Great Lakes Creel Survey PDA Data Entry Program: MiCreelGL

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Great Lakes creel survey

The Michigan Department of Natural Resources conducts angler surveys on Great Lakes waters each year to estimate fishing effort, catch and harvest. Results of these surveys will enable better management of these waters.

An angler survey consists of samples of angling effort and samples of individual angling activity. Effort is sampled by making counts of anglers or units representing anglers (such as fishing boats or occupied ice shanties) within a chosen survey area. Individual activity is sampled by interviewing angling parties and recording information for individuals within each party or for the entire party. In general, angler survey estimates are based on samples of 2% to 10% of the anglers fishing at a selected survey area. From the interview data, several important pieces of information are collected: rate of catch by species, number of anglers in the fishing party and length of fishing trip. From the counts and interviews, estimates are made over a chosen time period (a month for example) of angling hours, angling trips and catch by species.

Surveys are described by count type and then interview type. For example, a survey may be described as an aerial-access survey. Here counts are made by aircraft and interviews collected by access point survey.

Data (count and interview forms) are recorded and estimates are made by fishing mode (also referred to as units). Fishing modes or units are kept separate because catch and effort characteristics may be quite different for each.

Great Lakes surveys are designed to collect access interviews. In an "access" interview, the clerk only interviews those anglers who have COMPLETED their fishing trips. If an angler is returning to an access site momentarily (i.e. to pick up additional gear, use restroom, etc.), the clerk should not interview the angler. If an angler plans to return at a later time in the day, but has completed a fishing trip at the time they are intercepted, the clerk should interview the angler. There is a section on the interview sheet where the clerk can indicate whether the interview occurred on the first, second, third, or fourth trip of the day (*not set up yet in the following PDA program*).

Interview data recording

Interviews collected in Great Lakes creel surveys are mostly completed fishing trips. For each angler party that has completed their trip, one interview record should be completed for that angler party.

Complete-trip data record

In an access point survey, we interview anglers who have completed their fishing trip. For a complete fishing trip,

1. One interview record is filled out for **each fishing party**.
2. **Catch** data will be the catch for **the entire party** (fish harvested or released by species).

3. Anglers that finished their trip should be interviewed regardless of their fishing time. But do not interview anglers fished less than 30 min.

Count data recording

Criteria for identifying fishing boats for instantaneous counts: **Only boats that appear to be fishing are to be counted.**

The following types of boats should not be counted:

- Boats running across the lake (visible wake) are not counted.
- Boats pulling water skiers or tubers are not counted.
- Jet skis are not counted.
- Sail boats are not counted.
- Moored boats are not counted.
- Any other boats deemed not to be fishing.

For interval counts the boats are counted if they appear to be a fishing boat that is going out to fish during the count time, they will not yet be actively fishing because they are just leaving.

Criteria for determining if **a shanty is occupied** include:

- Snowmobile, ATV, or sled parked next to a shanty.
- Fishing equipment (bucket, ice auger, etc.) positioned next to or leaning against a shanty.
- Smoke coming from a shanty smoke stack.
- Any other visible signs of activity.

MiCreelGL Data Entry Assistant

MiCreelGL Assistant is a Pocket PC program providing Graphical User Interface for Great Lakes on-site angler survey data recording. An inland version of this program exists, which can be installed and used separately if clerk works on inland and Great Lakes site in the same season. These two programs use separate directories to store data to avoid any conflicts between them.

Features

1. Enable you to record and update interviews for angling parties in an access point survey.
2. Enable you to record and update counts of angling units in an access point survey.
3. Enable you to record and update **pier or shanty ratio data**.
4. Include extensive data validation and error checking.
5. Store and backup data in persistent storage space of a PDA, such as iPAQ file store and/or storage cards, to protect the data.

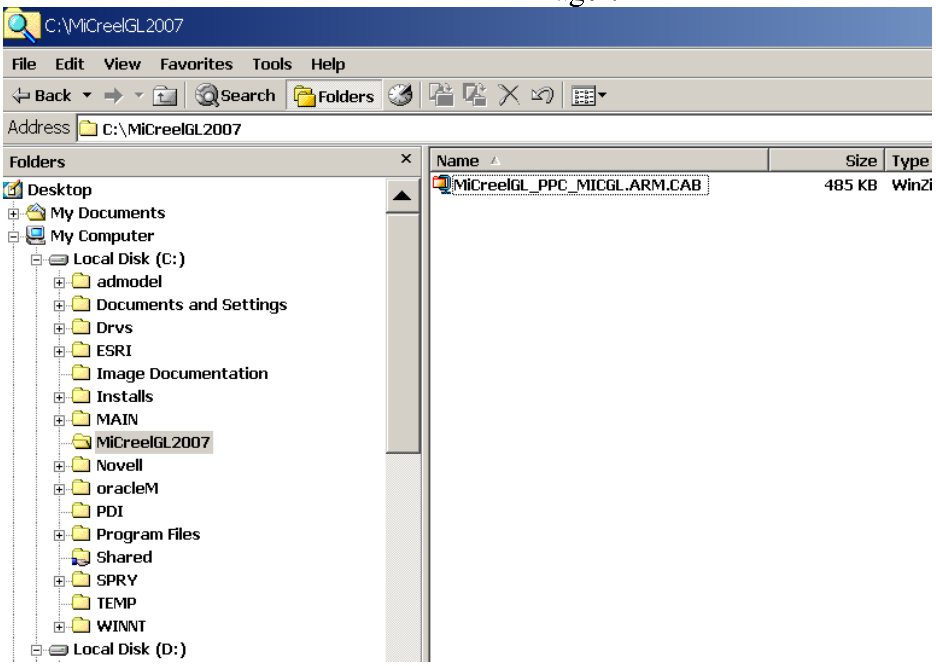
Program installation

To install the program you first need to connect your iPAQ to your PC with the USB cable. Using **Windows Explorer** on your PC, you can copy the program installation file from your PC to your iPAQ and install the program with the following steps:

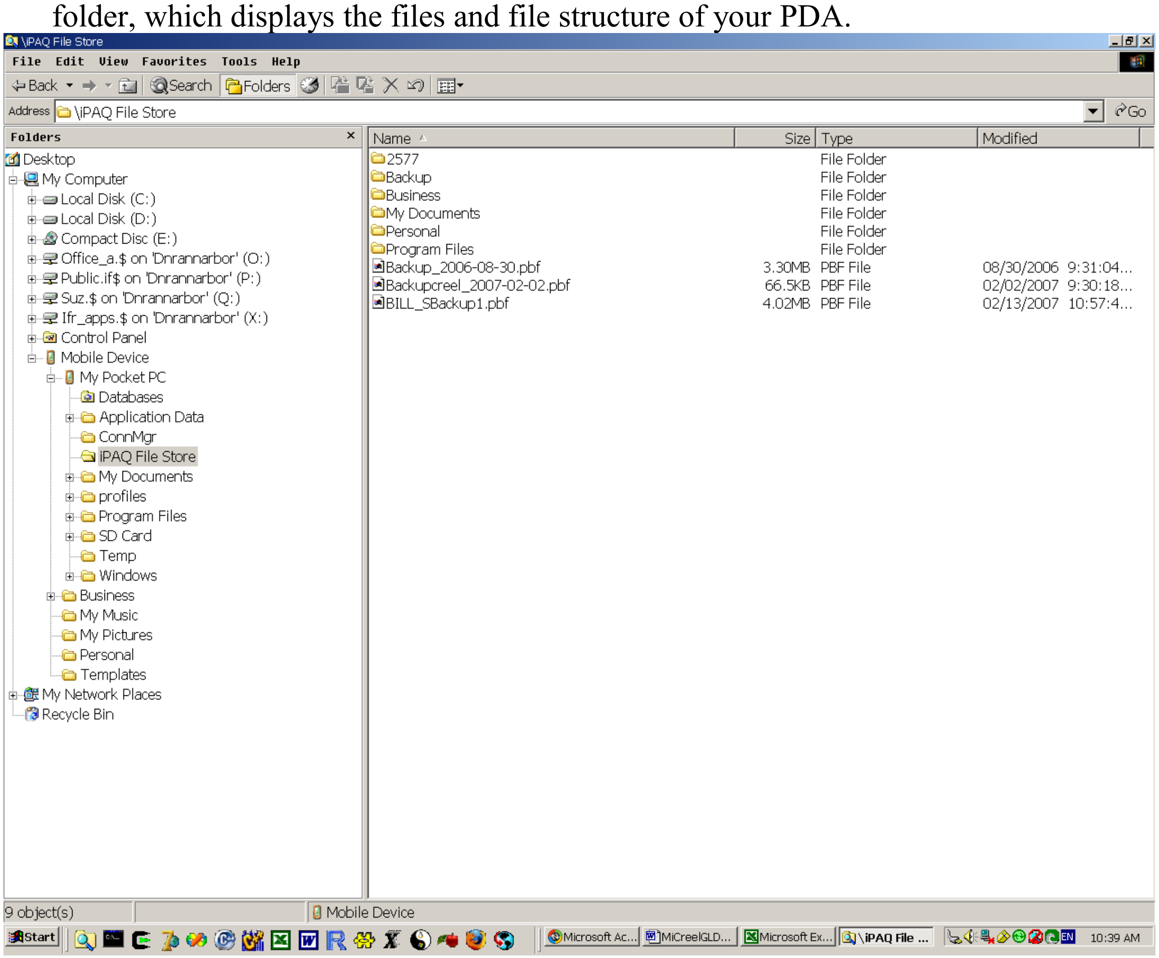
On your PC

After you receive the installation file: "**MiCreelGL_PPC_MIGL.ARM.CAB**",

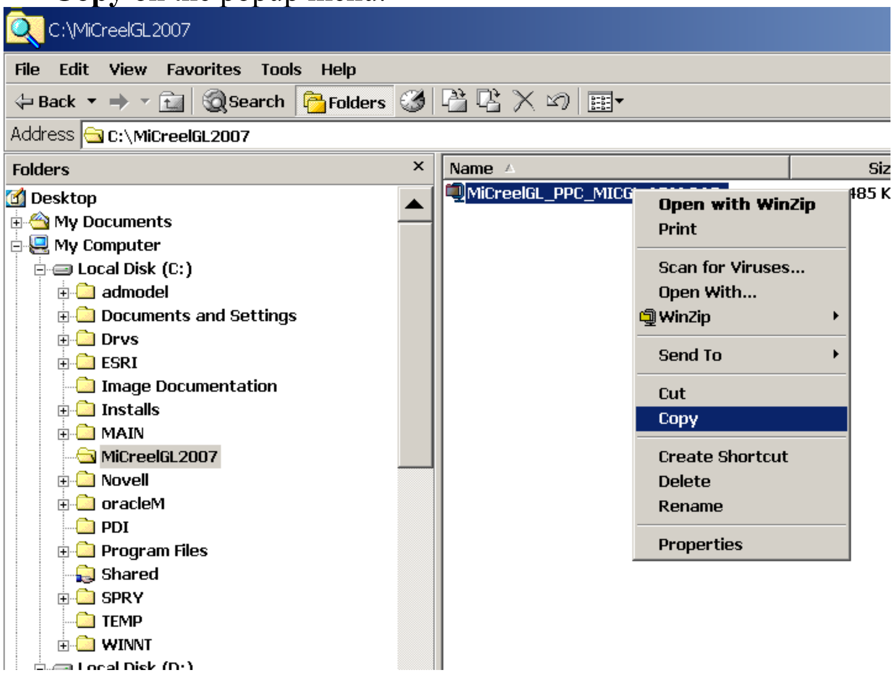
1. Create a directory on your PC. In the following, we assume the folder created is **MiCreelGL2007.**
2. Save the installation file in the **MiCreelGL2007** folder. You should keep the installation file on your PC in case you need to re-install it.



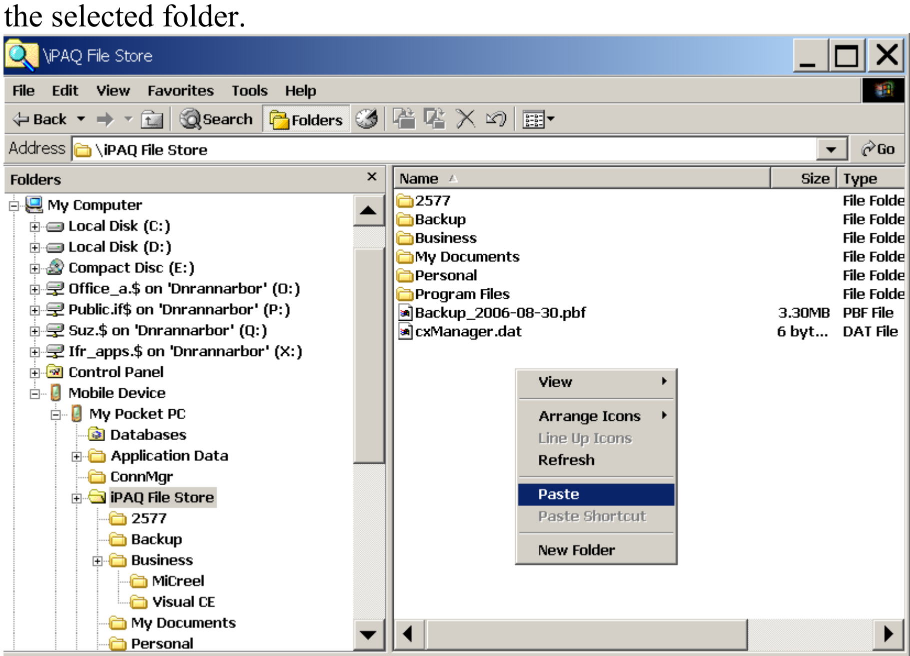
3. Copy the installation file from the **MiCreelGL2007** directory to the **Mobile Device** folder, which displays the files and file structure of your PDA.



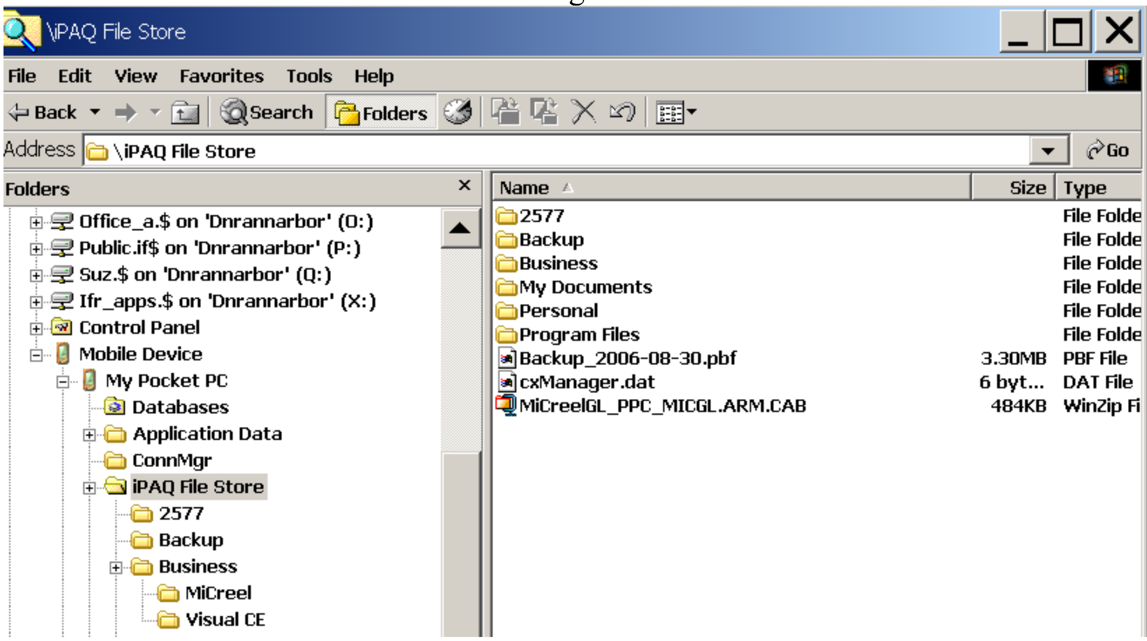
a) Right click the installation file in the **MiCreelGL2007** directory. Then click **Copy** on the popup menu.



b) Navigate to the **Mobile Device > iPAQ File Store** folder in **Windows Explorer**. Right click the mouse on an iPAQ folder and select **Paste** to copy the installation file to the selected folder.

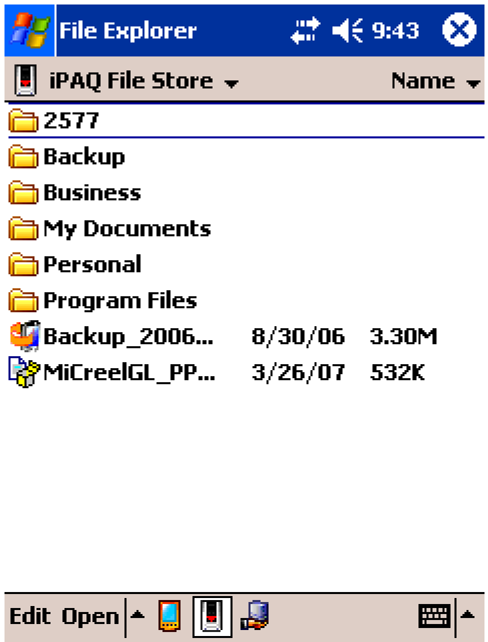


The file has been copied to the iPAQ.

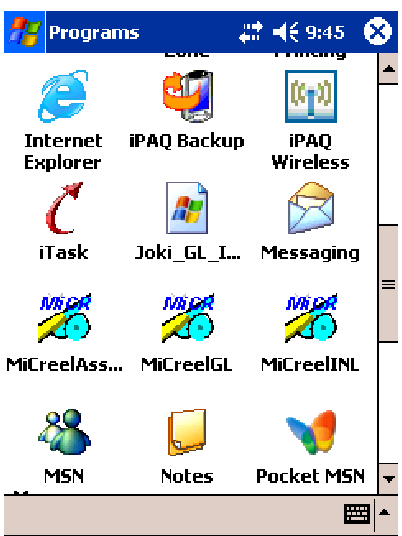

\iPAQ File Store
File Edit View Favorites Tools Help
Back Search Folders
Address \iPAQ File Store
Go
Folders
Office_a.$ on 'Dnrannarbor' (O:)
Public.if$ on 'Dnrannarbor' (P:)
Suz.$ on 'Dnrannarbor' (Q:)
Ifr_apps.$ on 'Dnrannarbor' (X:)
Control Panel
Mobile Device
My Pocket PC
Databases
Application Data
ConnMgr
iPAQ File Store
2577
Backup
Business
MiCreel
Visual CE
Name Size Type
2577 File Folde
Backup File Folde
Business File Folde
My Documents File Folde
Personal File Folde
Program Files File Folde
Backup_2006-08-30.pbf 3.30MB PBF File
cxManager.dat 6 byt... DAT File
MiCreelGL_PPC_MICGL.ARM.CAB 484KB WinZip Fi

On your iPAQ

4. Locate the installation file on your iPAQ in **\iPAQ File Store** with **File Explorer** and tap it. This will install the program to your device.



MiCreelGL Assistant will be installed in the "**Programs**" folder on your iPAQ. The original installation file may disappear after the installation (**keep a copy of the installation file!**).

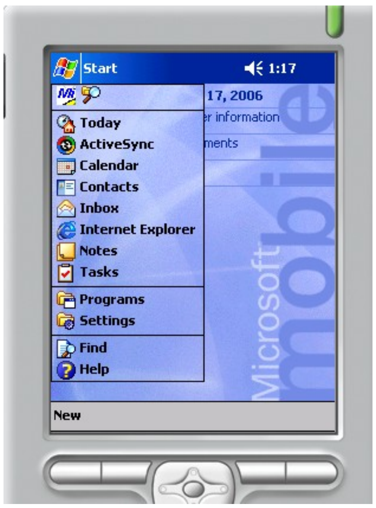


Starting MiCreelGL Assistant

You can start MiCreelGL Assistant in two ways from an iPAQ:
(1) Start it from the **Programs** window; or
(2) Create a shortcut to MiCreelGL Assistant that will show up on the **Start** menu.

(a) Start MiCreelGL Assistant from the Programs window

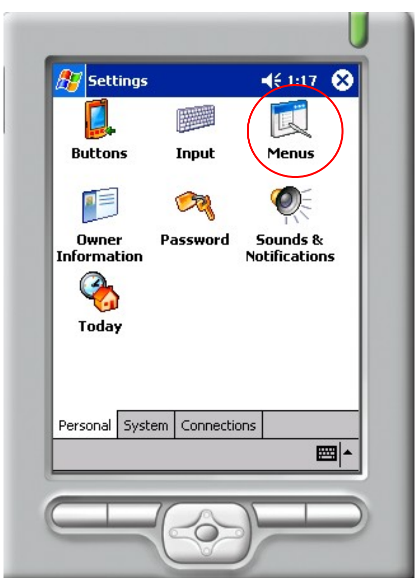
- Tap **Start > Programs > MiCreelGL**

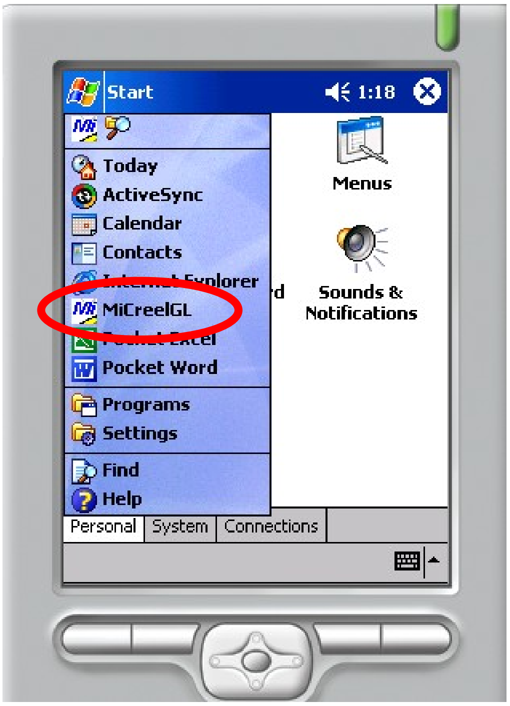


(b) Start MiCreelGL Assistant with a shortcut

To create a shortcut that will appear on the **Start** menu:

- Tap **Start > Settings > Menu**
- Check "**MiCreelGL**" then click OK
- **MiCreelGL** will now appear on the **Start** menu




Start
1:18
Today
ActiveSync
Calendar
Contacts
Internet Explorer
MiCreelGL
Pocket Excel
Pocket Word
Programs
Settings
Find
Help
Menus
Sounds &
Notifications
Personal
System
Connections

Using MiCreelGL Assistant

When you first start the program, you'll see the main window of the program: MiCreel GL. The program may prompt you to set up the project for your survey when you first use it.

Setup your survey project

For a new survey project, you need to specify the following survey settings in the **OPTIONS** dialog box:

- **Name of work area**. This can be some meaningful name specifying the work area of a clerk, such as Tittab, Tuscola, or Aren-Glad etc. Only letters, numbers and "-" are allowed for a name. We use this name to separate the data files got from different clerks.

- **Interview and count site lists**. Interview site list should be all the interview and fishing site numbers combined in a work area. Count sites should be the same as interview sites for most areas. But you can add count sites if you are help others to make counts in extra areas. For example, TUSCOLA-HURON CLERK should have three sites numbers: 288, 290, and 236; ARENAC-GLADWIN has two site numbers: 250, 255; LOWER BAY has three numbers: 260, 278, and 356.

- **Fishing modes**. "non-fishing" mode only be applicable to interview and only be shown on the interview forms. "Trailer" and "Car" are count modes and only be shown on the count forms.

If you need to make subsamples of counts of **shanties or piers** for calculating non-fishing ratios, you need to add “Pier ratio” or “Shanty ratio” to your mode list.

- **The number of counts made each shift for each mode.** This is the number of counts scheduled in your area. For some winter survey, a clerk may need to make a count per shift to get the numbers of total and empty shanties. In this case, the number of count is 1 (one). In summer surveys, you may need to make 1, 2, 3 or 4 counts per shift for each fishing mode.

There are also two options to control how interview data and the project file list are displayed.

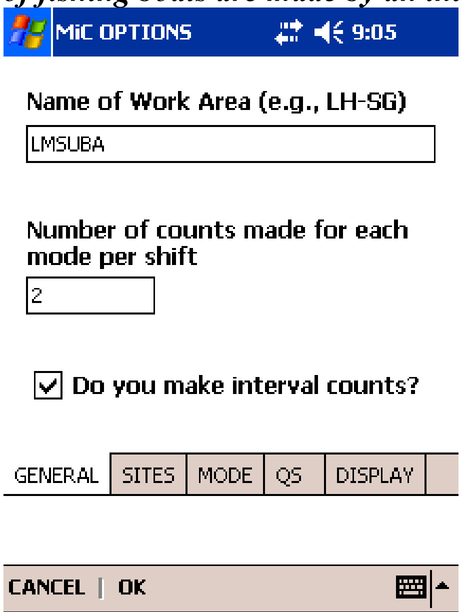
- **Whether you want to show all the records on the interview and count screens.** If you have many records in an interview file, it will take long time to load the record into the program and these records also consume a lot of memory. If you do not want to load, view or edit the old records in your interview file, you may uncheck this option. In that case, the program only shows the new records enter in a work session. It does not show those old records exist in the files.
- **Only display the two most recent project files on the main form.**

OPTIONS window

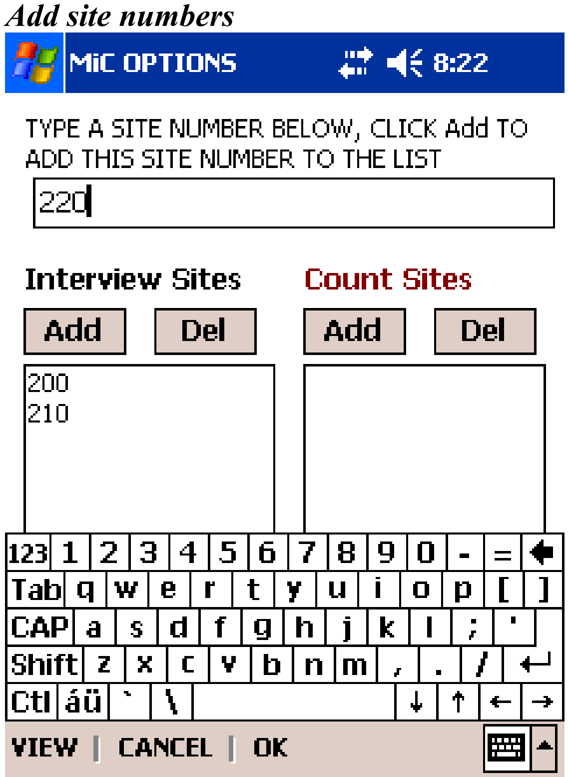
You can use the OPTIONS dialog box to enter or change the setting of a survey. Please notice that there are 5 pages on the **OPTIONS** window. If you want to add interview and count site numbers, you need to click on SITES to open the site setup page; similarly, open MODES to add or change fishing modes for the survey.

Here are screen shots showing how to set these several pieces of information for a survey project:

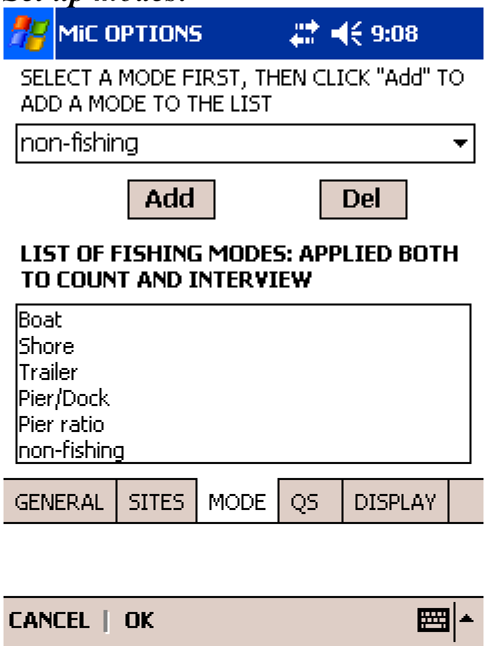
Specify the name of a work area, enter the number of counts, and check if the counts of fishing boats are made by an interval or instantaneous method



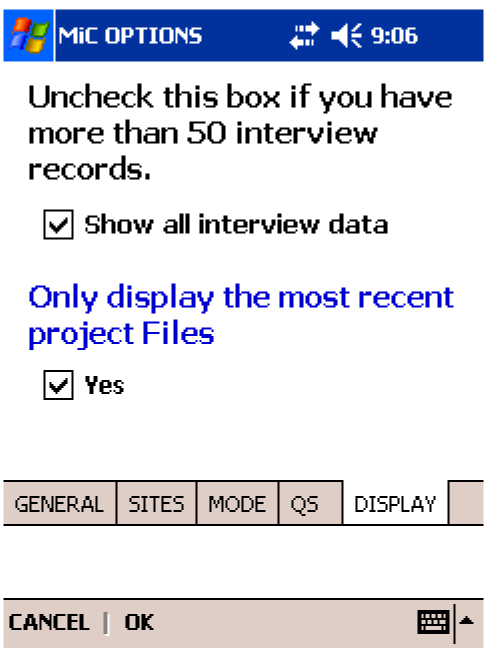
Add site numbers



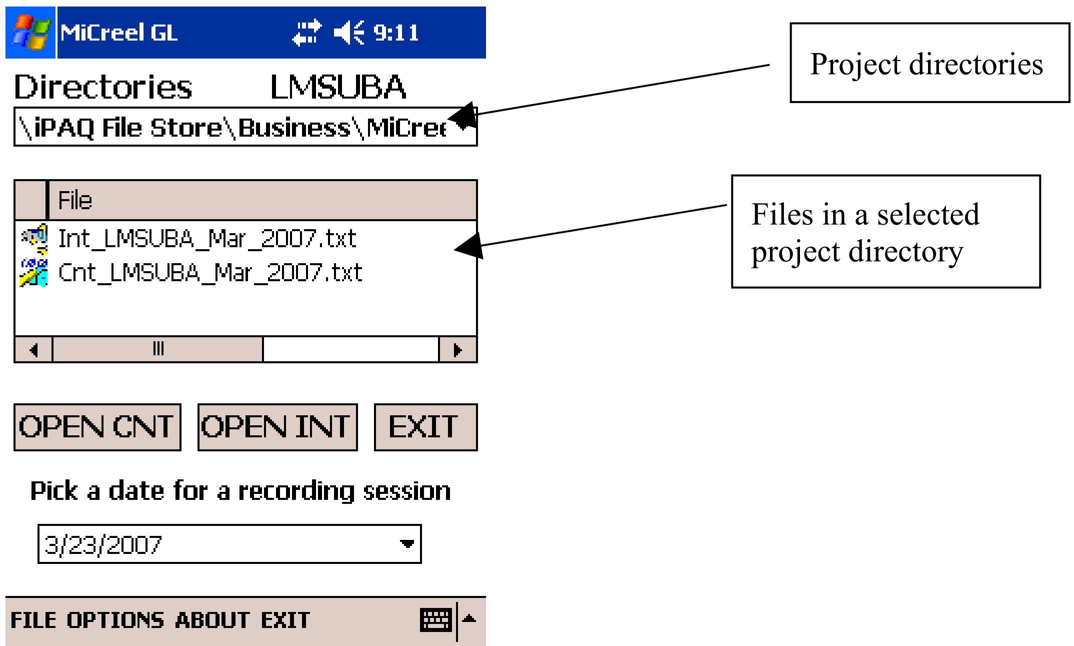
Set up modes:



Display controls



The Main Window



1. **Project directories**: contains a list of all the folders storing our creel data on your PDA.
2. **File list**: contains a list of files under a selected project directory.
3. **Work directory**: that is "**\iPAQ File Store\Business\MiCreelGL".** This is the default folder for storing interview and count file data.
4. **Buttons:** open files and quit the program.
5. **Default Date**: let you set a default date for a data entry session in case you want to enter data collected on old dates. Otherwise, this date is set to today.
6. **Menus**.

Work Directory – this is where your data will be saved!!

Because of the problem with internal memory, MiCreelGL Assistant works and stores data in the **iPAQ File Store**.

- The program will automatically create a folder in the **iPAQ File Store** the first time it is started. Specifically, the folder is "**\iPAQ File Store\Business\MiCreelGL".**
- When you first use the program, if you change the name of the work area, or at the beginning of each month, the program will automatically generate two new files:
    1) *An interview file named as something like* **Int_Lak_mon_2007.txt** for a month.
    2) *A count file named as something like* **Cnt_Lak_mon_2007.txt** for a month.
-

- When you complete an interview or count, that record will be saved in an interview or count file located in the Work Directory.

iPAQ File Store folder

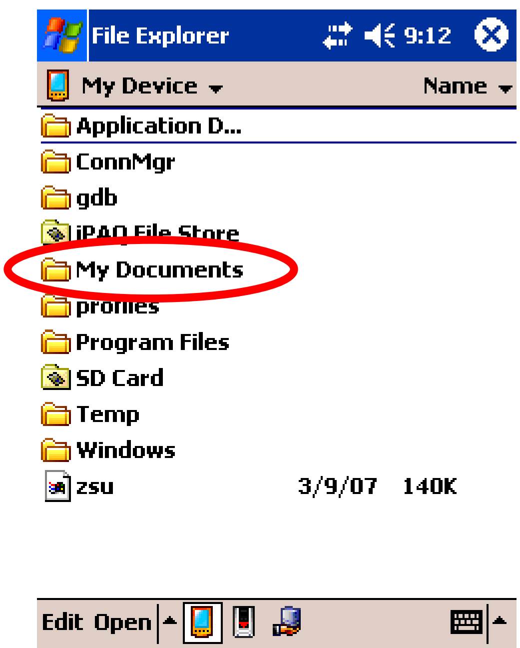
The creel work directory

Other Project Directories

The program checks for storage cards. If it finds any cards, data will be backed up automatically in the **MiCreelGL** folder which is created by the program in the **Business** directory if the **MiCreelGL** folder does not exist.

There will be several copies of the data on your PDA: one in the work directory (**\iPAQ File Store\Business\MiCreelGL**) and others on the storage cards (for example **\Storage Card\Business\MiCreelGL**).

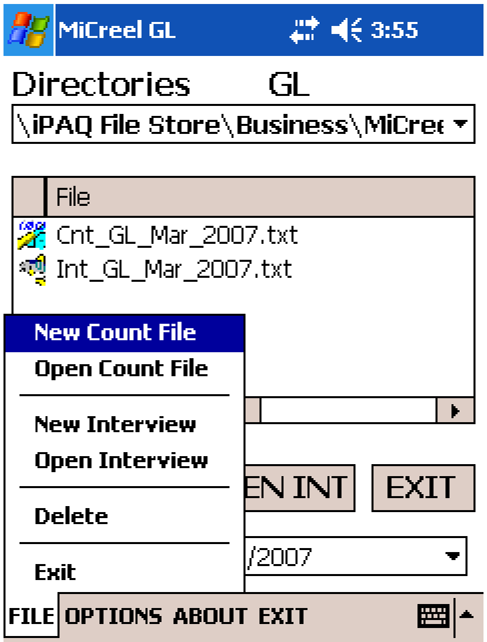
The folder "**My Documents\Business\MiCreelGL**" is also used to store creel data. This folder is in RAM. The files in "**My Documents**" will be transferred to a desktop (PC) automatically each time the iPAQ and a desktop are synchronized. So when you email the data, you can easily locate the data files in a specific folder on the hard drive of your PC. But be aware that the data in this folder will be erased any time your batteries discharge completely. You should not rely on this folder as a backup of your data.



You can determine which files have been saved in each directory by selecting the corresponding directory in **Project Directories**.

File menu

You may create a new file manually with "**New Count File**" or "**New Interview**" in the **File** menu.



You can delete any files in a folder by choosing **Delete** in the **File** menu.

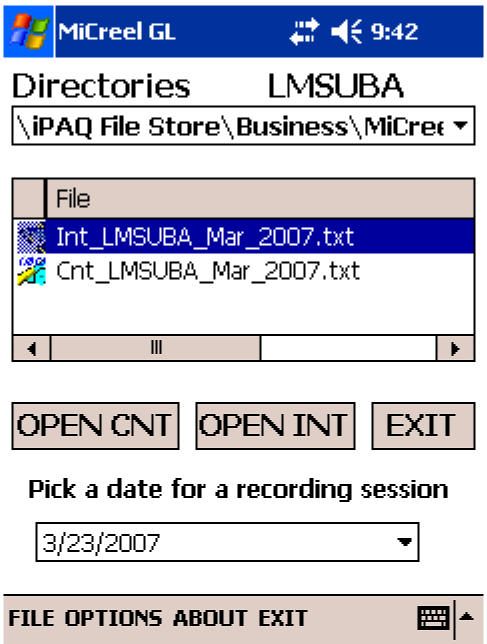
Be very careful with **Delete, because the files will be deleted permanently from this folder and from your PDA and there is no way to get the data back**. This button is mean to give you an option to clear up any testing files or any old creel files no longer used. Do not delete any creel files entered in the current season, especially do not delete files in the work directory “**\iPAQ File Store\Business\MiCreelGL”.**

In the case you are learning and testing the program and have saved some testing data to a file. You may freely delete that file and then create a new one with “**New Count File**” or “**New Interview**” in the **File** menu. When you click these two items, if a file has already exist, the program only airs a message saying so but will not overwrite and generate a new one for you.

Record Interviews with MiCreelGL

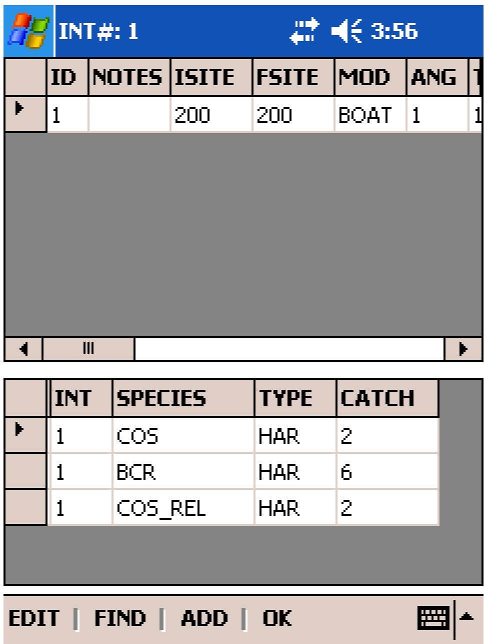
This section explains how to record interviews.

First, select an interview file from the file list. Tap **OPEN INT** to start working on interview data.



Main interview windo

From this form you can add new interviews or edit old ones.



Interview recording

Fill out one interview record for each fishing trip made by an angler party.
You can:

1. Add a new interview record for each trip of an angler party.
2. Edit or update a record.
3. Find a record.

Add a record for each trip:

Tap on **ADD** to start a new interview.

Edit a record

- First select a row in the table.
- Tap on **EDIT** to edit that record.

Notice that you can only edit a record showing on the interview table. If there is no record showing, this command is not functioning. After you add some new records, then you can edit one of them by this command.

In an access orientated survey each party is interviewed as a group (not individuals).

- Only need information for the whole party.
- One record for **each party**.
- Catch is the **total catch for the entire party**.

In an access survey you may encounter anglers still fishing, such as shore anglers, that you may interview them as incomplete trip interviews. You may collect incomplete trip interviews for shore/pier/dock anglers when you have waited for some time at a site but seem no anglers leaving, but you must move on to other sites. For incomplete trip interviews, the end time of a trip is the interview time, which is required to be at least one hour later than the start time. For complete trip interviews, it is allowed to interview anglers/parties fished half hour or longer.

Interview Data Forms

This section explains:

- Forms included for interview data entry.
- The required and optional entries on each form.
- Data validation and error checking functions on each form.

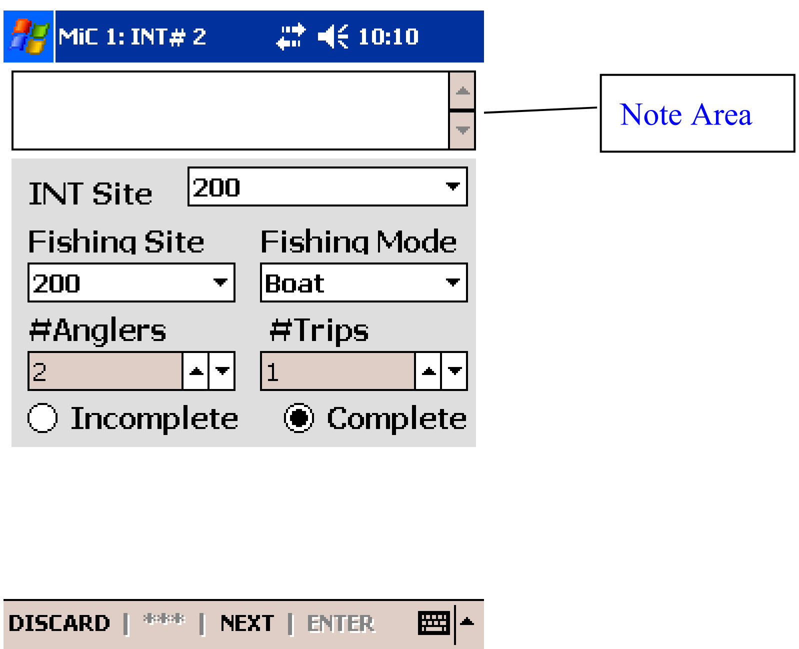
Each form is titled at the top of the form. The following instructions refer to that title.

Interview form 1

The following data fields are required:

1. Interview site
2. Fishing site
3. Fishing mode
4. Number of anglers in a party (#Anglers)
5. Number of trips made (#Trips)
6. The trip type: incomplete or complete

The note area is optional. Use the note area to add information for a party/angler.



The program will check if:

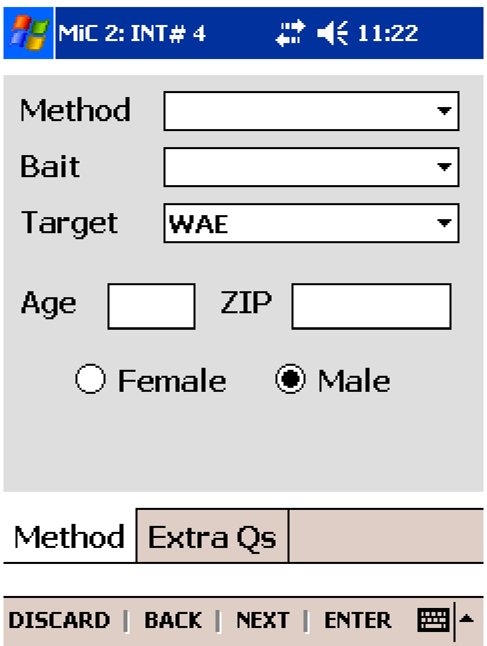
1. An interview site (**INT Site**) and fishing site (**Fishing Site**) have been selected;
2. A fishing mode (**Fishing Mode**) has been selected;
3. The number of anglers (**# Anglers**) is greater than 0 and less than 20;
4. The number of trips (#**Trips**) is greater than 0 and less than 6;
5. A **Complete** or **Incomplete** interview has been selected.

Interview Form 2

The following data is required:

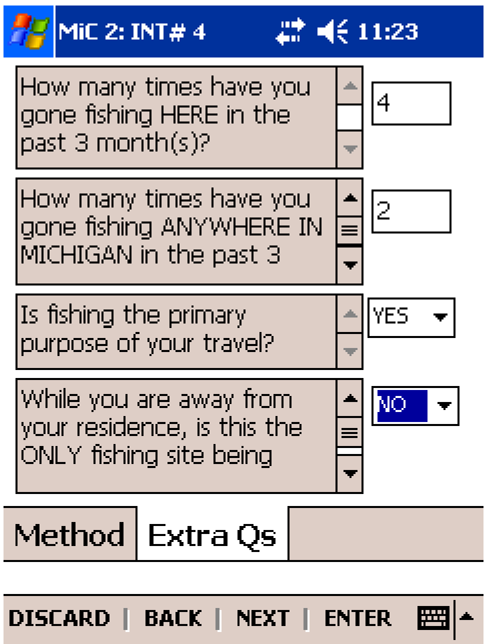
1. **Target** species;
2. **Female or Male**. Default to Male.

The optional entries are **Fishing Method, Bait**, **Age** (> 5 and <100), and **Zip** (must be 5 digits or blank). This means you can skip these items, but you are encourage to get these information if your work load is low, or you can get these information for every several, say 3, anglers/parties. For age, you may not need to ask, just enter your best guess. You may get zipcode at your best effort.



Also on **Interview Form 2** there is an **Extra Qs** page that includes questions proposal by the Fisheries Division. We encourage you to ask these 4 questions to help us to obtain important information on behavor of Michigan's anglers.

If time permits you should ask all four questions for each angler party.
If there are angler parties waiting in line you can ask these questions for the last party.



1. How many times have you gone fishing HERE in the past 3 month(s)?
ANSWER: 0 - 90

What it means: In the past 3 months, how many times has this individual come HERE, to this location, to fish for any species of fish.

Why it is asked: We are trying to learn more about this individual's behavior and visits to this site, and to some degree, fishing pressure at this site.

2. How many times have you gone fishing ANYWHERE IN MICHIGAN in the past 3 month(s)? **ANSWER: 0 – 90**

What it means: Simply put, in the past 3 month(s), how many times has this individual gone ANYWHERE IN MICHIGAN to fish for any species of fish.

Why it is asked: This question, (especially when we know the answer to question #1 above), helps us to understand how often this individual goes fishing and whether or not this site is where they have fish the most in the last 3 months.

3. Is fishing the primary purpose of your travel? **ANSWER: YES/NO**

What it means: Is this person out on another trip like a camping trip, a canoe trip, are they on their way to another location, on their lunch break or was "going fishing" the primary reason for the outing?

Why it is asked: We are trying to learn more about this individual's travel behavior and if coming out to fish was the primary reason they left their residence.

4. While you are away from your residence, is this the ONLY fishing site being visited? ANSWER: YES/NO

What it means: Since they left their residence, has this individual fished at another site prior to coming to this site, or do they plan to fish at another site before returning to their residence.

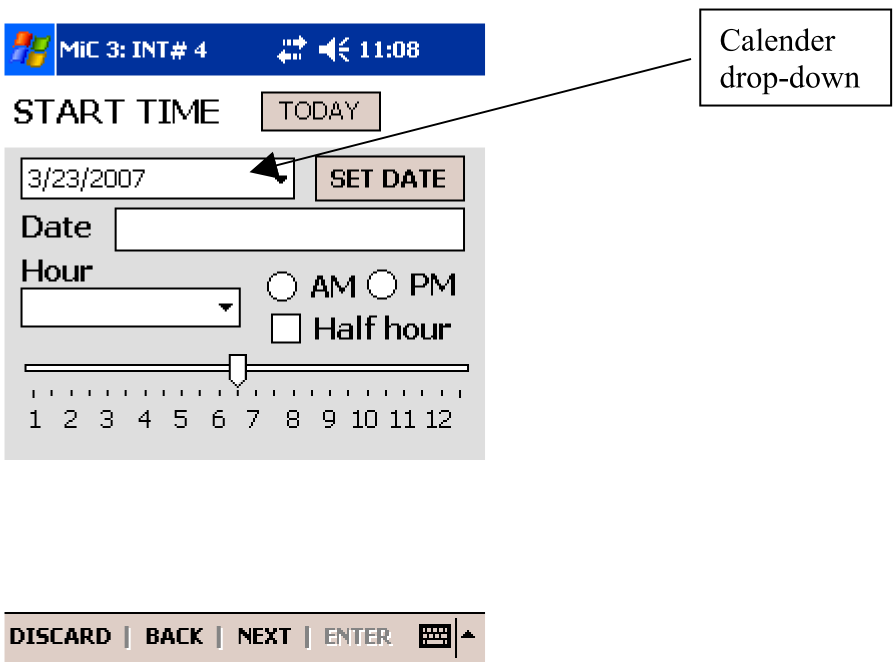
Why it is asked: We are trying to learn a more about fishing behavior and an individual's travel behavior.

Interview Form 3: Start date and time

Start time: the date and time an angler/party started fishing.

In this part of the form you need to record the start date and time of a fishing trip.

Select a date:
The default date shown on this form is the date you set on the main screen of the program. You can pick a different date by tapping the **calender drop-down box**. If you want to change back to today's date, tap **Today**. After selected a date, tap **SET DATE** to enter the date value to the **Date** box.

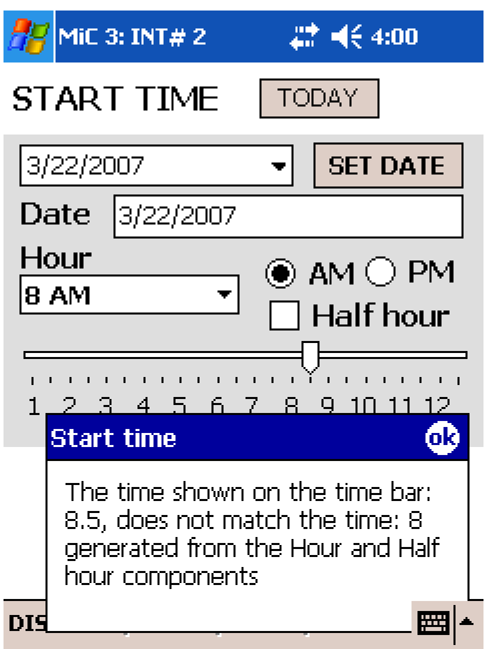


Select a time:
If the angler's start time is **8:30 AM** do the following:

- Pick **8 AM** from the **Hour** box;
- Select **AM;**
- Check **Half Hour**;
- Pull the slider to the middle of 8 and 9 to complete recording of the start time, **8:30 AM**.

The program will check if:

- Date has been set
- **Hour** has been selected
- **AM** or **PM** has been selected
- Time shown on the time bar matches with the time generated by other entries.



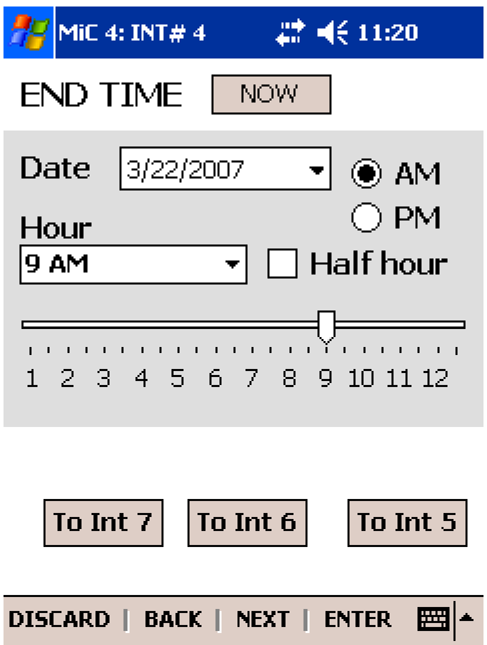
Interview Form 4: End time

End time: the interview date and time for an incomplete trip or the date and time when the angler completed his trip.

The end date is default to the start day you have already entered.

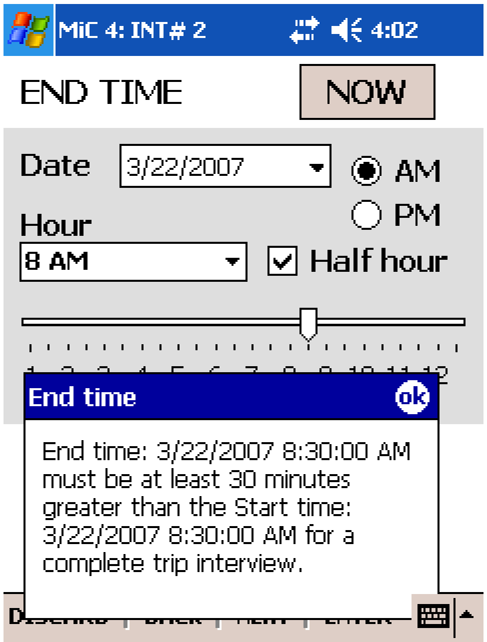
Enter the end date and time in the same fashion as you enter the start date and time.

If the end time is now, tapping on **NOW** will complete the recording of the end time.



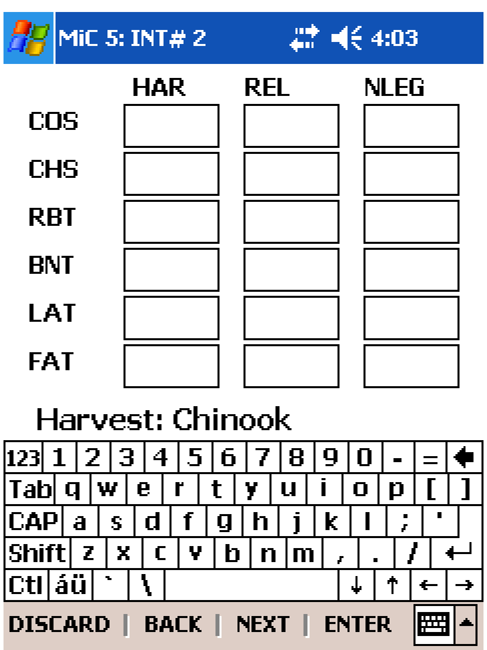
The program will check if:

- **Hour** has been selected
- **AM** or **PM** has been selected
- Time shown on the time bar matches with the time generated by other entries.
- Validation of start time and end time for incomplete and complete trips. For complete trips, end time must be at least 30 min later than the start time (End time – Start Time >= 30 min). Do not interview anglers/parties fished less than 30 min.



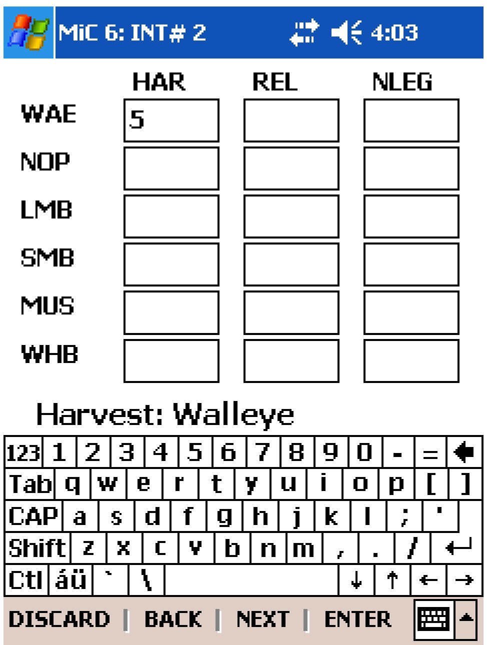
Interview Form 5

Enter fish harvested, legal released and non-legal sized releases for the following species:
COS – Coho salmon
CHS – Chinook salmon
RBT – Rainbow trout
BNT – Brown trout
LAT – Lean lake trout
FAT – Fat lake trout



Interview Form 6

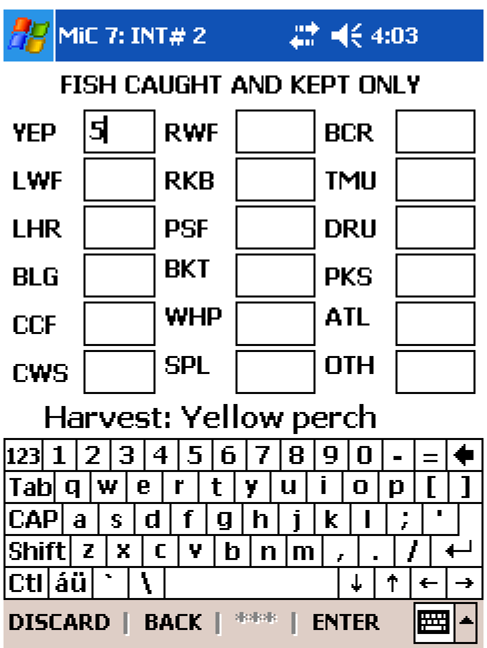
Enter fish harvested, legal released and non-legal sized releases for the following species:
WAE -- Walleye
NOP – Northern pike
LMB – Largemouth bass
SMB – Smallmouth bass
MUS – Muskellunge
WHB – White bass



Interview Form 7

Enter fish harvested only for the following species:

YEP – Yellow Perch
LWF – Lake whitefish
LHR – Lake herring
BLG – Bluegill
CCF – Channel catfish
CWS -- White sucker
RWF – Round white fish
RKB – Rock bass
PSF – Pumpkinseed
BKT – Brook trout
WHP – White perch
SPL – Splake
BCR – Black crappie
TMU – Tiger muskellunge
DRU – Freshwater drum
PKS – Pink salmon
ATL -- Atlantic salmon
OTH – other



Treat all other species not listed as **OTH**. You should make a note in the Note area on **Interview 1** to indicate the name of this **Other** species.

Data validation for Interview 5-7

Warning messages:

1. Possession limits based on the 2006 inland fisheries regulations:
    a) Combined possession limit on LMB, SMB, WAE, and NOP (does not include the harvest of flathead catfish yet);
    b) Check for harvest of channel catfish greater than 10;
    c) Check for harvest of muskellunge greater than 1;
    d) Check for harvest of yellow perch greater than 50;
    e) Check for harvest of sunfishes greater than 25;
    f) Check for harvest of white bass greater than 10;
    g) Check for combined harvest of lake white fish and lake herring greater than 12;
    h) Check for harvest of salmon and trout.
2. Check for any number greater than 50.

Count data record

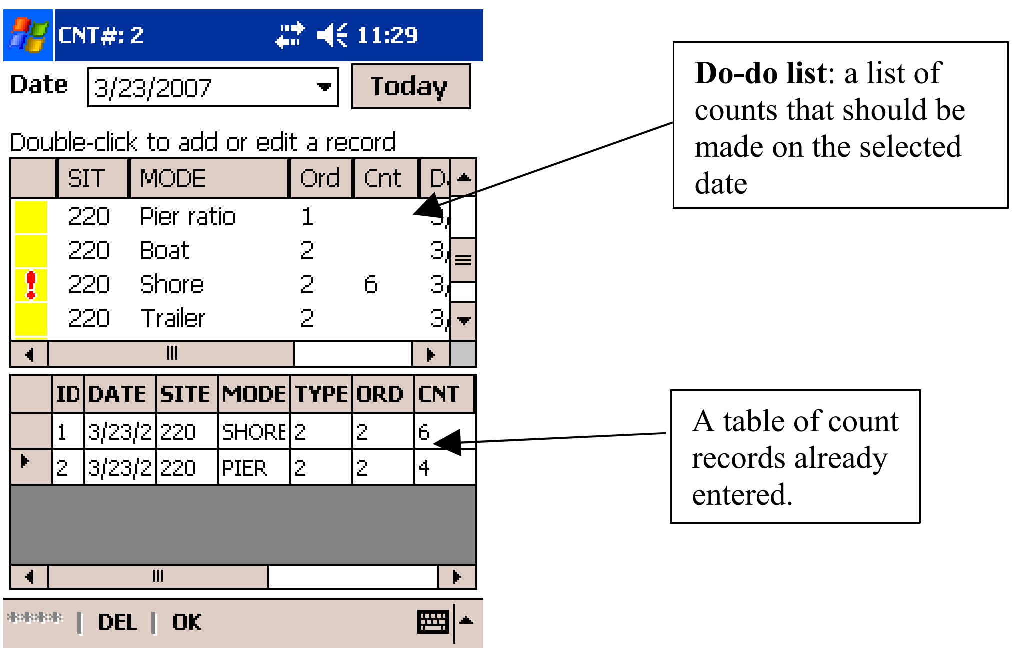
You can add, edit or delete a count record on the main count screen.

Requirements for recording counts are:

(1) One record is entered for each combination of count mode (boat, shore etc.) and site.

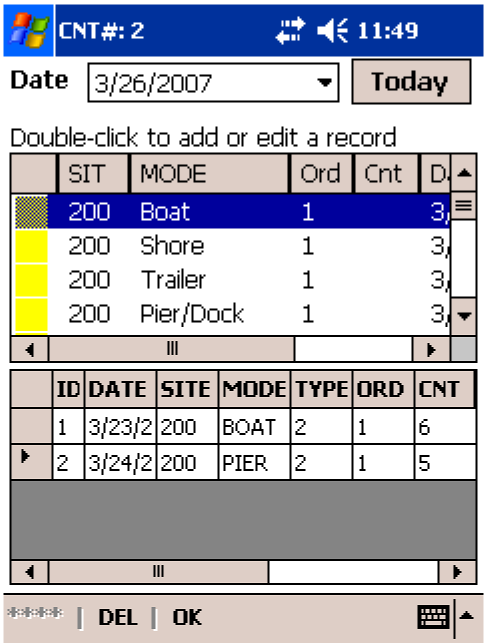
When the Main Counts form is open, it lists all counts needed to be made each day (including all the combinations of site, mode, and the number of counts) on the list view at the top of **Main Count Window**. It serves as a **to-do list** for counting on a day. Scheduled count that have not been made for a day are marked with a yellow blank square. The counts that have been made are marked with a "**!**".

The date is set to the date picked on the Main Window. Select a earlier date than the Date shown will update the list view of counts to that day.

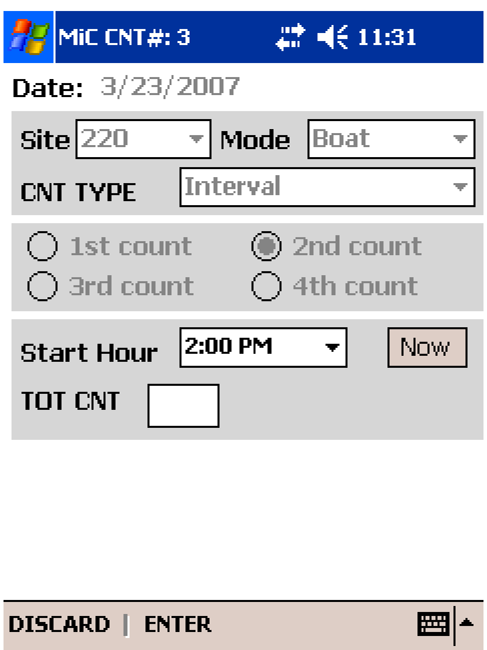


Add a count record:

Tap on a row on the to-do list with a yellow blank square two times will bring up a count window.

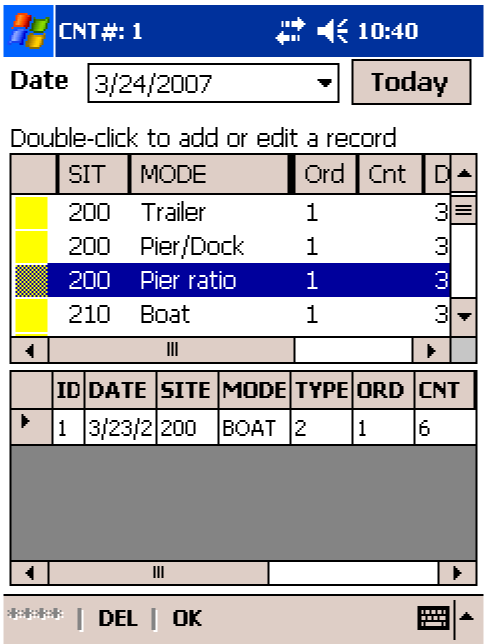


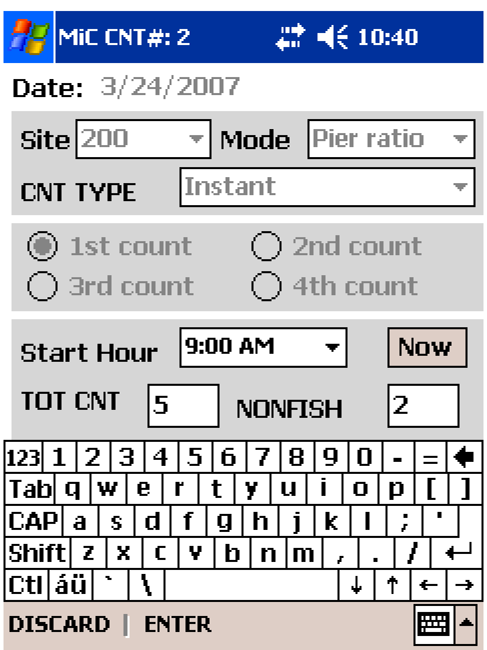
You only need to set the start time of a count and enter the count on this window.



Shanty ratio and pier ratio counts

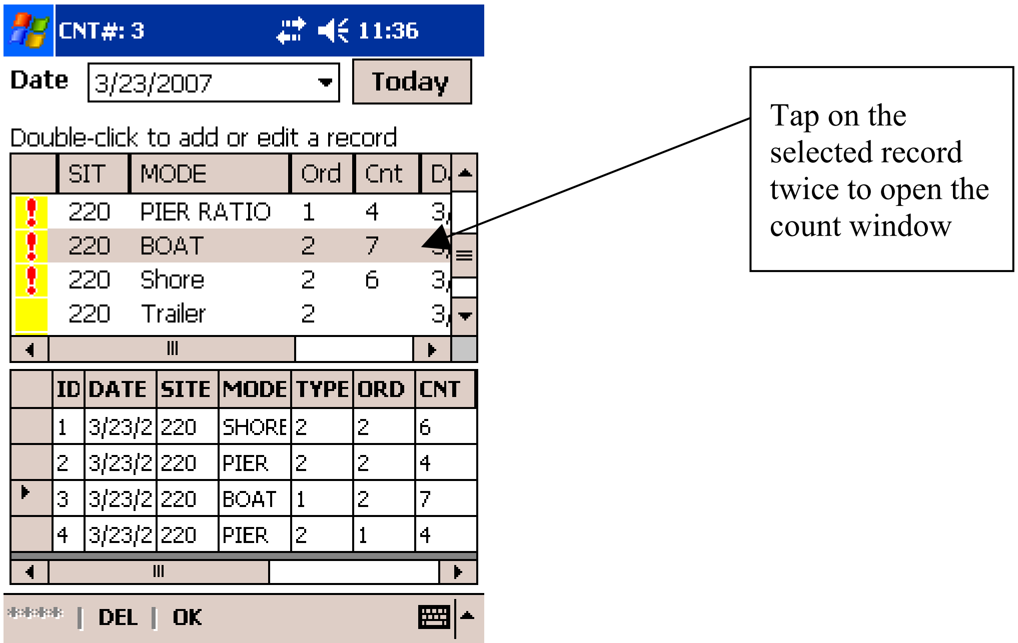
To enter shanty ratio (or pier ratio) counts, select a ratio count mode (shanty ratio or pier ratio) on the to-do list of the main count form, then enter the total number of shanties (or peir anglers) in the TOT CNT textbox; enter the empty shanty (or nonfishing peir individuals) count in the NONFISH textbox.

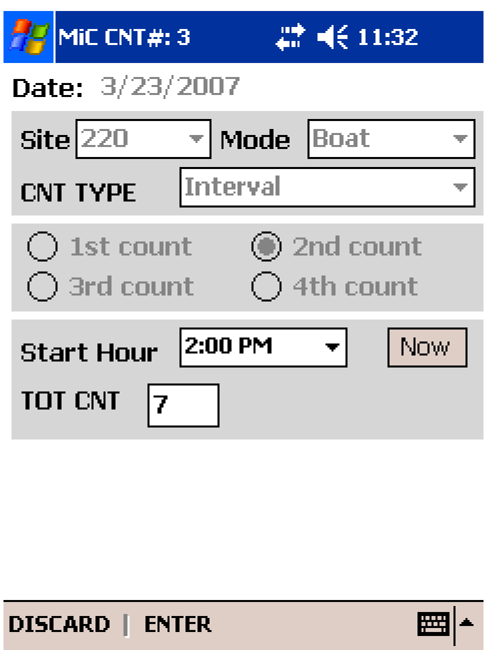




Edit a count record:

Tap on a row with a "!" mark on the to-do list twice will bring up the **Count** window. You can change the start time and the count on this window.





Appendix

Transferring data from a PDA to a desktop

To transfer your data to your desktop PC, you need first to connect your iPAQ to your PC with the USB cable. **Microsoft Activesync** will start to transfer data between your iPAQ and the PC for selected information.

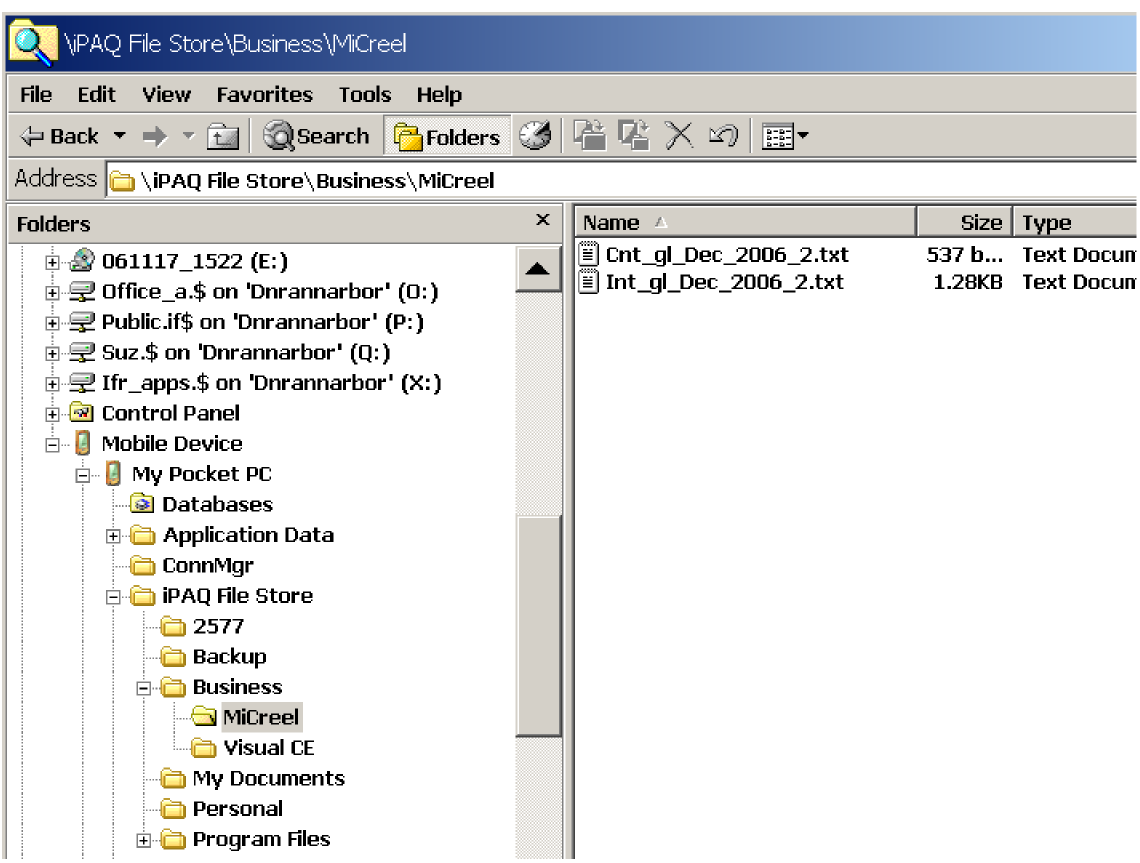
There are two ways to transfer data from your iPAQ to your PC or from your PC to your iPAQ (see the installation section):

- Transfer the files in the **iPAQ File Store** or storage cards with the **Windows Explorer** program on the PC.
- **Activesync** will transfer files in the "**My Documents**" folder of an iPAQ to a PC automatically.

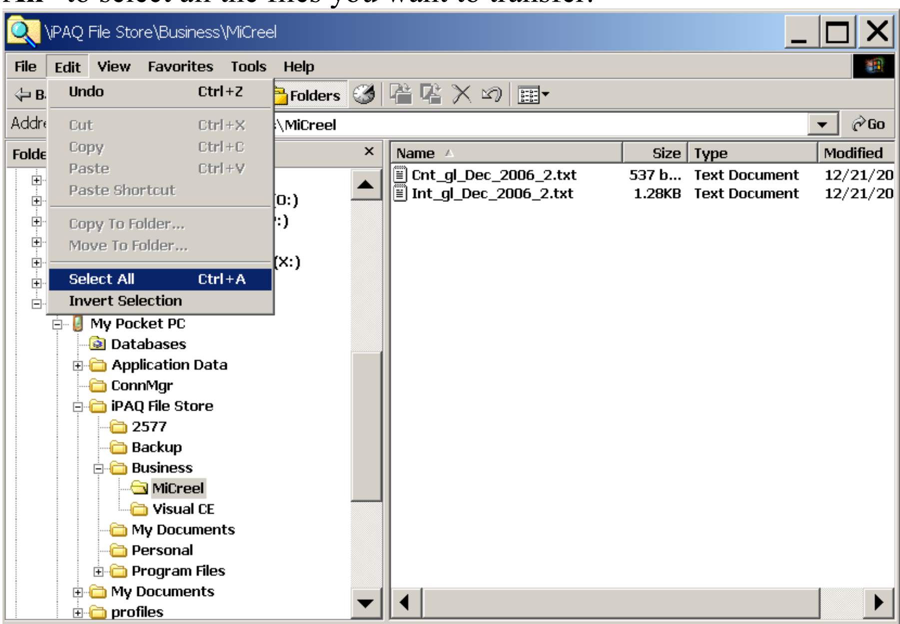
Using Windows Explorer to transfer data

- Be sure Activesync is installed.
- Be sure the USB cable is connected to your PC.

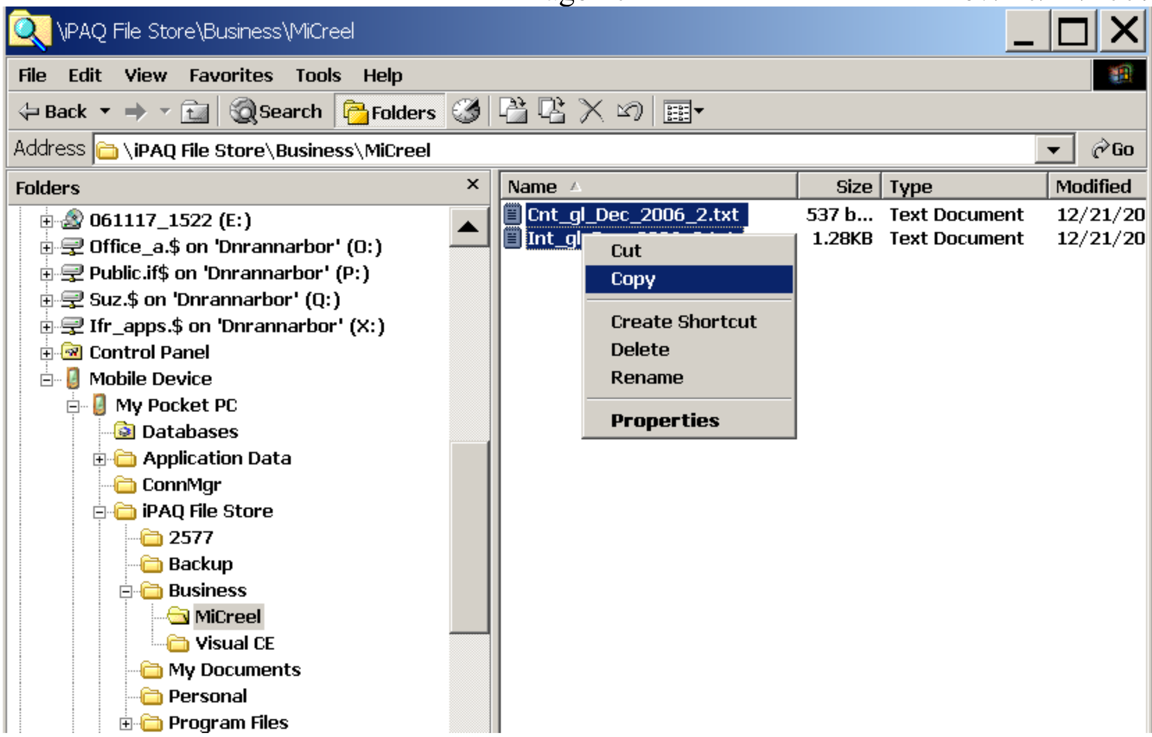
b) Open **Windows Explorer** in your PC and you will see the **Mobile Device** folder.



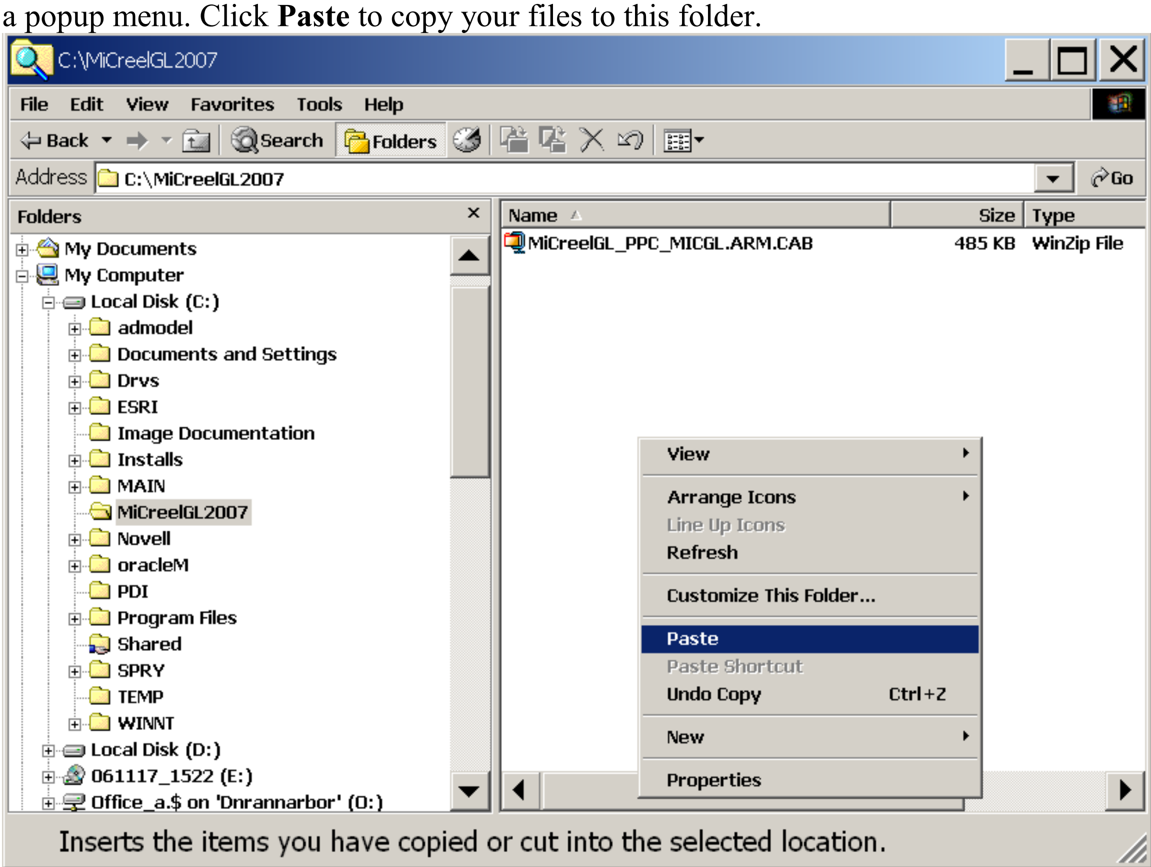
b) Navigate to the **MiCreelGL** folder (**Mobile Device > iPAQ File Store > Business > MiCreelGL**) of your iPAQ to locate your data files. In that folder, click “**Edit > Select All**” to select all the files you want to transfer.

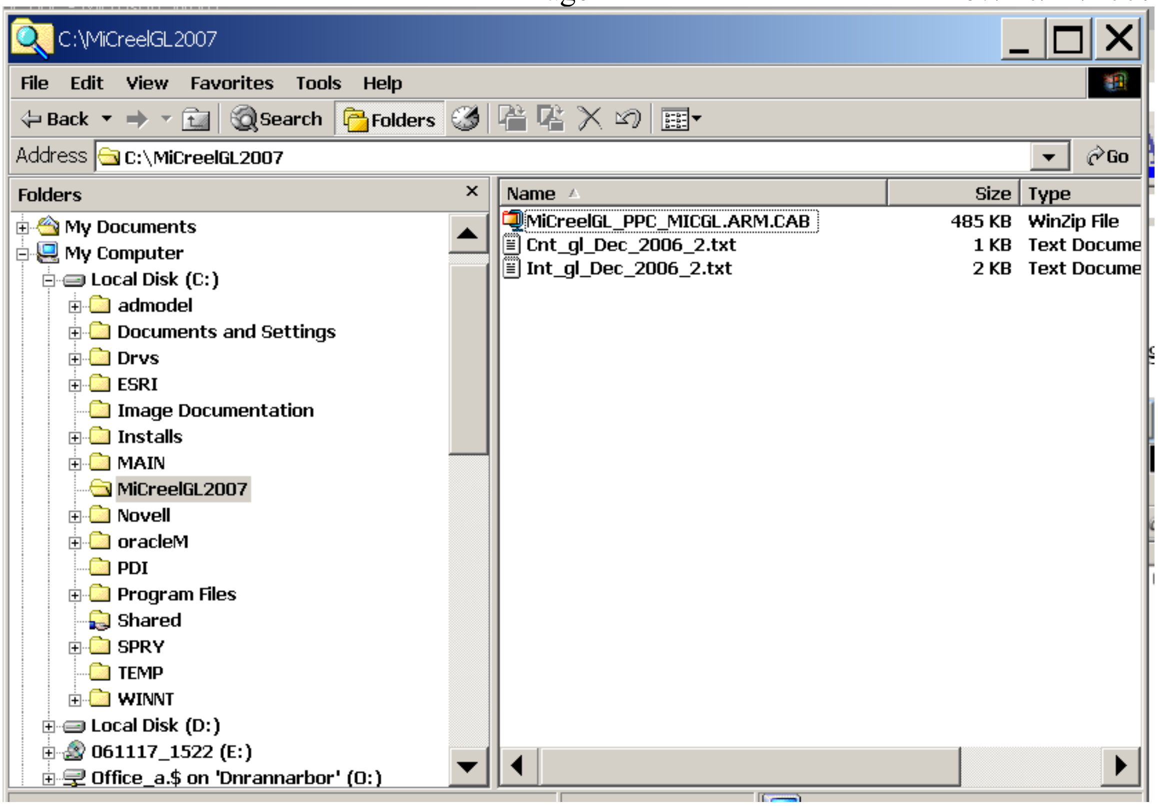


c) Right click your mouse on the selected files to bring up a popup menu, click “**Copy**” to copy the selected files.



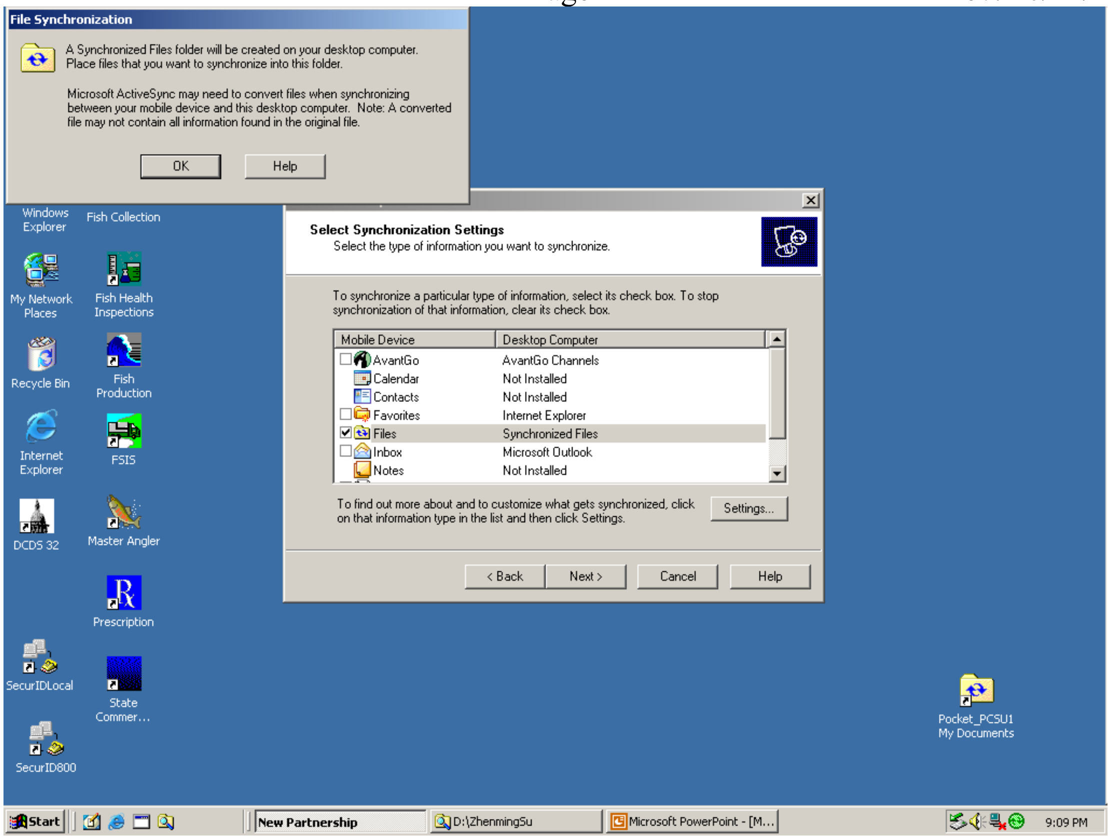
d) Navigate to the **MiCreelGL2007** folder on your PC. Right click the mouse to bring up a popup menu. Click **Paste** to copy your files to this folder.





Data files in storage cards can be transferred in the same way.

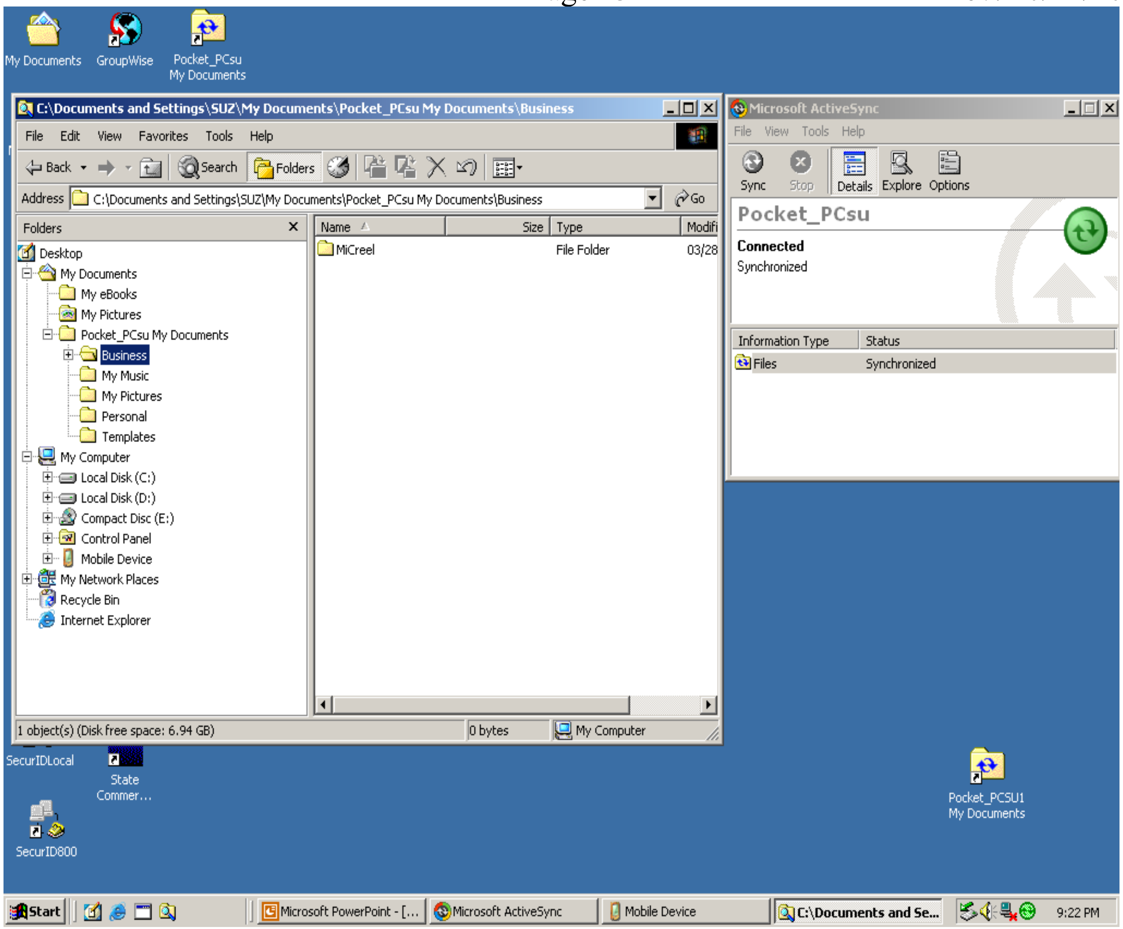
Using Activesync to synchronize files to your PC
Start **Activesync** on your PC. Click **Options** on the Activesync toolbar.
• Under the **Sync Options** tab, Select **Files.**



• Click **OK.**

Files in the "**My Documents**" folder on your iPAQ will be transferred to **My Documents** on your PC in a folder named similar to "Pocket_PCxxx My Documents".

Illustrate the **Pocket_PCxxx My Documents** folder on your PC:


My Documents
GroupWise
Pocket_PCsu My Documents
C:\Documents and Settings\SUZ\My Documents\Pocket_PCsu My Documents\Business
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Documents and Settings\SUZ\My Documents\Pocket_PCsu My Documents\Business
Go
Folders
Desktop
My Documents
My eBooks
My Pictures
Pocket_PCsu My Documents
Business
My Music
My Pictures
Personal
Templates
My Computer
Local Disk (C:)
Local Disk (D:)
Compact Disc (E:)
Control Panel
Mobile Device
My Network Places
Recycle Bin
Internet Explorer
Name Size Type Modifi
MiCreel File Folder 03/28
1 object(s) (Disk free space: 6.94 GB)
0 bytes
My Computer
Microsoft ActiveSync
File View Tools Help
Sync Stop Details Explore Options
Pocket_PCsu
Connected
Synchronized
Information Type Status
Files Synchronized
SecurIDLocal
State Commer...
SecurID800
Pocket_PCSU1 My Documents
Start
Microsoft PowerPoint - [...
Microsoft ActiveSync
Mobile Device
C:\Documents and Se...
9:22 PM

Storage space for data on PDAs

There are two kinds of storage space on an iPAQ: persistent and volatile.

Persistent: iPAQ File Store
Data stored in the file store will not be lost if the batteries discharge completely or if you perform a hard reset.

External storage cards can also be used to store your data permanently.

Volatile: Internal Memory (RAM, random access memory)
All settings, programs, and data from RAM will be erased after a **hard reset**. A **soft reset** does not erase the data in RAM.

Keep your PDA charged so you don't lose information and the ability to use MiCreelGL Assistant.

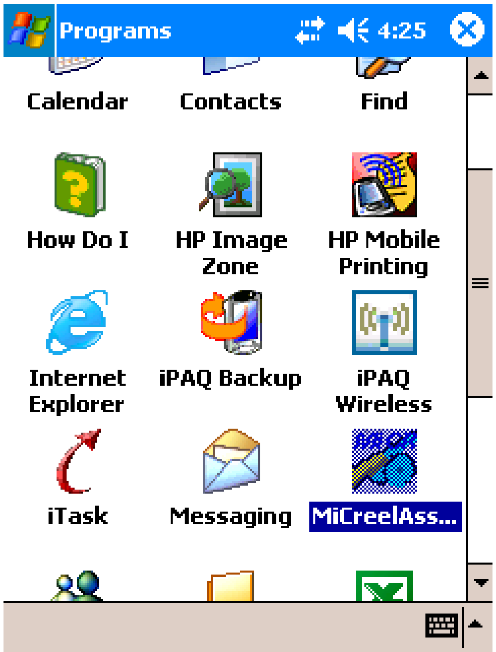
The program is installed in RAM by default. That means when the batteries die the program will also be erased and will need to be re-installed.

Backup and restore your PDA

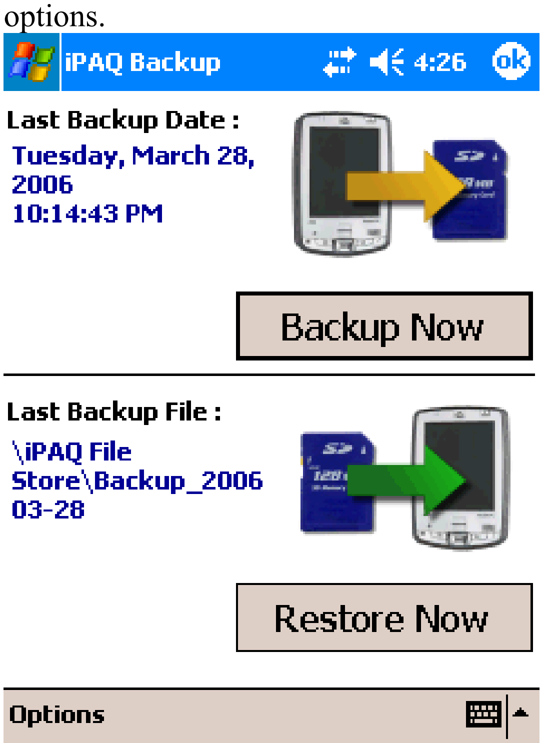
One way to save you from losing data or from the trouble of resetting your PDA is to backup all the information in RAM with the **iPAQ Backup** program.
- You can backup all the information in RAM with the **iPAQ Backup** program.
- You can restore all the information to the PDA if you have battery problems. After restoration, the settings (such as password, personal profile, etc.) will be restored. All the user programs will be re-installed automatically.
- BEWARE that the old data backed up will overwrite newly entered data or settings.

Here are several screen shots demonstrating how to use iPAQ Backup to backup and restore your iPAQ:

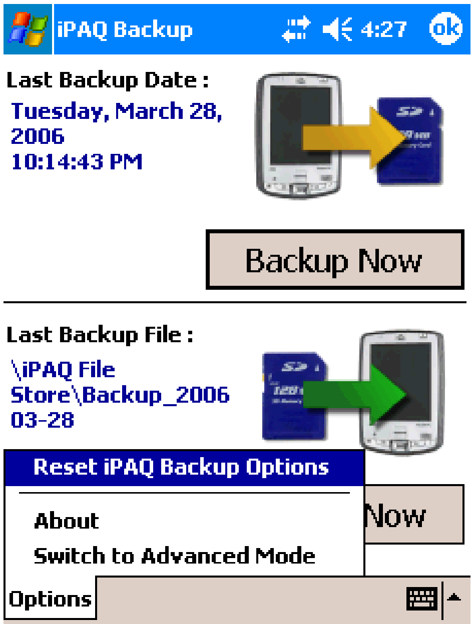
(a) **iPAQ Backup** is located in **Programs**.



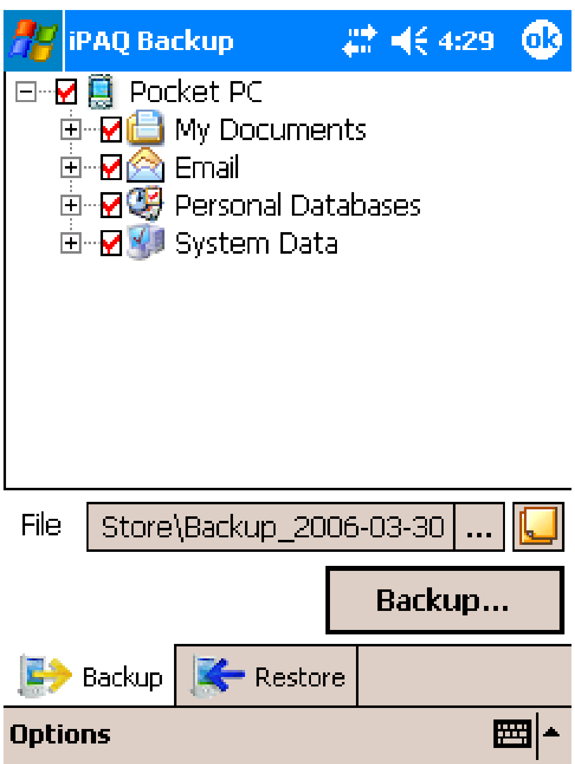
(b) With **iPAQ Backup** is open, tap **Backup Now** to backup your iPAQ with the default options.



(c) **Switch to Advanced Mode**.



(d) In the **Advanced Mode**, you can exclude some contents you don't want to backup.



You need to reset the date and time every time your PDA loses power or you perform a hard reset!!!