" color can be changed in Tools/Writing properties as can line width. In Tools/ you can zoom. In Edit, you can undo strokes, delete and insert pages. When you have finished writing your notes and sketches, go to File/ and save as .INK or export them as .jpg, .bmp, or .prn files. Exporting files in any of these formats takes you to the Save As option, where you can name the file, select its folder, and location. Retrieving your notes and sketches saved in your iPAQ is a simple operation. Sync your iPAQ with your laptop/desktop. In Windows 2000, go to My Computer/Mobile Device/Seiko Ink Notes and copy and paste the files to your working directory. If you are not going to use them anymore on your iPAQ, delete them to save space.

3. Working with your Opti-Logic Rangefinder. The range finder is introduced to you to save you countless hours of pulling tape and to help make your line of sight distance measurements accurate up to 548 meters. It is powered by a standard 9-volt battery good for about 1000 shots. The instructions are easily understandable. Your unit is programmable from feet to meters (some units are feet-meters-yards) which makes it useful for both historic and prehistoric archeological site work. Press and hold down the Range button until the screen blanks, then quickly press again. Note the mode changes from feet to meters to feet. Select the mode you need.

To operate, hold the rangefinder an inch or so from your eye and aim at an object through the viewfinder. Press and hold the range button on top. Place the red dot that appears on the target. Release the button and hold the red dot on the target momentarily. The laser does not fire until the button is released. Read the distance after the red dot disappears.

Case Study

You are going out to survey the West Opi timber sale. Your mobile computing Kit is set to go. Last night you charged the batteries in the GPS unit and the iPAQ. Now you're reviewing your check-out list to make sure you are taking all the needed components with you:

iPAQ and cabling including cigarette lighter adapter SmartPadII Field notebook Opti-Logic rangefinder

You have preloaded a geojpg of the West Opi timber sale area and made it large enough for you to GPS your drive into the sale area along logging roads so you will know where you are on the ground when you do your survey. You wrote down the coordinate system in the project file folder you created for the job so that should you wish to return and do more GPS at the site, you won't have a problem remembering the coordinate system setups. Based on your map review and background research, you have also familiarized yourself with the area using topographical maps and have decided to walk and shovel test the ridges and benches since the project area is mountainous.

Your first step is to log your survey starting point with your GPS. You walked to the point where you will begin your survey. You connected your GPS plug to the iPAQ, turned on the iPAQ and went to Start/Programs/TerraSync/Status/Setup/Coordinate System to double check your settings: System=UTM; Zone=18 North; Datum=NAD

1983 (Conus); Altitude Reference=Height Above Elipsois (HAE); Altitude Units=Meters; Coordinate Units=Meters; Display USNG=Off.

Next, you clicked the GPS tab in the screen's upper right corner to initiate communication with satellites. After a few moments, you saw Almanac Received and the number of satellites with which you are making contact appeared beside the icon which pulses showing you that connection has been made. You had contact with 5 satellites so you were good to go. Then you went to the Setup tab in the upper left corner and clicked on Data. In the Dictionary Name box you arrowed down to ArchSite1 and clicked Create, then clicked Site Point and Create. You noted that the moment you clicked Create, a pencil-shaped icon appeared telling you that GPS data was being collected. You typed in the FS# and in Component you typed in "survey start point" and your name in the Recorded by box. You collected 90 points standing still because you knew if you changed your position on the ground that your "point" data would be changed.

You paused the unit at 90 points by touching Pause, and then you clicked Line and Create, and immediately clicked Pause again because you were not quite ready to walk your first transect and you didn't want the GPS recording any data while you were not moving. You filled out the boxes. In the Number box, you put "Line 1 Ridge 1" per your predetermined survey pattern and entered other important information into the remaining boxes. You decided to change the logging interval from 5 seconds to 1 second for your transect surveys so while in the same directory you went to Options, then Logging Interval and changed to 1s by tapping the down arrow and clicking on it. You

27

clicked OK, then clicked Resume, and began walking Transect 1. While walking you tapped Data in upper left corner of the iPAQ screen and touched Map so you could visually see where you were walking. You were careful to look now and then to make certain you were logging GPS data.

At 30 meters from your start point, you spotted a rock pile which you wanted to describe as a feature. You clicked Pause, put your iPAQ on the SmartPadII on the left and your field notebook on the right side of the SmartPad book, clicked Start (the flag at the bottom of the iPAQ screen), then clicked InkNote Manager, then File and New to bring up a new InkNote pad screen. Using the SmartPad II pen, you wrote your description of the rock pile. You used your Opti-Logic range finder to record distances between features of the rock pile. You clicked File, Save As and named your file and folder. You clicked your way out of InkNote Manager to return to your GPS transect line. You clicked Map, Data, and Resume, and continued walking to the end of your first line. You clicked OK and noted "Feature Stored". You moved to the next line, clicked Create and then Pause. You typed in Line 2 in the Number box and its direction in the Azimuth box, clicked Resume and continued to the end of the line. You completed 20 lines in this manner, turned off the GPS, and recorded your survey notes in InkNote Manager. You were done your field work for the day.



That afternoon you processed your data. You synced your iPAQ with your computer.

and typed in Opi Sale. You went into Coordinate System under Options and filled in the appropriate data (UTM, 17N, NAD 1927 (CONUS) and clicked OK. You went to File, Background/Add Background, and brought in the georeferenced .jpg you had made before you went into the field. You were careful to note the Coordinate System of Selected Files was *not* in the correct coordinate system for your survey so you clicked



it. Then you went to Utilities/Data Transfer and clicked Add/Data File, highlighted the data you collected today which are displayed by date, clicked Open and then Transfer All. The

Change and corrected

Receiving dialog box appeared and told you Transfer Complete when the data transfer was done. You clicked Close and returned to Pathfinder Office to close the Data Transfer window. Next, you clicked View/Map and opened the .SSF files. To bring in your background map, you went to View/Layers/Background and clicked the Show box next to the Layer Name. You were smart in naming the background file Opi when you created the georeferenced .jpg. This made it easy for you to find the .jpg. During your survey you created several .SSF files. To view them individually, you went to File, Open and clicked and viewed them one at a time. You decided against differential correction at this time. You did, however, export the data as shape files for your ArcView work. To do this, you clicked Utilities/Export and noted the output folder was the same folder you have been working in (c:\Pfdata\Opi\Export). Under Choose an Export Setup, you made sure the Sample ArcView Shapefile Setup was named in the box. You also noted that the Coordinate System in the Export box was *incorrect* so you corrected it to UTM, 17N, NAD 1927 (CONUS). Then you clicked OK and noted the Export Completed dialog box indicating the files transferred without any issues. You double checked by viewing the file Opi Sale in the folder c:/Pfdata.

Your next step was to create an Opi Sale project file in ArcView. You open ArcView 3.2a and clicked on File/Extensions and checked the box JPEG (JFIF) Image Support and



clicked OK. You clicked New and Add Theme under View. You scrolled to c:\pfdata\opi sale\ and under Data Source Types you clicked Image Data Source, then highlighted the .jpg

for your project area and clicked OK. Then you changed to Feature Data Source under Data Source Types. In the Pfdata/Opi Sale box you double clicked the Export dialog box to see your line.shp and site_poi.shp files that you had brought in from Pathfinder Office. You highlighted all of them using your shift key and clicked OK. At this point your background map and your line and shape files appeared in View1. You went into View/Properties and entered meters in Map Units and Distance Units. You clicked File, Save As, and saved the project Opi Sale Survey in your Opi Sale folder. To retrieve your field notes that you collected during your survey, you used Windows Explorer to go into Seiko Ink Notes folder on the mobile device and copied them to your Opi Sale folder where you saved them as .jpg. Saving them in this format made the files easy to paste into a Microsoft Word or other word processor when you write your report.

