identiMetrics™

Biometric Identification at Your Fingertips

USER'S GUIDE
identiFi™ and identiFi Pro™
Version 1.6.1

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TABLE OF CONTENTS

OVERVIEW

identiFi is a middleware application that brings the security, accuracy and convenience of biometric identification to any application that accepts standard text input from a keyboard or other device simulating a keyboard (barcode scanners, swipe cards or PIN pads) or that reads standard text input from a serial port. Simply install identiFi, plug in the scanner, enroll the people and start using your application. identiFi starts working immediately to provide accurate and speedy identification to your application.

When identiFi "scans a finger", it performs a series of complex tasks that convert the raw image of a finger into a set of numbers called a template. First, the image is scanned by the scanner and enhanced using sophisticated image enhancement techniques like those used in high-end digital photography. Then, the image is analyzed to find special features of the image called minutia. Utilizing the minutia points and the curves that join them, a mathematical model of the image is created, digitized and stored in an encrypted template. To ensure the privacy of the individuals using identiFi, we do not store the image and it is not possible to recreate the image from the template.
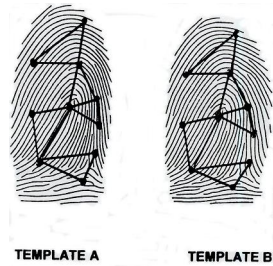
There are three applications involved in the identification process: identiFi, ScanMan and the Host.

identiFi is the application that provides the Identification Service to the Host application. Identification is the process of scanning a finger and searching the database to determine if there is a matching finger. Then, identiFi reports the results of the search to the Host application for the appropriate processing. However, before a person can be identified, they must first be enrolled. Enrollment is the process of scanning one or more fingers and associating them with a particular person. So, in addition to providing identification services, identiFi also acts as the Enrollment Station. identiFi can run as a standalone application on a single computer utilizing its built-in ScanMan or can act as a server to many ScanMan applications in a networked environment.

The ScanMan application manages the interaction between the scanner, the user, identiFi and the Host Application. It displays status messages to the user about finger placement, retrieves the scan from the scanner and sends it to identiFi. It also sends the response to the Host Application. A ScanMan must be running for each scanner that is in use. The combination of a scanner and a ScanMan is called a Scan Point or Scanner Location. A Scanner Location is referred to as "local" if the scanner is on the same computer as identiFi and is referred to as "remote" when the scanner is on a different computer.

The Host Application is the application to which identiFi will send the identification results. identiFi works with many different applications. To keep the documentation simple, we refer to them collectively as the Host Application.

IDENTIFI

identiFi is the Identification Service and Enrollment Station. In most cases, you install it, plug in the scanner and it's ready to use. However, you can also configure identiFi in a variety of ways depending on the needs of your environment, the Host Application and your individual preferences.

Note: *Although there are many settings that affect the look-and-feel of the identiFi and ScanMan windows, all of the screen shots were made using the standard configuration settings unless noted otherwise.*

Preparing to Use the Application

Read the **IdentiFi – Installation Guide** in the *Documents* folder on the installation CD and then install identiFi. After you have completed the installation, use this document to learn about the many features available and how to use them. We start with an overview of the files, folders and shortcuts placed on your computer during installation.

Files

The files that are installed with identiFi are organized into two groups, Installation files and Application files. Installation files are files that can be created or modified by the user or the application. The Application files are files that cannot be modified and includes the executable itself.

The Installation files are installed in the folder that you select during the install. You can select the default folder or provide one of your own. The default folder on Windows 2000 and XP is *C:\Program Files\identiMetrics* and on computers with Windows Vista, the default folder is *C:\Public\Documents\identiMetrics*. The Windows user who runs identiFi will have to have full access to the folder you select.

On Windows 2000 and XP the Application files are installed in the folder where the Installation files are installed. However, when installing identiFi on Windows Vista the Application files will <u>always</u> be installed to the *C:\Program Files\identiMetrics* folder.

Here is a list of the Installation files and related folders:

- *identiFi.exe* – The identiFi application.
- *Docs* – This folder contains the installation, user and troubleshooting guides.
- *Drivers* – This folder contains the files needed to install the device drivers for the many scanners that we support.
- *Utilities* – This folder contains additional files and programs that may be helpful when using identiFi.
- *identiFi_files* – This folder contains the Help files used by identiFi.
- *identiFi-Licensing_files* – This folder contains the Licensing Help files used by identiFi.

Here is a list of the Application files and related folders:

- *identifi.cfg* – This text file contains the configuration settings for identiFi. If you upgraded from a previous version of identiFi, then this will contain the new settings and will contain any custom settings you had made in the previous version.
- *identifi.cfg.std* – If you upgraded from a previous version of identiFi, then you will also see this file. It is the standard configuration file that would be installed by the new version of identiFi.
- *upgrader.log* –This file contains the status history of running the upgrader application and is only used for troubleshooting.
- *scannerinstall.log* – This file contains the status history of running the scannerinstallation and is used for troubleshooting.
- *SampleImport.csv* – This file is a sample import file using a comma separator and no quotes.
- *Database* – This folder contains the files that comprise the identiFi database.
  - o *identdata.idb* – This file is part of the database that contains the enrollment information and other internal data.
  - o *Bio* – This folder is the second part of the database that contains the biometric data for each enrolled person.
- *Backups* – This folder contains the backup subfolders. Each subfolder is named with the date that it was created.
  - o *Backup-MMDDYY(-#)* – This folder contains a backup of the database. It is created whenever you request a backup or use any of the other Admin functions. Each backup folder is named using the current date and may have a hyphen and number if more than one backup is performed during the same day.
- *Transfers* – This folder contains the transfer subfolders. Each subfolder is named with the date that it was created.
  - o *Transfer-MMDDYY(-#)* – This folder contains a transfer database. It is created whenever you run the Admin Transfer function. Each transfer folder is named using the current date and may have a hyphen and number if more than one transfer is performed during the same day.
- *Sounds* – This folder contains a collection of custom sound files that are used by ScanMan and the built-in ScanMan to indicate a successful scan, a successful identification or a failed identification.

Shortcuts

The installation also creates several shortcuts to make it easier to access the program, documentation and training materials. A shortcut to *identiFi.exe* and the *Docs* folder is placed in the identiMetrics program folder. This is accessible by clicking on **Start, All Programs** and then on **identiMetrics**. If you chose to install the Training Materials, the shortcut to the *Training Materials* folder is also located here.

Shortcuts to *identiFi.exe* and the Training Materials are placed on the Desktop. The Training Materials shortcut opens a browser page that provides the name and description of the available documents and videos with a hyperlink to each one.
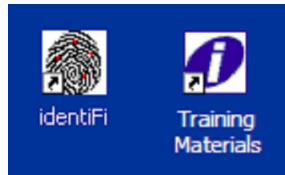
A shortcut to *identiFi.exe* is also installed in the Startup program folder. . This is accessible by clicking on **Start, All Programs** and then on **Startup**. This shortcut tells Windows to start identiFi automatically whenever your computer is turned on or restarted.

Note: *If you don't want identiFi to start automatically each time you start Windows, you can delete the shortcut from the Startup folder.*

Starting the Application

By default, identiFi will run automatically when your computer is turned on or restarted. If you close identiFi and wish to restart it, you can double-click the Desktop icon, or follow these steps:

- Click the **start** button on the Windows toolbar.
- Click on **All Programs** from the menu.
- Click on **identiMetrics** folder.
- Click on the **identiFi** item.

Interacting with the Application

identiFi provides a user interface to manage the enrollment information, monitor the status and activity of connected scanner locations and manage the operation of identiFi itself.

Here is a screenshot of identiFi with the built-in ScanMan window open, waiting for a finger placement.
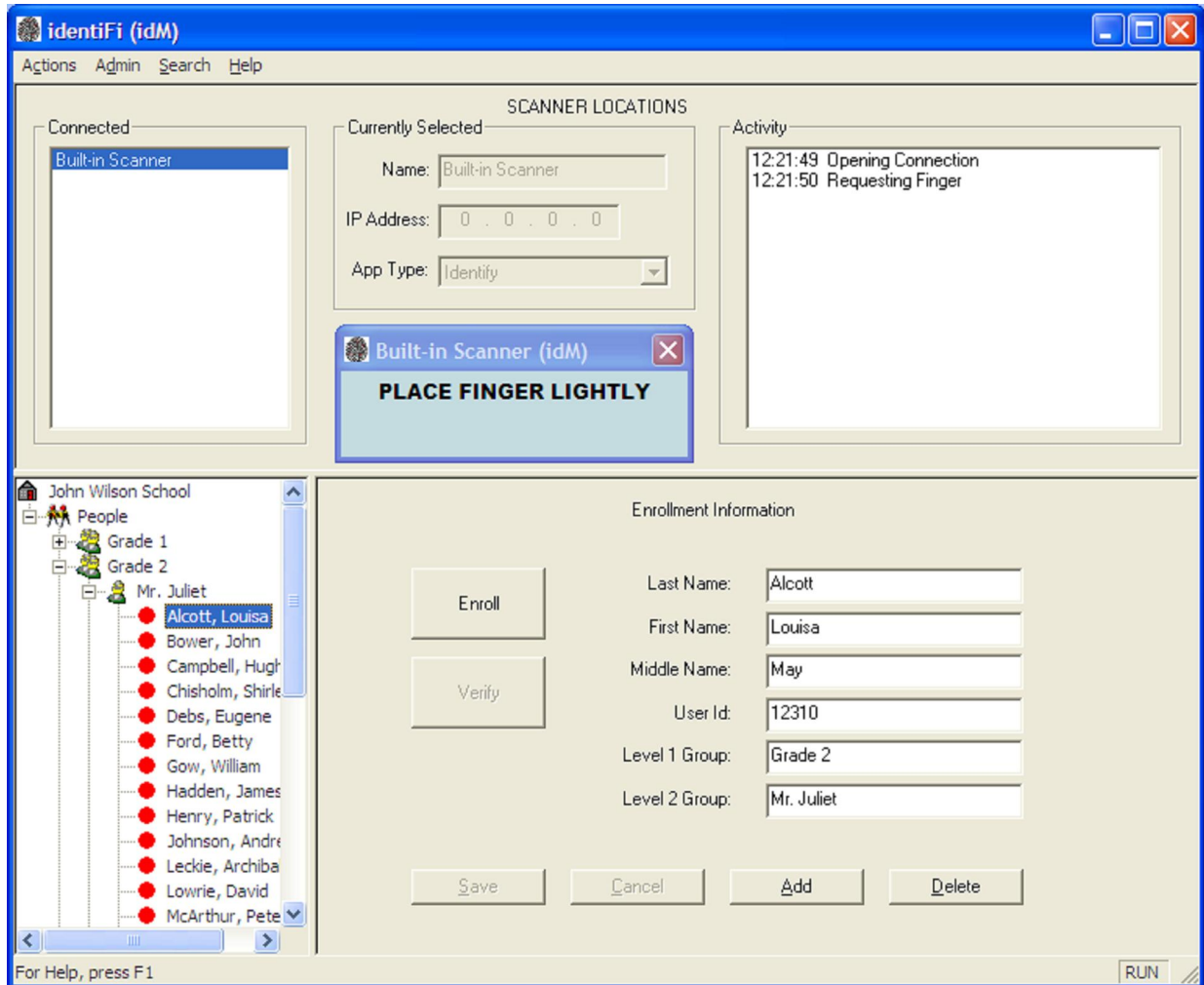
The user interface is divided into three main sections: the Main Menu; the Server Section and the Enrollment Section. The Main Menu contains the Actions, Admin, Search and Help menu items. These are discussed in depth throughout this document.

The large section immediately below the Main Menu is the Server Section and it reflects the activity of the Identification Server. This section is described in more detail in the **Monitoring the Scanner Locations** section of this document.

The bottom section is the Enrollment Section and is devoted to managing the enrollment information. It is divided into the Selection View on the left and the Form View on the right. This section and the views are described in more detail in the **Managing the Enrollment Information** section of this document.

Licensing the Application

identiFi requires a license key to run and is licensed for a specific computer. However, to make it easy for you to get started, identiFi will run for 45 days after installation without a key.

Each time you start identiFi during the grace period, this message box will be displayed reminding you to get your license key and install it before the grace period expires.
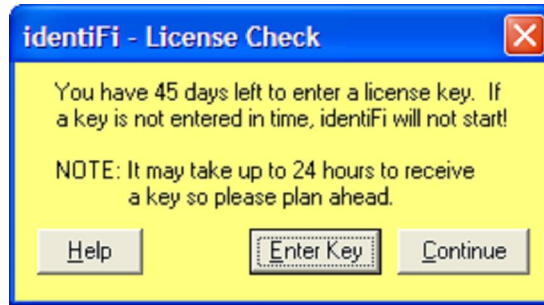
Note: *Once the grace period has expired, the following message will be displayed. Clicking on the **Continue** button will simply exit identiFi.*
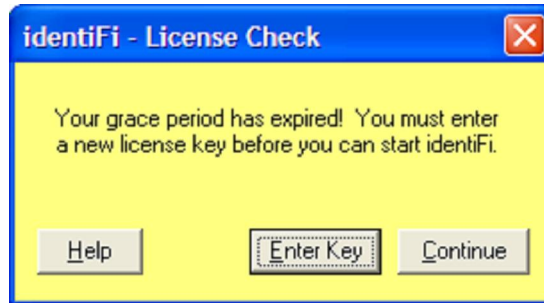
To get a license key, you need to register your installation with identiMetrics, Inc. Click on the **Enter Key** button to display the Enter Key dialog shown below. If you choose not to register identiFi at this time, click on **Continue** and identiFi will start and operate normally until the grace period ends.
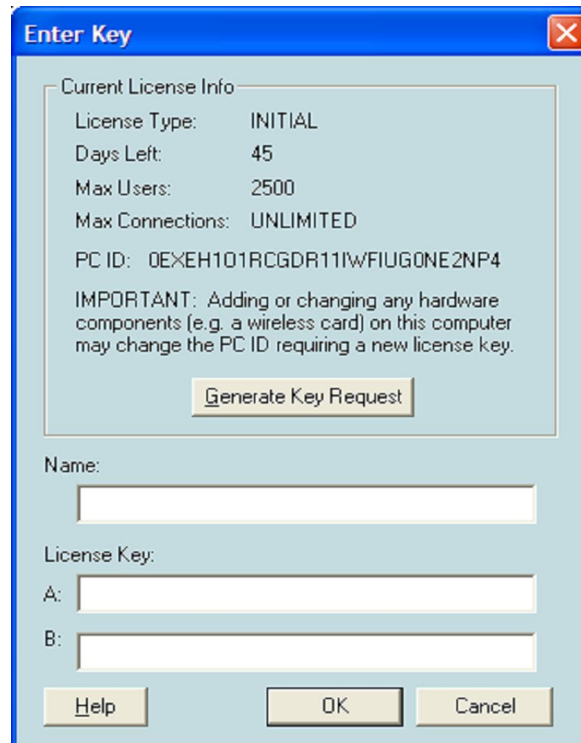
The first step to register identiFi is to click on the **Generate Key Request** button which will display a key request form in Notepad.
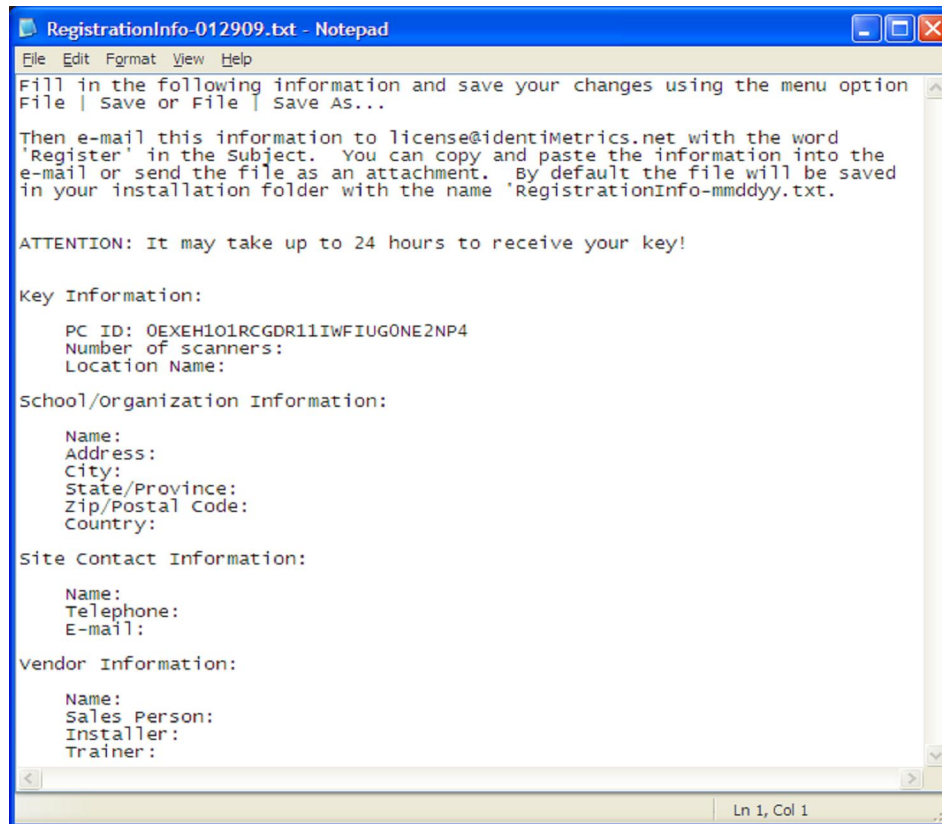
Once you have filled in all the items on the form, save your changes by selecting the **File | Save** menu item. If you want save the file in another location or rename it, then use the **File | Save As…** menu item.

The second step is to send an e-mail to license@IdentiMetrics.net with 'Register' as the subject and the information you just typed as the body. You can copy and paste the text from the Notepad window into your e-mail or you can simply attach the file to the e-mail and send it off.

The last step will be to copy your registered Name and Key values from the e-mail reply and paste them into the **Enter Key** dialog and click on **OK**. identiFi will be registered and will no longer display the License Key warning message when starting. It may take up to 24 hours to receive your key, so plan ahead.

If you wish to exit the **Enter Key** dialog while you're waiting for your key, click on the **Cancel** button and identiFi will continue its normal startup.

IMPORTANT: Adding or changing any hardware components (e.g. a wireless card) on the licensed computer may change its PC ID and require a new license key.

Note: *Don't worry if you are not sure how many scanner locations you will use in the future, you can upgrade your license key at a later time when you purchase additional scan points. Simply send an e-mail to license@IdentiMetrics.net with 'Upgrade' as the subject and indicate the new information in the body of the email.*

Managing the Enrollment Information

The Enrollment Section is the section of the interface that is used to manage the information associated with each person in the identiFi database. When the Security Option is on this section is hidden until a user logs in. The left side, the Selection View, displays the list of names of each person grouped by their level and sorted alphabetically. The right side, the Form View, displays different forms depending on what item is highlighted in the Selection View.
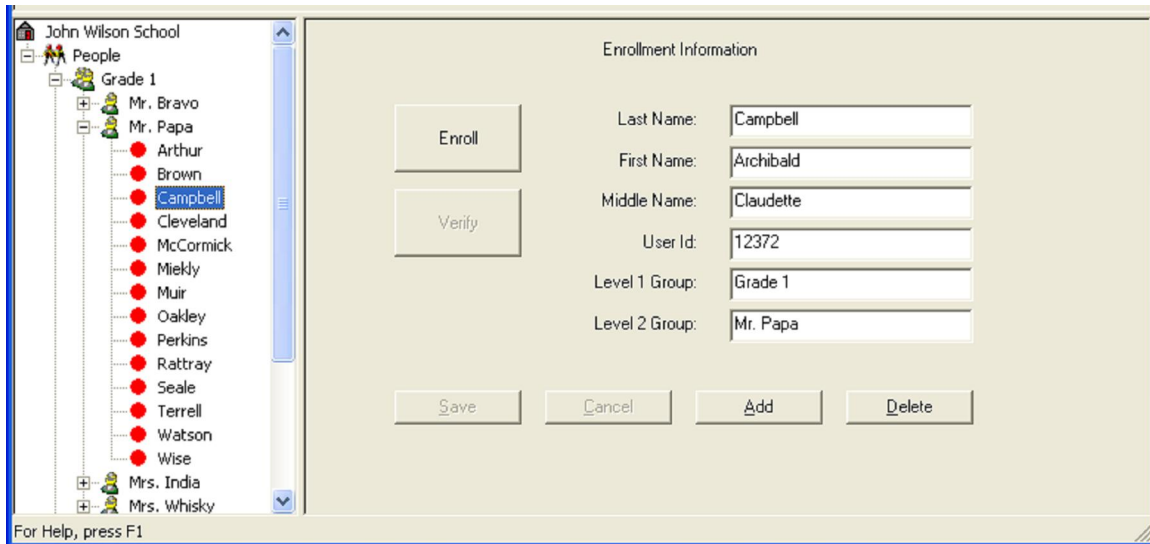
The following sections describe how to use the two views to add enrollment records, to enroll people, to verify an enrollment and to view and modify existing records.

The Selection View
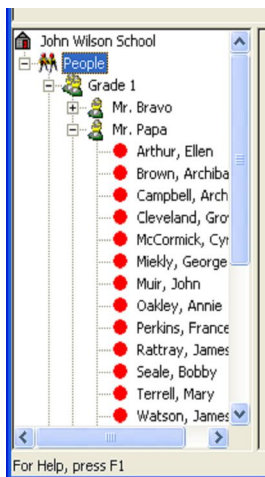
The Selection View provides an easy way to find and select a specific individual. To find an individual, expand the appropriate levels until the person is visible by clicking on the **+** symbol next to the level. For example, clicking the **+** next to **People** will show all of the Level 1 items such as Grade 1, Grade 2, etc. Clicking the **+** next to **Grade 1** will display all the Level 2 items that it contains, **Mr. Bravo** and **Mr. Papa** in this example. Clicking the **+** on any of the Level 2 items will show the list of people in that group. Select a person by clicking on the name directly or by moving through the list using the up and down arrow keys. You can also type a letter to move to

the next item in the list whose first character matches. The Selection View provides an easy to read indicator showing whether or not an individual is enrolled. A red dot ● indicates that they are not enrolled and a green dot ♣ indicates that they are. Right-clicking on a group item displays a popup menu that lets you perform one of the admin functions on that group.
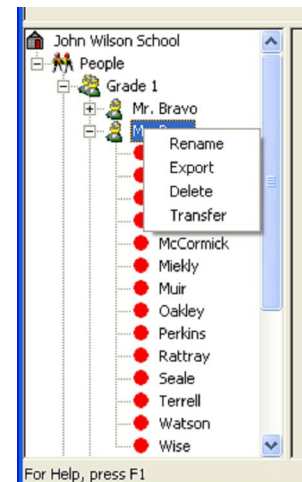
The Form View

The **Form View** appears to the right of the **Selection View** and is used to display detailed information relating to the selected item. Each form allows you to modify the information being displayed and provides buttons for each available action. Here are descriptions of each of the different forms and when they are displayed:

The Main Form

The **Main** form is shown when the top-most item in the Selection View is highlighted. It displays the two fields that describe the owner of identiFi. The labels 'Organization' and 'Group' can be changed by changing the settings in the configuration file (see the **Configuration** section for more details).
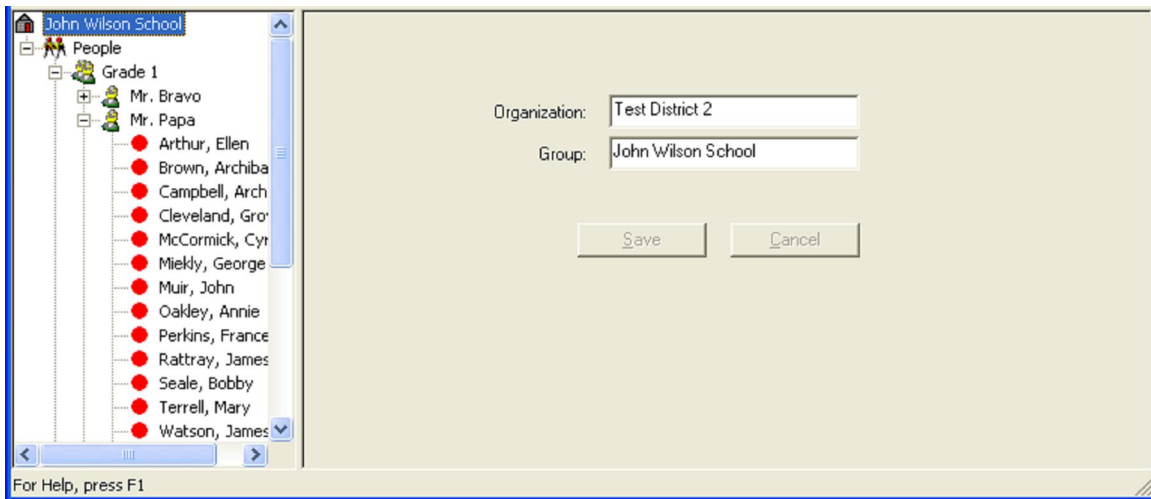
Enrollment Information Form

The **Enrollment Information** form is displayed when a person's name is highlighted in the Selection View. It displays the individual fields for the selected person and provides action buttons for enrolling and verifying. It also provides several buttons for editing.
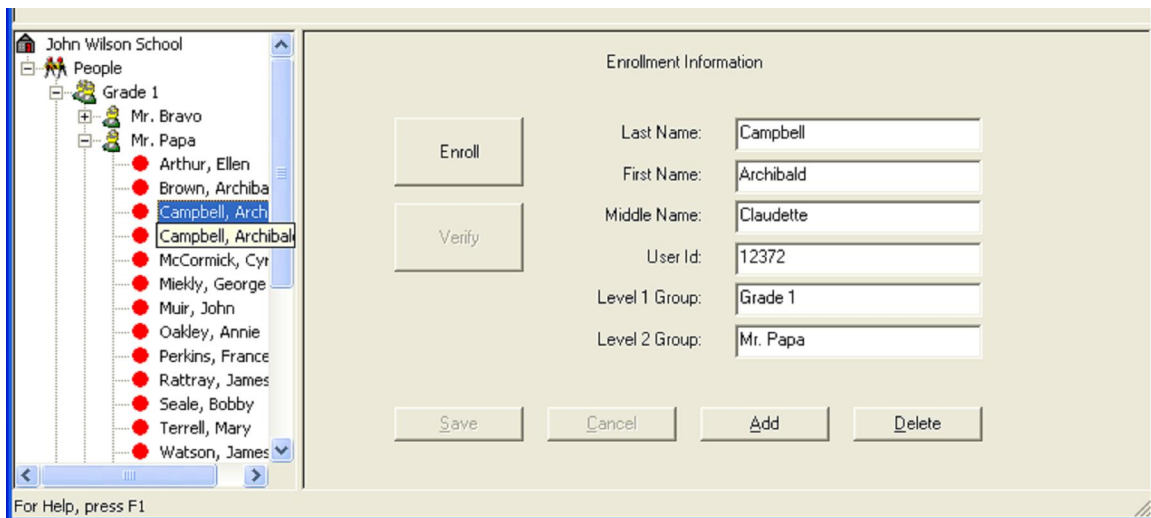
Add Enrollment Information Form

The **Add Enrollment Information** form is displayed when the **People** item is selected and is only used to add individual people to the database. After adding a new record, the form is cleared to make it easy to add several unrelated records at one time.

Adding An Enrollment Record

Click the **Add** button to get things started. If you're on the **Enrollment Information** form, the fields will be cleared except for the two Level fields. If you're on the **Add Enrollment Information** form, then all fields will be cleared. The cursor is moved to the **Last Name** field and the **Save** and **Cancel** buttons are enabled. Enter the desired data and click the **Save** button to add the information to the database. If any required fields are missing or the **User Id** field is not unique, a message is displayed and the error will have to be corrected. If you're on the **Enrollment Information** form, the new person will become the current selection in the Selection View. Clicking the **Cancel** button at any time will discard any data entered and return to the form to its previous state.

Each person's enrollment record includes the following fields:

- **Last Name** – Required field
- **First Name** – Required field
- **Middle Name** – Optional field
- **User Id** – Required field which is the ID value that identiFi will send to the Host Application. This value must be unique for all people in the database.
- **Level 1 Group** – Required field that is the first level in the hierarchy used to group and display people. This can be any text you wish. All people that have the same **Level 1 Group** value will be listed under that group in the Selection View.
- **Level 2 Group** – Required field that is the second level in the hierarchy used to group and display people. This can be any text you wish. All individuals that have the same **Level 1 Group** and **Level 2 Group** values will be listed together under that group in the Selection View.

10

Level 1 and **Level 2** values are used to organize your people and are usually setup to enhance the enrollment process. The best way to understand how this works is with an example. Let's assume that we have a school where every student is assigned a homeroom that they attend before starting regular classes and we are going to go to each homeroom and enroll the students.
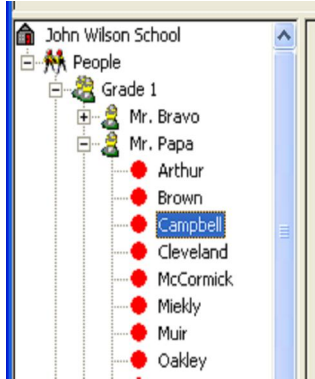
We are going to set **Level 1** to be the grade and **Level 2** to be the teacher name. The figure at the left shows how this would look in the Selection View. The highlighted item would have a **Last Name** of *Campbell*, a **Level 1** of *Grade 1* and a **Level 2** of *Mr. Papa*.

Another option would be to use Students, Teachers and Staff as the **Level 1** groups and then use letters or letter groups (e.g. A, B, C-F, etc.) as the **Level 2** groups. This would be useful if you were going to do your enrollments alphabetically instead of by class.

Deleting and Modifying an Enrollment Record

Editing functions are provided by the **Delete**, **Save** and **Cancel** buttons and are performed as follows:

To delete a person, click on the person's name to highlight, then click the **Delete** button. A message box will be displayed to verify that you really want to delete the currently selected person. Clicking the **Yes** button will cause that person to be removed from the database and the selection list. In addition, it will move the current selection to the next person in the list if there is one or to the previous person if there isn't. Clicking the **No** button will stop the delete.

To modify an existing record, you simply edit any or all of the fields on the form and click the **Save** button. If any required fields are missing or the **User Id** field is not unique, a message is displayed and the error will have to be corrected. If you're on the **Enrollment Information** form, the new person will become the current selection in the Selection View. Clicking the **Cancel** button at any time will discard any data entered and return to the form to its previous state.

Enrolling

Enrollment is the process of scanning two fingers and associating them with a person. The quality of the images scanned during the enrollment process is crucial to error free identifications. It is highly recommended that you keep the default settings for the **Number of Placements** option (3) and the **Verify On Enrollment** option (checked) in the **Options** dialog box (see the **Admin | Options Menu Item** section).

The steps of the enrollment process are:

- Click on the person's name that you want to enroll.
- Click on the **Enroll** button. This will automatically select the built-in scanner. The **Connected** box in the Server Section will reflect this. However, if the built-in

scanner is not connected, you will not be allowed to continue. See the **Actions | Start Built-in ScanMan Menu Item** section for more info.

- Place the index finger flat and gently in the center of the scanner with the tip of the finger touching the top of the scan area. If it's necessary to move the finger to find the best scan location, lift and place it again instead of sliding it.

- Follow the placement directions shown in the ScanMan window.

- A sound is played once the finger image has been successfully scanned. After hearing the sound, lift the finger slightly and then replace it gently on the scanner until all scans for that finger are complete. It is not necessary to move the finger very much between each scan or to press hard.

- Do the same thing for the other finger. The directions in the ScanMan window will guide you.

- If **Verify On Enrollment** is checked, the person will then be asked to place each finger on the scanner one time to verify that they can be identified successfully.

- If the verify fails while placing either finger, a message box will be displayed indicating that the enrollment failed. Click **OK** and restart the enrollment.

- A message box will appear when the enrollment process is complete.

- If you try to start a different operation at any point during the enrollment steps, you will see the following warning. Click **OK** and complete the enrollment.
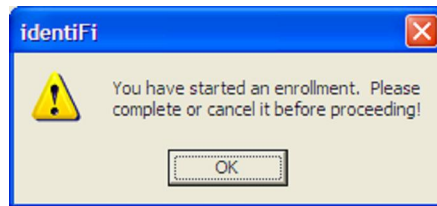
- You can stop the process at any point during the enrollment by clicking on the **Cancel** button on the Enrollment Information form.

Verifying and Re-enrolling

Verification consists of scanning two fingers and comparing it to the stored templates of this person only.

The steps of the verification process are:

- Click on the person's name that you want to verify.

- Click on the **Verify** button. This will automatically select the built-in scanner. The **Connected** box in the Server Section will reflect this. However, if the built-in scanner is not connected, you will not be allowed to continue. See the **Actions | Start Built-in ScanMan Menu Item** section for more info.

- Place the index finger flat and gently in the center of the scanner with the tip of the finger touching the top of the scan area. It may be necessary to move the finger in order to find the best scan location.

- Follow the placement directions shown in the ScanMan window.

- You will hear a sound when each finger is scanned successfully.

- If the verify fails, you'll be asked if you want to re-enroll. If you choose **Yes,** then the enrollment steps will be repeated. If you choose **No,** then the enrollment will be complete. *However, if you choose **No**, then there is a possibility that you'll have difficulty when trying to identify later.*

- A message box will appear when the verification process is successful.

- If you try to start a different operation at any point during the verification steps, you will see the following warning. Click **OK** and complete the verification.
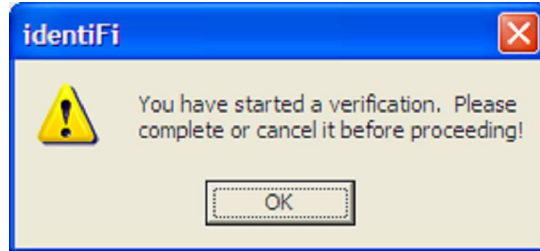
- You can stop the process at any point during the verification steps by clicking on the **Cancel** button on the Enrollment Information form.

Note: *It is recommended that the **Verify On Enrollment** option is checked so that verification is performed for each enrollee at the time they are enrolled in order to minimize the number of problem scans while identifying. However, if you're enrolling very young users you may encounter difficulty with the Verify On Enrollment. If the young users successfully enroll but consistently fail to Verify, uncheck (turn off) the Verify On Enrollment and enroll without it.*

Modifying the Owner Information

To modify either of the fields on the **Main** form, you simply edit as desired and click on the **Save** button. Clicking **Cancel** will discard any changes.
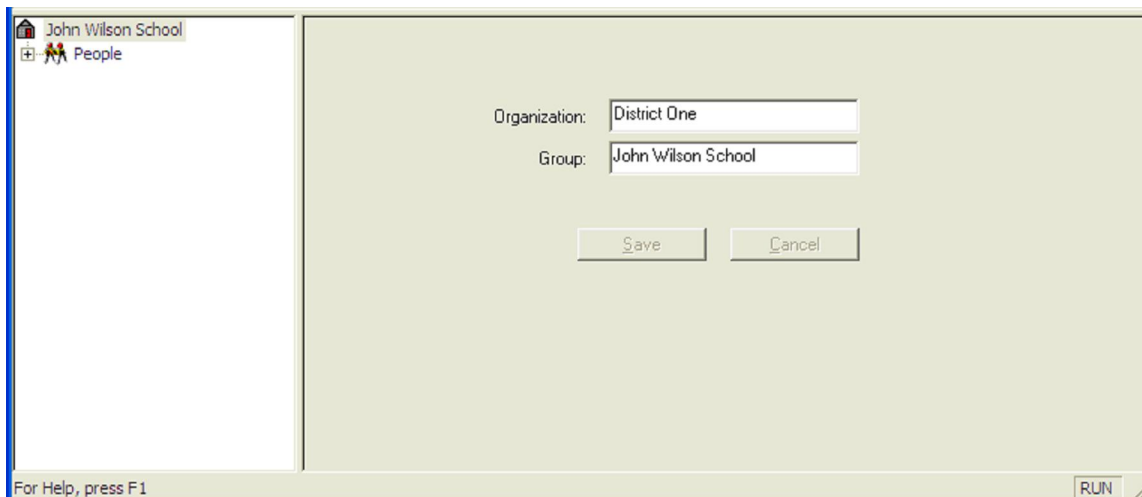
Importing Enrollment Records

Importing is the process of populating identiFi's database with a group of enrollment records instead of adding them one at a time. The information is provided in a specially

formatted text file that is typically created by another software program that has already collected the data. This is done when you first setup identiFi or at any other time when you have to add a large number of records at one time. Even if you have to create this file yourself, it's generally much easier to type the data all at once instead of adding them one-by-one in identiFi.

In order for identiFi to import the data successfully, the data must be in a standard ASCII text file and must be in the correct format. The file can only contain enrollment records (i.e. not header records) and there can only be one person's record per line. If you are simply adding records or doing minor updates then you can use the basic format. If you want to modify your data in more complicated ways, you can use the command format. See **Appendix C** for the details of the command format.

The basic format is as follows:

- Each line <u>must</u> contain the fields: **Last Name, First Name, Middle Name, ID, Level 1** and **Level 2**.
- The fields <u>must</u> be separated from each other by either a single **tab** or a **comma and space**.
- If you use the **comma and space** as a delimiter, there can be NO commas in the fields themselves.
- Each field <u>may</u> be surrounded by **double-quotes**. Use these when you are using the **comma and space** delimiter, and one or more of the fields might contain a comma. Without the **double-quotes**, identiFi will get confused by the extra commas.
- If you choose to put **double-quotes** around each field then there can be NO **double-quotes** in the fields themselves (e.g. "O"Malley" would be incorrect).
- The **Middle Name** field can be blank, but you must include the delimiter for that field to act as a placeholder.

Here are some examples of the different format options:

- Adams, Abigail, , 12303, 2, A-E
  This example uses the **comma and space** delimiter without quotes. Notice that the **Middle Name** field has no value, but there is still a **comma and space** there to act as a placeholder.
- "Franklin, Jr.", "James", "A.", "12334", "2", "F-L"
  This example uses the **comma and space** delimiter with quotes. Notice that the **Last Name** field contains a comma. This data must use the **double-quotes** to work.
- Miles   Susan   12445   3   M-Q
  This example uses the **tab** delimiter without quotes. Notice that the **Middle Name** field has no value, but that there is still a **tab** there to act as a placeholder.
- "Star, Jr"   "John"   "David"   "12446"   "3"   "R-Z"
  This example uses the **tab** delimiter with quotes. Notice that the **Last Name** field contains a comma. However, in this example the data does NOT need the **double-quotes** to work because it's using a **tab** delimiter; identiFi won't be confused by the comma.

If you will not be getting your data from another software program, then you can use a text editor, like Notepad, or a spreadsheet program like Excel. If you are using Notepad, you would simply type the data in using one of the formats shown above. Here is an example of how the data might look if you were using a **tab** delimiter and no quotes:
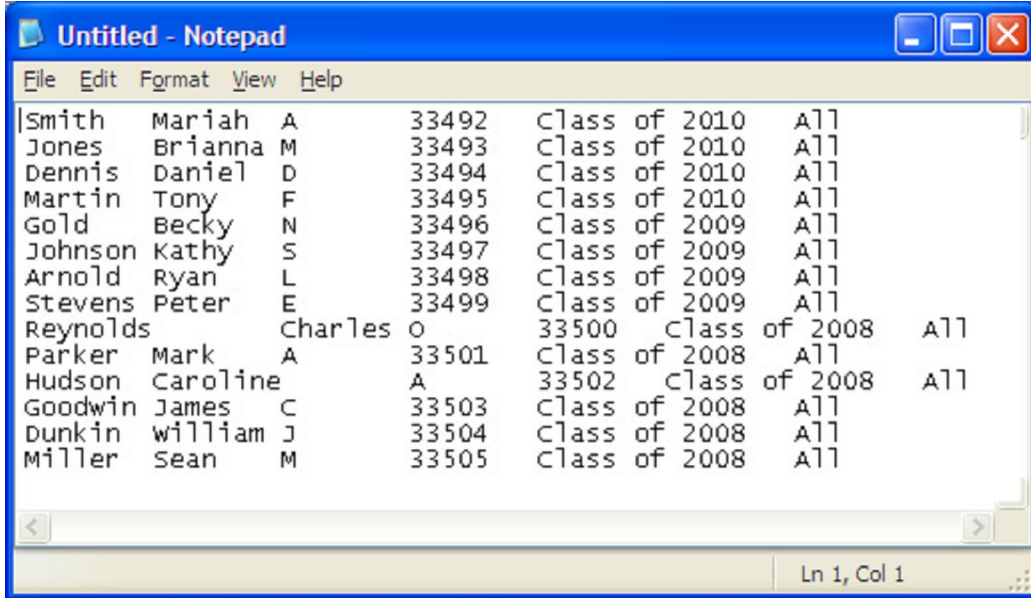
Another approach is to use Excel to enter the data. Then using the **File | Save As…** menu item you can save the data as a CSV (comma separated value) file or as a tab delimited text file. Here is an example of how the data might look in Excel:
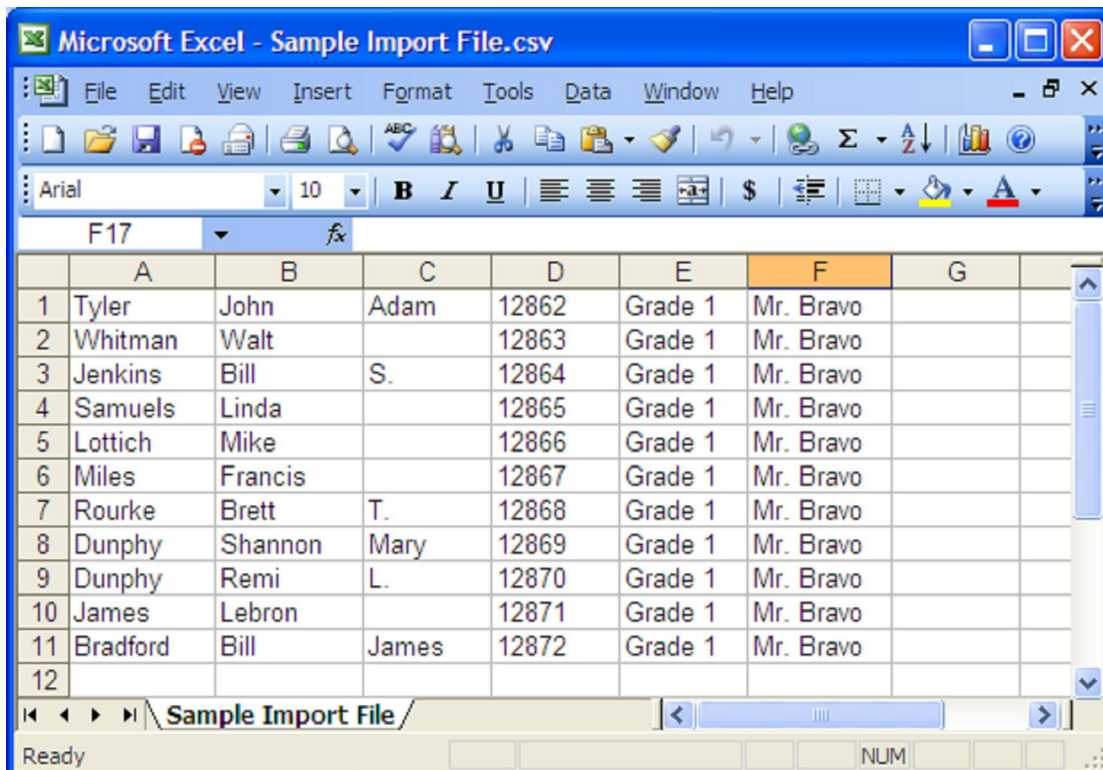
To Import, click the **Admin | Import** menu item. Import performs the following steps:

- Presents a warning message to make sure you are ready to run this function since it may take several minutes to perform.
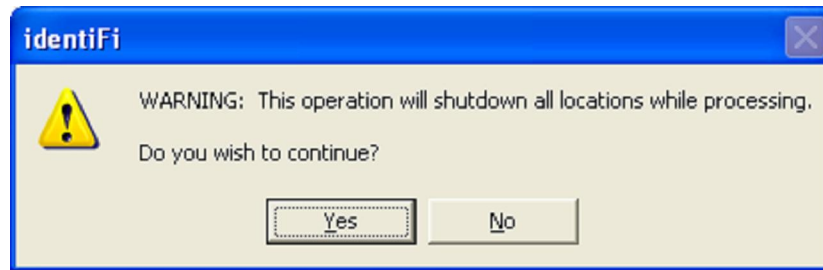
Location Shutdown Warning Message

- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.

- Displays an Open dialog box to select the file you wish to Import. Select a file and click the **Open** button to continue. Click the **Cancel** button to stop the import.
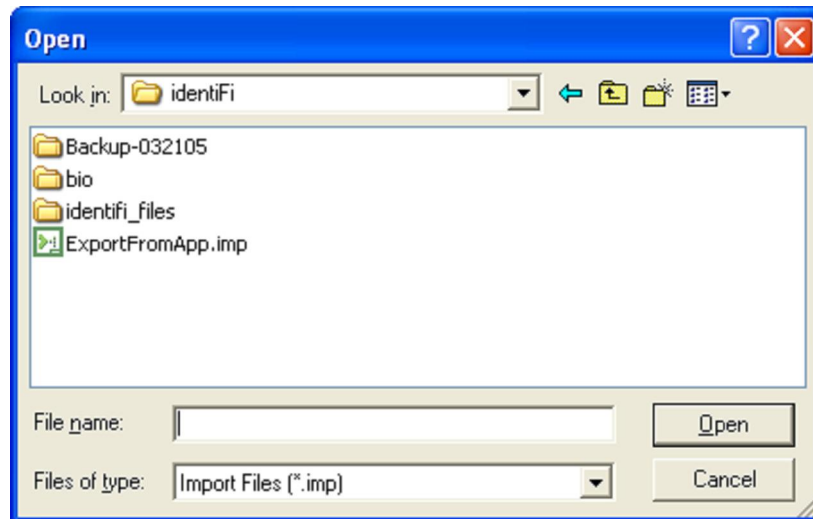
Import Dialog Box

- Displays the **Import Options** dialog box to tell the Import what format the import file is using. You can select either a tab or a comma and space as the delimiter and you can indicate whether the fields are quoted (double-quote character) or not. Remember, these settings must match the format or your import file.
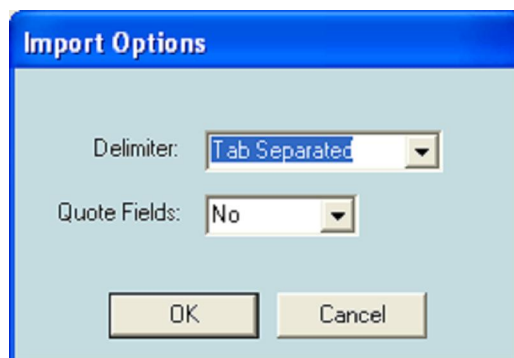
     After selecting, click **OK** to continue the Import, click **Cancel** to stop.

- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then the data will be written to the first file in the sequence.

- Performs a backup as described in the **Backing Up Your Database** section.

- Processes each line from the Import file as described above.

- Displays a message box indicating that the import has completed.

- Restarts the Connection Listener so that the locations can reconnect to the identiFi.

IMPORTANT: If any unusual condition is detected during this function, it will stop processing and display an error message. You should record the message, exit identiFi and contact support before resuming normal operations.

AutoImport Now

AutoImport is a special version of Import and that is used to import a small number of people as an update to the current enrollment. It checks to see if the import file exists. If so, it imports the data and then deletes the file. If the import file is not found, it does nothing. It does NOT do a backup, prompt for a file name, prompt for settings or shutdown the connections. The filename and settings are configured in the *identiFi.cfg* file (See the **Configuring the Application** section for details on using these settings).

To run, click on the **Admin | AutoImport Now** menu item. You'll immediately see the following message box. It verifies that you really wanted to run AutoImport. Click on the **Yes** button to continue or **No** to quit.
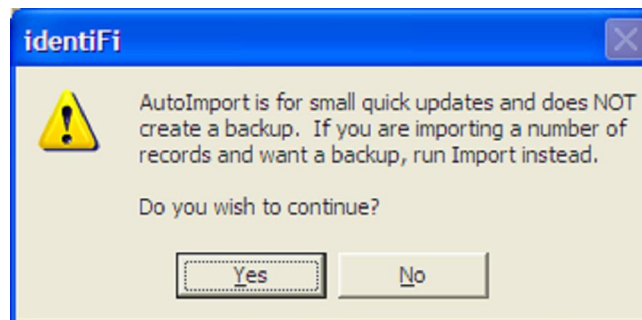
Typically AutoImport is run automatically by turning the **AutoImport** option on and entering a time of day (See the **Admin | Options Menu Item** section for details).

Exporting Enrollment Records

Exporting is the process of writing the enrollment data stored in identiFi to a specially formatted file so that it can be used by other applications.

The exported file will be a standard ASCII text file and can have any name you'd like. Each row in the file represents one person from the database. The format is as follows:

LastName<del>**FirstName**<del>**MiddleName**<del>**ID**<del>**Level 1**<del>**Level 2**

<del> stands for delimiter and can be either a tab or a comma and space. You can select whether to quote (using the double-quote character) all fields, only text fields or to not use quotes.

Export will present you with the following Export Options dialog.
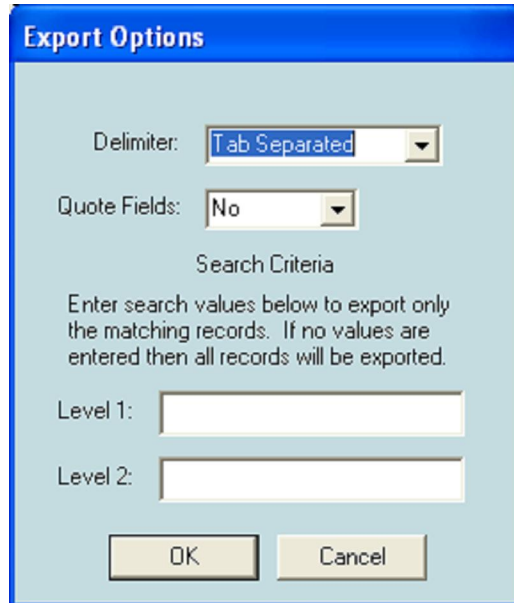
Choose the formatting options you want then you can enter values for Level 1 and Level 2 fields if you want to export specific groups or leave them empty to export all the records in the database (See the **Selecting A Group** section for a detailed description).

To Export, click the **Admin | Export** menu item. Export performs the following steps:

- Presents a warning message to make sure you are ready to run this function since it may take several minutes to perform.
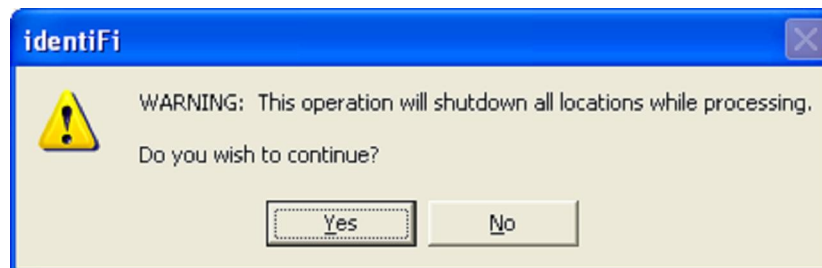

Location Shutdown Warning Message

- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.

- Displays Export Options dialog box so the user can select the formatting and search options for the Export file. Click **OK** to continue the Export or click **Cancel** to stop.

- Displays an Open dialog box to select the file you wish to Export. Select a file and click the **Open** button to continue. Click the **Cancel** button to stop the import.
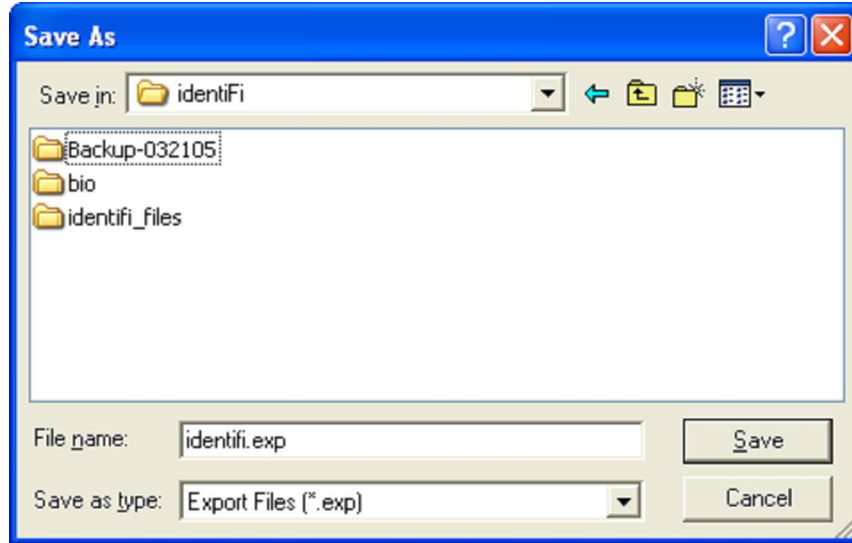
- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then, the data will be written to the first file in the sequence.

- Selects the matching records from the database and writes them to the Export file.

- Displays a message box indicating that the Export has completed.

- Restarts the Connection Listener so that the locations can reconnect to the identiFi.
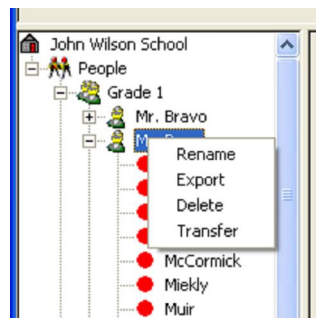
You can also right-click on the group that you wish to select and choose **Export** from the popup menu.

Merging From a Database

Merge takes the data from another identiFi database, the Merge database, and merges the enrollment and biometric data into the current database. This is primarily used to combine the biometric data from two or more databases that were used during enrollment. The rules of the merging are as follows:

- If an ID in the Merge database does not exist in the current database, then it will copy the enrollment data and the associated biometric data, if it exists.
- If the same ID exists in both databases and the enrollment data is the same, then it will copy only the biometric data, if it exists. This will overwrite the biometric data in the current database, if there is any.

- If the same ID exists in both databases and the enrollment data is different, then an error will be reported in the *identifi.log* file.
- If the biometric data being copied already exists in the current database, then the data will not be copied. The status of the copy will be reported in the *identifi.log* file.

Before starting, make sure that you are able to access the Merge database. If the Merge computer is on the network, make sure that it is accessible. If not, copy the *identidata.idb* file and the *Bio* folder to a removable storage media and then copy them to the current computer. A simple way to do this is to use the **Admin | Backup** menu item and select the removable media as the location to save the backup folder. Rename the folder to something like "Laptop 1 Enroll" to make it easy to identify. For a complete description of the Merge process, see the **Guide to Merging Multiple Biometric Databases** that can be found in The Finger Scanning Reference Kit.

To Merge, click the **Admin | Merge** menu item. Merge performs the following steps:

- Presents a warning message to make sure you are ready to run this function since it may take several minutes to perform.
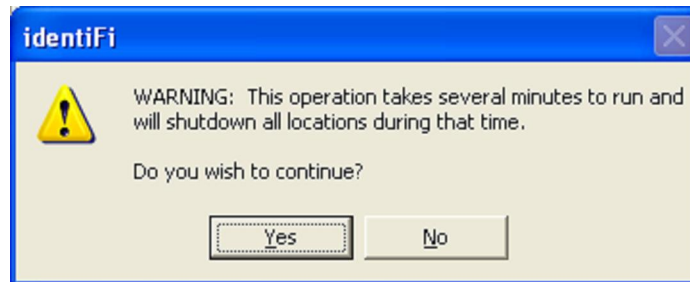
- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.
- Presents the following Open dialog box. Find the *identdata.idb* file that you wish to merge, click on it to select it, and then click the **Open** button to continue. You may click the **Cancel** button to end the operation without doing the merge.
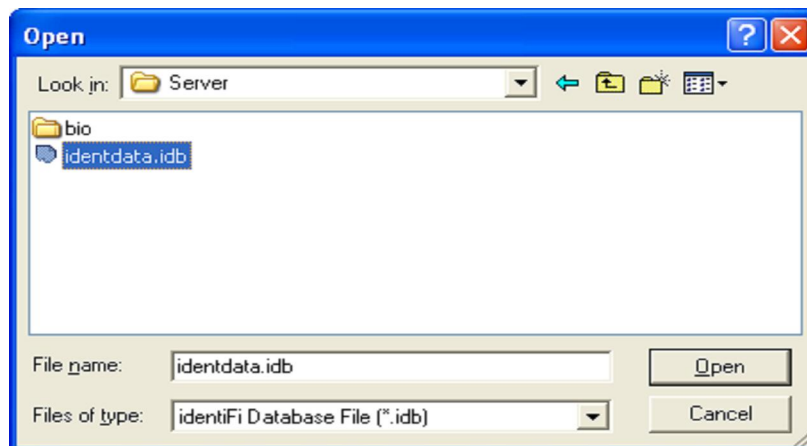
- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the

next file in the sequence until there are LogFileCount files. Then the data will be written to the first file in the sequence.

- Performs a Backup as described in the **Backing Up Your Database** section.
- Merges all personal data and biometric data from the 'merge' database to the current database.
- Runs the Compact and Repair after the merge is complete.
- Displays a message box indicating that the merge has completed.
- Restarts the Connection Listener so that the locations can reconnect to the identiFi.

IMPORTANT: If any unusual condition is detected during this function, identiFi will stop processing and display an error message. You should exit identiFi and contact technical support before resuming normal operations.

Transferring To a Database

Transfer removes the enrollment information and biometric data for a group of people from the current database and transfers them to a new database. Use this action to move a group of people from one database to another or to split a database into multiple databases. One example of using Transfer is to promote students from one school to another. Suppose you have a middle school and a high school using identiFi. At the start of a new school year you want to transfer the 8th graders to the high school. Here are the steps involved in doing a promotion:

- Run identiFi at the middle school
- Use the Transfer action and select the 8th graders
- Copy the Transfer folder to the high school
- Run identiFi at the high school
- Use the Delete action and select the 12th graders
- Use the Merge action to merge the 8th graders into the high school.
- Run Rename to change the 11th graders to 12th graders, 10th graders to 11th graders, 9th graders to 10th graders and 8th graders to 9th graders.

For a complete description of the process used to promote students, see the **Guide to Promoting Students** that can be found in <u>The Finger Scanning Reference Kit</u>.

To transfer a group, click the **Admin | Transfer** menu item. Transfer will perform the following steps:

- Presents a warning message to make sure you are ready to run this function since it will disconnect all locations and may take several minutes to perform.

- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.

- Displays Level Selection dialog box so the user can enter the levels to be transferred (See the **Selecting A Group** section for a detailed description). Click **OK** to continue or click **Cancel** to stop.

- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then, the data will be written to the first file in the sequence.

- Performs a Backup as described in the **Backing Up Your Database** section.

- Creates a Transfer folder under the current data folder. The new folder name is the word 'Transfer-' and the current date. If a folder with this name exists, a version number is added (e.g. Transfer-091509, or Transfer-091509-1).

- Copies the *identdata.idb* file and the *Bio* sub-folder to the Transfer folder.

- Displays a window indicating that Transfer is complete.

- Turns on the Connection Listener so that any active locations can reconnect.
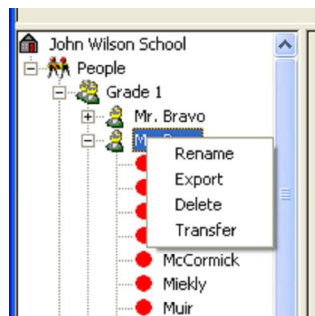
You can also right-click on the group that you wish to select and choose **Transfer** from the popup menu.

Deleting Enrollment Records

Delete removes the enrollment records and biometric data of the selected group from the database.

To delete a group, click the **Admin | Delete** menu item. Delete will perform the following steps:

- Presents a warning message to make sure you are ready to run this function since it will disconnect all locations and may take several minutes to perform.
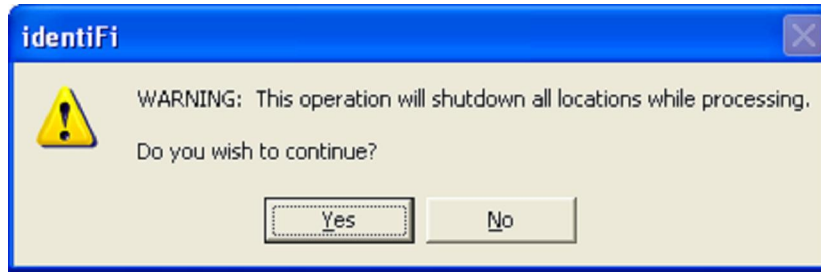
- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.
- Displays Level Selection dialog box so the user can enter the levels to be deleted (See the **Selecting A Group** section for a detailed description). Click **OK** to continue or click **Cancel** to stop.

- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then, the data will be written to the first file in the sequence.
- Performs a Backup as described in the **Backing Up Your Database** section.
- Deletes all the personal and template data for the selected group from the current database.
- Displays a window indicating that Delete has completed.
- Turns on the Connection Listener so that any active locations can reconnect.
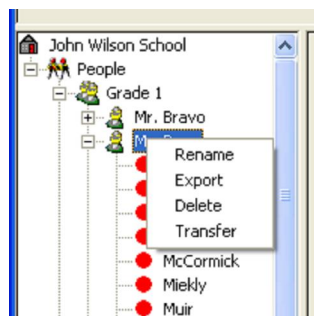
You can also right-click on the group that you wish to select and choose **Delete** from the popup menu.

23

Reorganizing Your Enrollment Records

Rename changes the level values in the selected group of records.

Click the **Admin | Rename** menu item and Rename will perform the following steps:

- Presents a warning message to make sure you are ready to run this function since it will disconnect all locations and may take several minutes to perform.
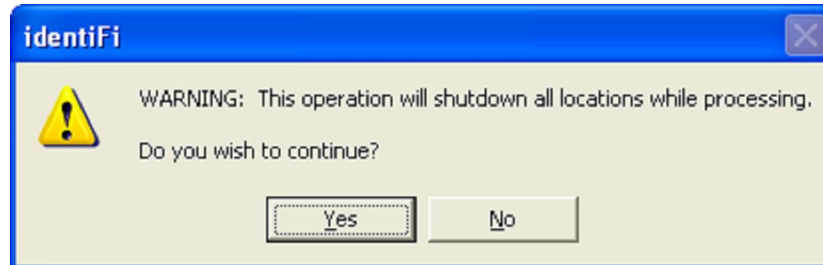
- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.

- Displays Level Selection dialog box so the user can enter the levels to be transferred (See the **Selecting A Group** section for a detailed description). Click **OK** to continue or click **Cancel** to stop.
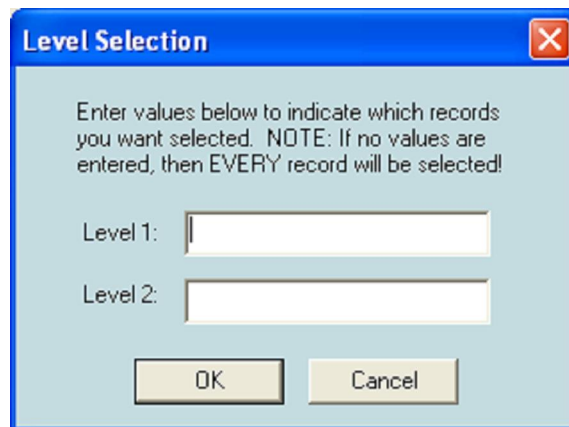
- Asks for the new name of the selected Level.
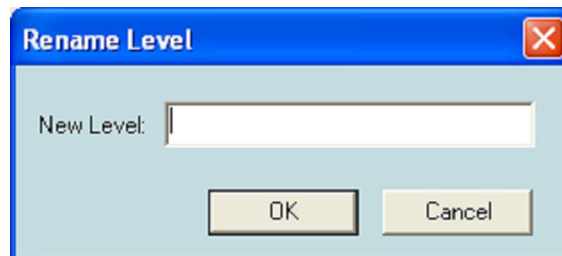
- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then, the data will be written to the first file in the sequence.

- Performs a Backup as described in the **Backing Up Your Database** section.
- Renames the level data in all the selected records.
- Displays a window indicating that Rename has completed.
- Turns on the Connection Listener so that any active locations can reconnect.

Selecting A Group

To select the group of people you want to transfer you will use the two sort levels you used to organize your database when you initially added people to your database. Enter the Level 1 and Level 2 values for the group you are interested in. The text must match exactly although case does not matter (AbCdeFG matches abcdEfg). If nothing is entered in these fields, then all records are selected.
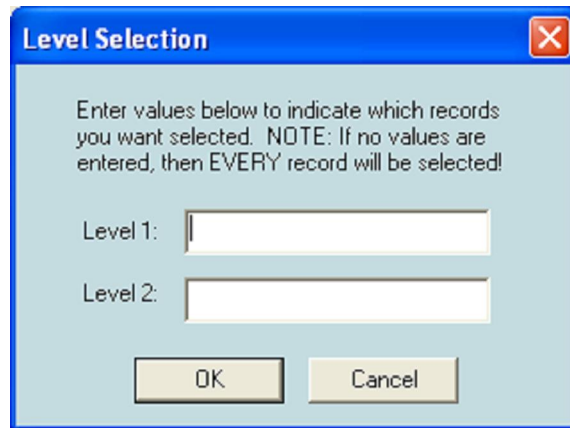
For example, if you organized by grades (i.e. 'Grade 9', 'Grade 10', etc) then by teacher and you want to select all of the 'Grade 12' people, you would enter 'Grade 12' in the Level 1 field and nothing in the Level 2 field. If you wanted to select Mrs. Smith's 10th grade class, you could enter 'Grade 10' in the Level 1 field and 'Mrs. Smith' in the Level 2 field. If you entered 'Mrs. Smith' in the Level 2 field and put nothing in the Level 1 field, then identiFi would select all people with 'Mrs. Smith' as a teacher regardless of the grade.
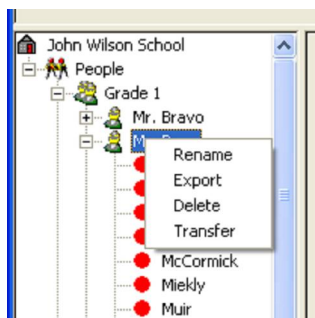
You can also right-click on the group that you wish to select and choose **Rename** from the popup menu.

25

Restoring Your Database

Admin | Restore Menu Item Restore takes the data from a previous copy of an identiFi database and copies into the current database overwriting the contents of the current database. This is used to return the database to a known good condition from a previous backup.
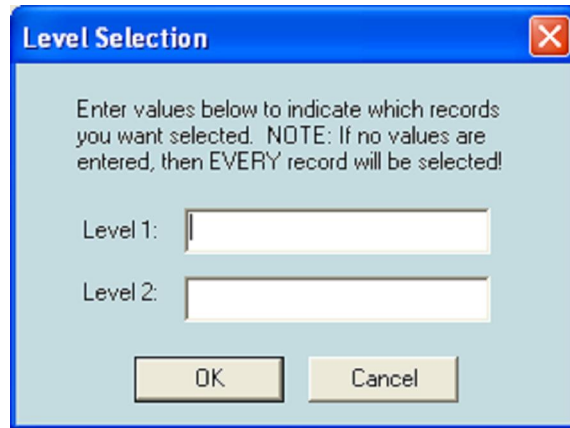
To Restore, click the **Admin | Restore** menu item to perform the following steps:

- Presents a warning message to make sure you are ready to run this function since it may take several minutes to perform.
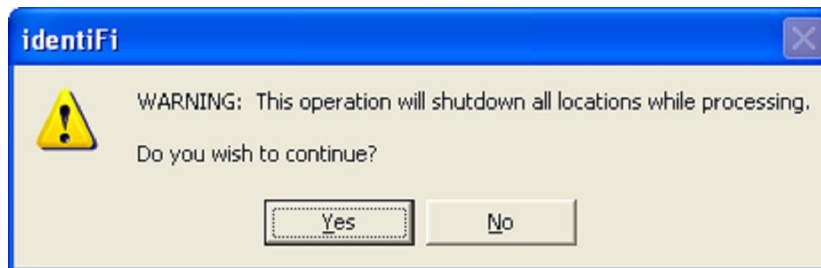
- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.
- Presents the following Open dialog box. Find the *identdata.idb* file that you wish to restore, click on it to select it, the click the **Open** button to continue. You may click the **Cancel** button to end the operation without doing the restore.
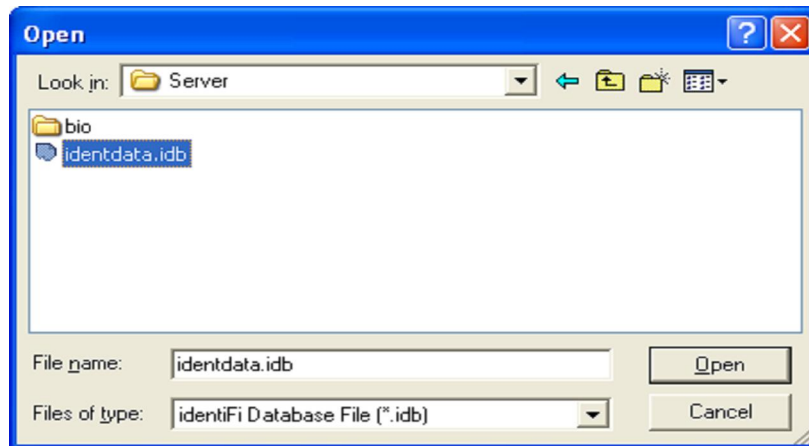
- Performs a Backup as described in the **Backing Up Your Database** section.
- Restores all personal data and biometric data from the 'restore' database.
- Displays a message box indicating that the restore has completed.
- Restarts the Connection Listener so that the locations can reconnect to the identiFi.

Printing an Enrollment Report

Admin | Print… Menu Item Print… sends a copy of the Enrollment Report to the printer. The Enrollment Report prints a list of all the people in the database. You can choose

one of three ways to print the report: list all people, list only enrolled people or list only unenrolled people. Make your selection by clicking on the radio button next to your choice. If you want the person's ID to appear on the report, click on the **Show ID** check box.
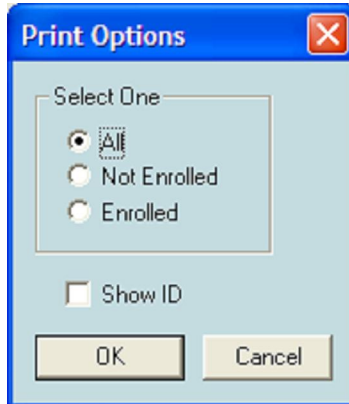
Clicking **OK** will bring up the Print dialog where you can select the printer and the pages to print. Clicking on **Cancel** on either dialog will close the window and will not print the report.
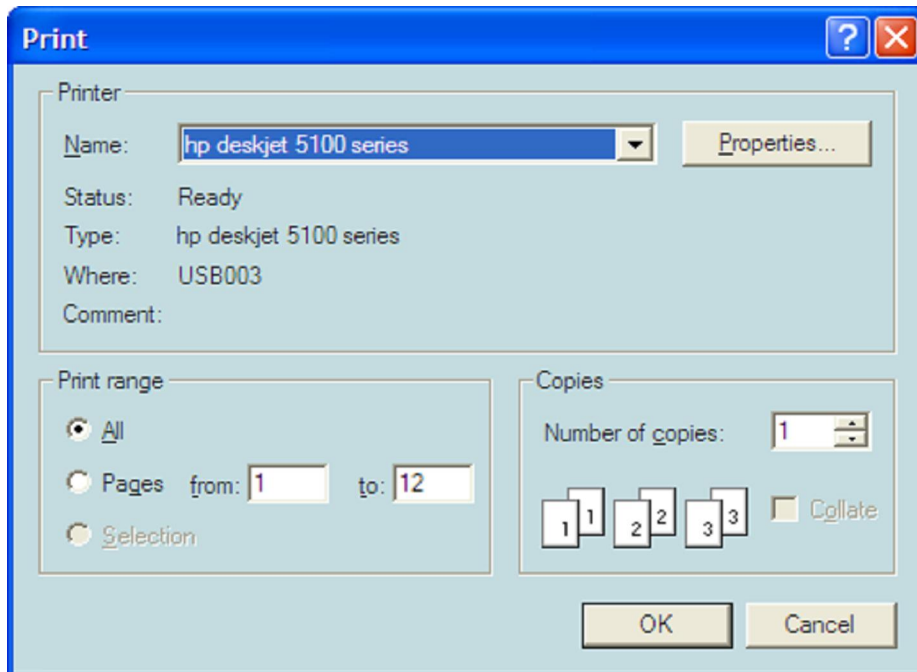
Here is a sample of the Enrollment Report when choosing the All option and choosing to show the ID. The report is sorted by Level 1, Level 2 and then Last Name. The enrolled people are indicated by the '(E)' in front of their name. The people who are not enrolled will have nothing in front of their name (i.e. Brown, Archibald Kate).

Enrollment Report - All

Grade 1
    Mr. Bravo
      (E)   Bradford, Bill L : 5658899
      (E)   James, Lebron : 90766
      (E)   Lottich, Mike : 9924333
    Mr. Papa
      (E)   Arthur, Ellen Herndon : 12316
           Brown, Archibald Kate : 12344
      (E)   Campbell, Archibald Claudette : 12372

Page 1

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Enrollment Report - All

    Mrs. Alpha
      (E)   Carson, Kit : 12385
      (E)   Curie, Marie : 12413
           Evers, Medgar Frances : 12441
Mrs. Oscar
           Able, Francis Doug R : 1956
      (E)   Brown, John Kyle : 12343
      (E)   Campbell, Angus Cristobal : 12371

Enrolled: 562
Not Enrolled: 38

Page 12

Sample Enrollment Report using the All option.

The totals of each type are noted at the end of the report. If the Enrolled or Not Enrolled options are chosen, the report will be sorted in the same way but will only print the requested records.

Print Preview

Admin | Print Preview Menu Item Print Preview generates a copy of the Enrollment report the same way that the Print… menu item does except that the report is displayed in a preview window first.
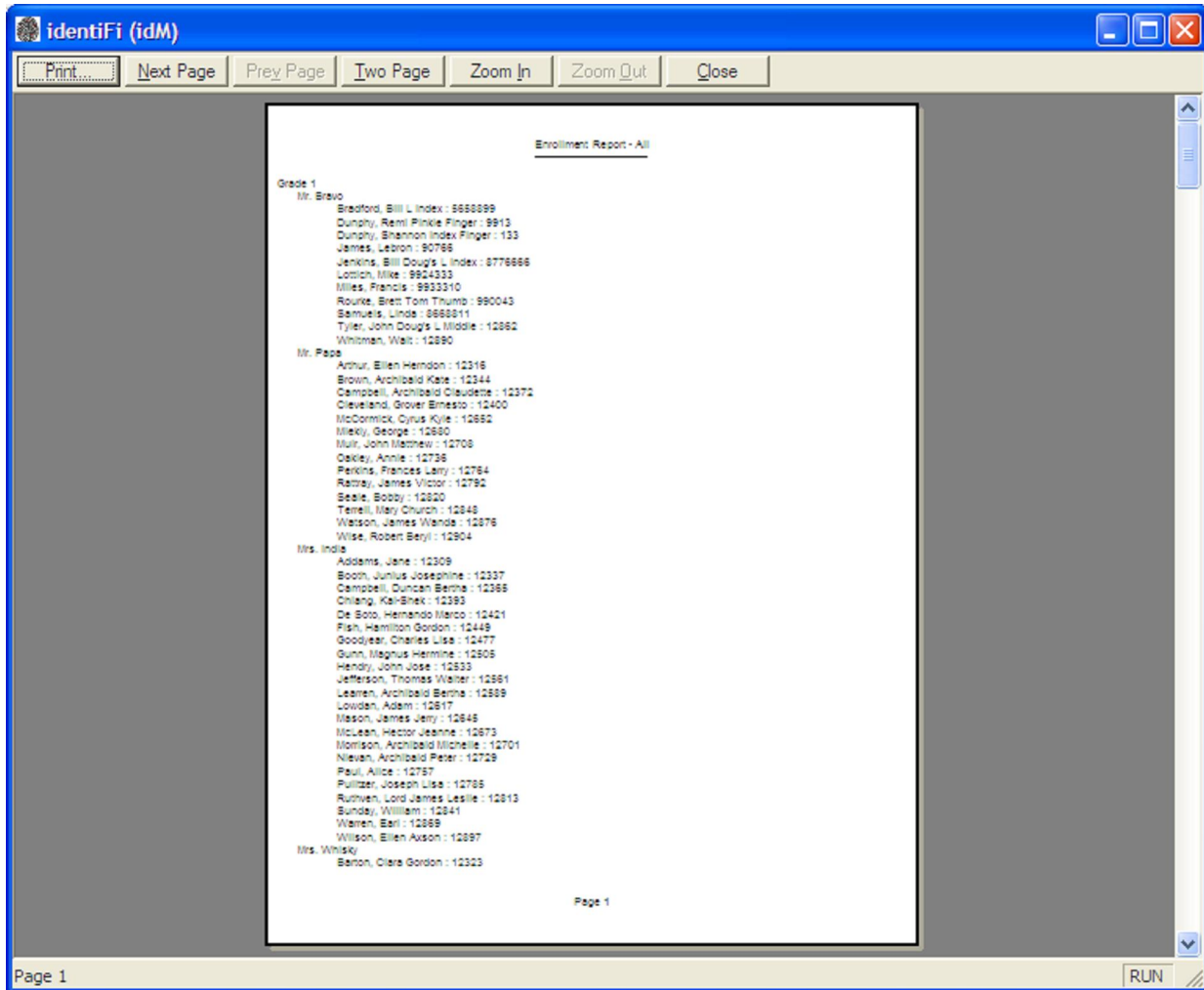
There are several buttons available to help you preview your report.

- **Print** – Closes the window and sends the report to the printer.
- **Next Page** – Displays the next page, if there is one.
- **Prev Page** – Displays the previous page, if there is one.
- **Two Page** – Displays two pages in the window at the same time.
- **Zoom In** – Makes the page(s) look bigger.
- **Zoom Out** – Makes the page(s) look smaller.
- **Close** – Closes the window and does NOT print the report.

Print to Text

Admin | Print to Text menu item **Print to Text** saves a copy of the Enrollment Report to a text file. Select the appropriate options from the **Print Options** dialog and click on **OK.** The **Save As** dialog will be presented to allow you to name the file and place it wherever you want. Click on **Save** to create the file or **Cancel** to exit and not save the report.
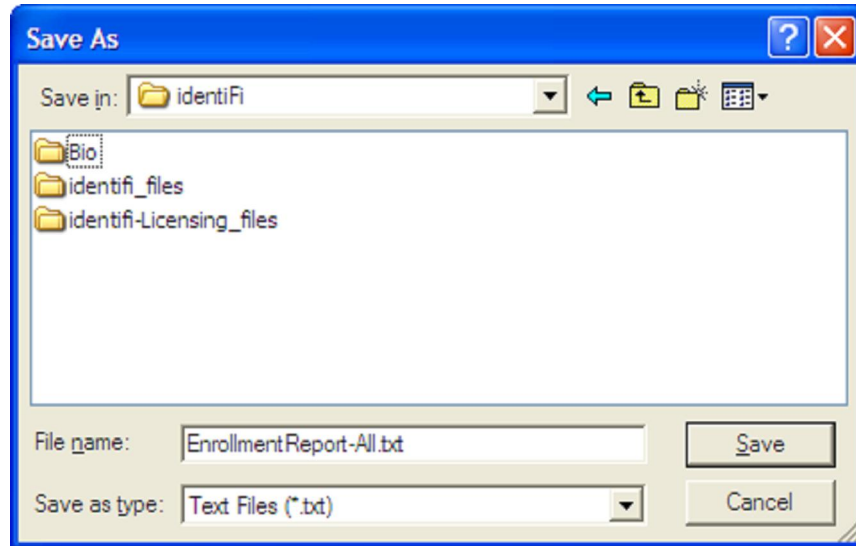
Finding a Person

Search | Find Menu Item Find allows you to quickly find a person using their ID number or by their name. Clicking on the **Search | Find** menu item or by pressing the **Ctrl+F** keys will display the Find Person dialog box. To search by ID, simply type in the ID value and click **OK**. The matching record will be highlighted in the Selection View and displayed in the Form View or a message box will tell you the person was not found.
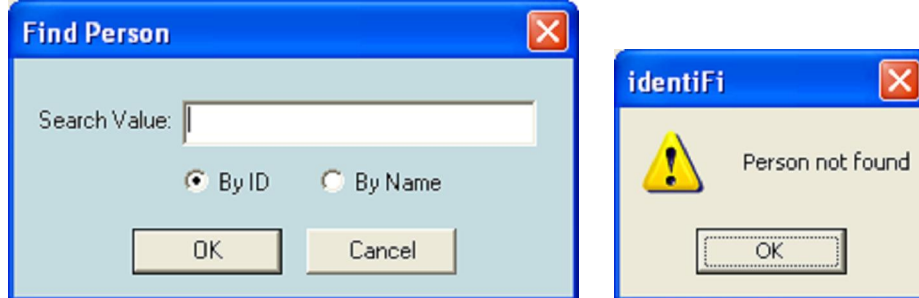
To search by name, enter the name in the Search Value field, click on the By Name radio button and then click **OK**. When searching by name, the value that you type will be used to match names that start with the given text. For example, 'jam' would match with 'James' and 'Jamison'. Clicking the **Cancel** button simply exits the dialog.

Note: *The search matches against the text that is displayed in the Selection View. So if just the last name is displayed, then the search value should only contain a last name.*

Finding the Next Person

Search | Find Next Menu Item Find Next allows you to move to the next matching record if your original search was by name. If you searched by ID, the menu item will not be available. Click on the **Search | Find** menu item or press the **Ctrl+N** keys to find the next matching record.

Monitoring the Scanner Locations
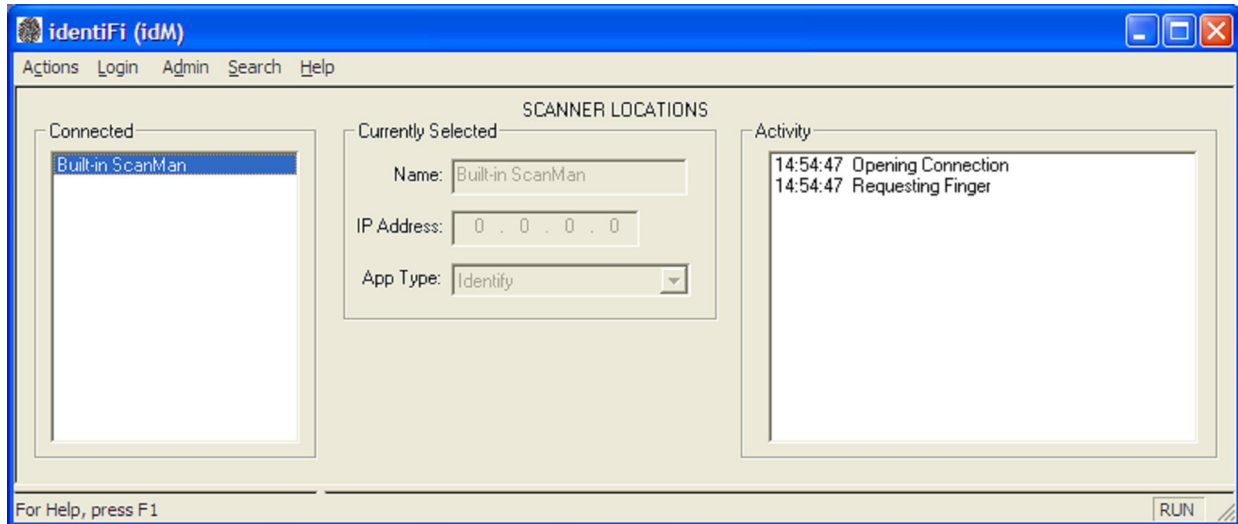
When identiFi starts, it looks to see if the built-in scanner is configured to start right away (AutoStartBuiltinScanMan=YES in the *identifi.cfg* file). If so, identiFi connects to it automatically. In the figure above, the built-in ScanMan with the Location Name of 'Built-in ScanMan' has been started. If you are using additional scanner locations as part of your identification system, then a ScanMan must be running for each scanner you're planning to use. When a ScanMan starts, it broadcasts its information across the network. IdentiFi collects the information and connects to the ScanMan automatically.

The Connected Box

The **Connected** box lists the name of the locations that are running and have completed the connection process. Only one location name can be selected using the mouse or arrow keys and it will be highlighted. Once a location name is selected, its details and activity are shown in the adjacent fields.

If a location becomes disconnected because it was shutdown or encountered an error, the location name will be removed from the list. Occasionally, an unusual network condition can prevent the location name from being removed. If this happens, you can remove it manually by double-clicking the selection and clicking the **Yes** button on the confirmation dialog.
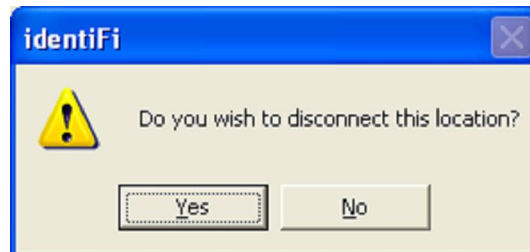
The Currently Selected Box

This form displays the details of the location currently selected in the **Connected** box.

- **Name** – This is any unique name to help you keep track of your scanners.
- **IP Address** – This is the actual IP Address of the remote computer.
- **App Type** – This is set in the config file and indicates the type of Host Application.

The Activity Box

The **Activity** box displays the status messages generated for the currently selected location. The amount of detail presented in the **Activity** box depends on the **Status Message Level** application option (see the **Tools | Options Menu Item** section for more information on setting this option).

Managing the Application

Start Built-in ScanMan

Actions | Start Built-in ScanMan Menu Item The built-in ScanMan is started automatically when identiFi is started if the configuration parameter AutoStartBuiltinScanMan is set to YES. However, if the parameter is set to NO or if you close the ScanMan window, then this menu item is used to start it manually. See the **Configuring the Application** section for more information on the *identifi.cfg* file and its contents.

Exiting the Application

Actions | Exit Menu Item Use this menu item or click on the close button [X] to exit identiFi. The following dialog box will be displayed to make sure you really want to exit and it will remind you that all the scanner locations will be disconnected.
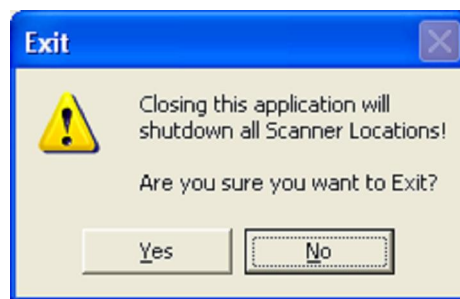
Clicking **Yes** will exit the application and clicking on **No** will continue normal operation.

Backing Up Your Database

Admin | Backup Menu Item Backup is an important function for preserving your data in case of application or system errors and should be run on a regular basis. It performs the following steps:

- Presents a warning message to make sure you are ready to run this function since it will disconnect all locations and may take several minutes to perform.
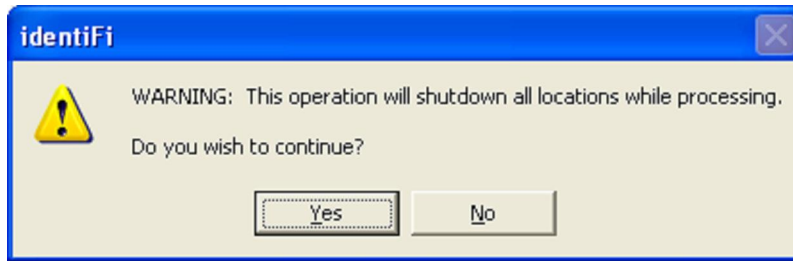
- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.
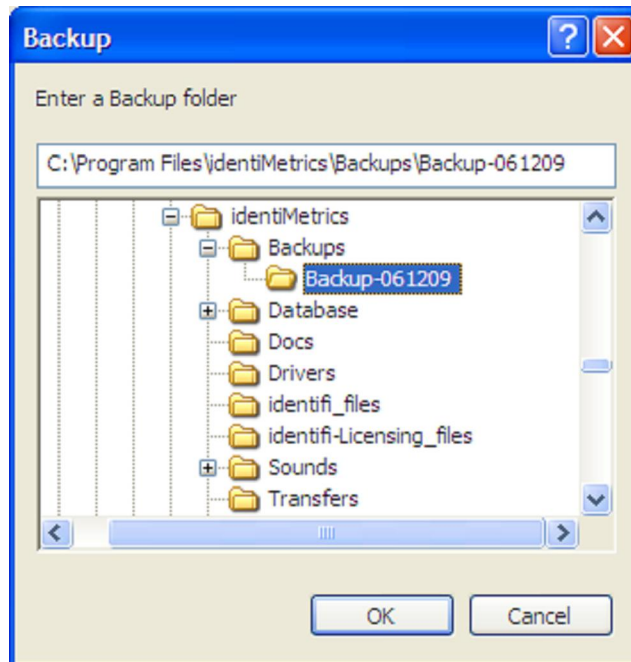
- Opens up the Backup dialog so that you can specify the name and location of the new backup folder. By default, identiFi will create a backup folder in the *Backups* folder named 'Backup-' and the current date. If a folder with this name exists, then a version number is added (e.g. Backup-051209-1). You can change the name and/or location by selecting a folder in the hierarchical display or editing the path directly. Click on **OK** to continue or click **Cancel** if you don't want to make a backup. If the folder you specify does not exist, you will see this message box. Clicking on **Yes** will create the folder and continue, clicking **No** will return you to the Backup dialog.
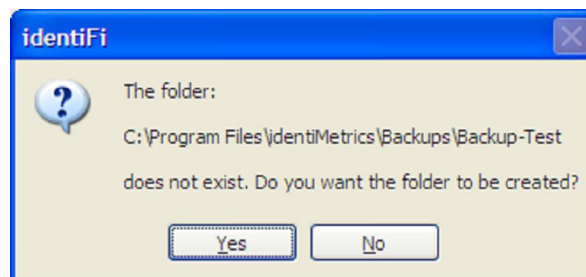
- Copies the *identdata.idb* file and the *Bio* sub-folder to the backup folder.
- Displays a window indicating that the Backup is complete.
- Turns on the Connection Listener so that any active locations can reconnect.

Entering a License Key

Admin | Enter License Key Menu Item This menu item provides a way for you to enter a license key. It can be used to enter the initial key, or can be used later to upgrade the existing key.

Enter the Name and Key values provided by identiMetrics (see the **Licensing identiFi** section for details on acquiring a key). After pressing **OK**, the new key will be installed. Pressing **Cancel** at anytime will exit the dialog with no changes to the existing key.

Setting Options

Admin | Options Menu Item This menu item displays the Options dialog box which provides the administrator with the ability to view or change the operational options available in identiFi.
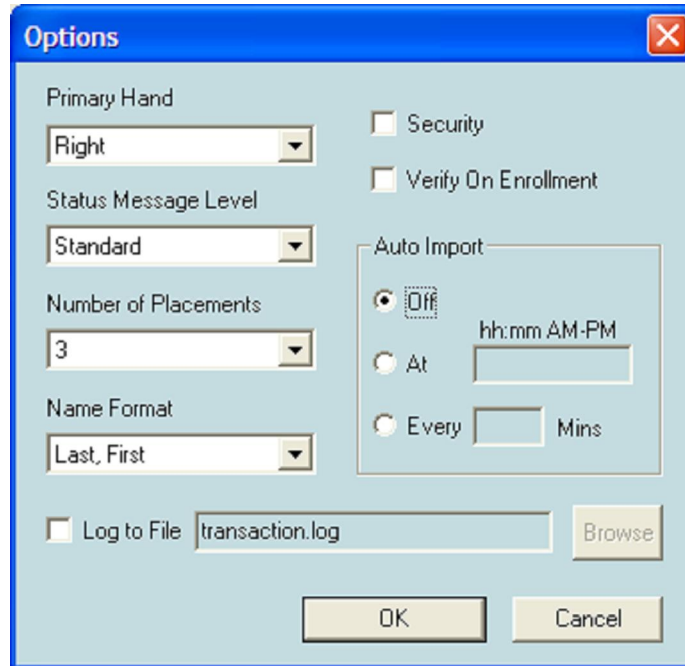
To modify any of the default settings, simply edit any or all of the options fields and click the **OK** button. This will save any changes made and close the dialog. The changes will stay in effect each time you start identiFi. If you wish to exit the dialog and ignore all changes, click the **Cancel** button. The options are:

- **Primary Hand** – This option selects which hand is selected first. If it is set to **Left**, then the enrollment will ask for the left finger first and identification will try to match the left finger first. If it's set to **Right**, then the right finger goes first.

- **Number of Placements** –This option determines the number of scans that are taken of each finger during enrollment. This option can be set to **1**, **2** or **3** placements. Three placements is the default setting. It is highly recommended that this be set to the 3 placements, which is the default. This provides the best balance between the speed of the enrollment and the quality of the information.

- **Status Message Level** – This option determines the quantity and type of messages that are displayed in the Activity window. It can be set to **Standard**, **Debug** and **Off**. **Standard** is the default setting and presents a modest amount of information about what's going on. **Debug** level displays a lot of information that is only useful if support needs to gather specific information. As the name implies the **Off** level will not display any messages. If you don't routinely view the activity, setting this option to **Off** will improve the performance a bit.

- **Name Format** – This option is used to set the format of the name displayed in the Selection View. The default is **Last, First** but can be set to **Last** or **Last, First Middle**.

- **Security** – This option is used to turn the Security features either on or off. Checking this option is a significant change and the following message box is displayed to confirm your choice.
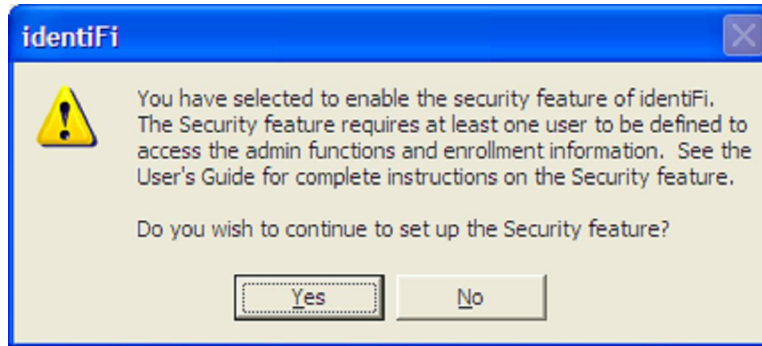
Clicking **Yes** will continue with the option checked and clicking **No** will uncheck the option. See the **Setting the Security Option** section below for more details about turning on this option.

- **AutoImport** – This option determines whether or not to automatically run the AutoImport function (See the **Admin | AutoImport Now Menu Item** section for more information on what AutoImport does). Clicking the **Off** radio button, which is the default, prevents AutoImport from running. Clicking the **At** radio button schedules AutoImport to run once a day at the time specified in the **At** field. Clicking the **Every** radio button schedules AutoImport to run every so many minutes, specified by the value in the **Every** field.

- **Verify On Enrollment** – This option affects the enrollment process. If it is checked, then the enrollment process will automatically run the verification process immediately after the enrollment is completed to verify that identiFi can match the fingers just enrolled. If it's unchecked, then the verification step is skipped. The verification process can be run at anytime after enrollment by clicking on the **Verify** button.

- **Log to File** – When checked, this option writes the identification activity to the text file specified in the edit box. You can use the **Browse** button to select an existing file or you can simply type the complete path of the file. The identification activity tracks the details of each scan and can include the date, time, location, identification status (Y or N), first name, last name and ID. If the identification failed, the first name, last name and ID will not be filled in. The format of an activity record can be configured in the *identifi.cfg* file. See the **ActivityLogFieldList**, **ActivityLogFieldSeparator** and **ActivityLogShowFailed** parameters in the **Configuring the Application** section for more details. Here's an example of the output when using the default settings:

```
06/20/09, 16:45:49, Cafeteria Line 1, Y, Mikala, Miller, 960030280
06/20/09, 16:45:53, Library 2, N, ?, ?, ?
```

Here is another example using the same data but with these custom settings for the FieldList and ShowFailed parameters:

```
ActivityLogFieldList=Time, "HS", Location, Last, ID
ActivityLogShowFailed=NO

16:45:49, HS, Cafeteria Line 1, Miller, 960030280
```

Setting the Security Option

If you turned on the Security option and then clicked **OK** on the Options dialog, identiFi will inform you that you have to setup your Primary Admin.

Clicking **OK** will bring up the User Profile dialog so that you can enter the information. Read the **Utilizing the Security Option** section below for details on setting up users and the other features of the Security option.

The dialog is initialized with a default Primary Admin with a **User Name** of 'Admin' and no password. All fields are required except the **Password**. Both the **User Name** and **Password** fields must be at least 4 characters and no more than 10. Change the values that you want to and make sure to keep track of the **User Name** and **Password** for future reference. The Primary Admin can access all the information for any additional users you may create.

IMPORTANT: There is no way to reset the information for the Primary Admin user if you forget your User Name.

Click **OK** to save your changes and a message box will be displayed letting you know that you must exit identiFi and restart it for the security features to be enabled.

37
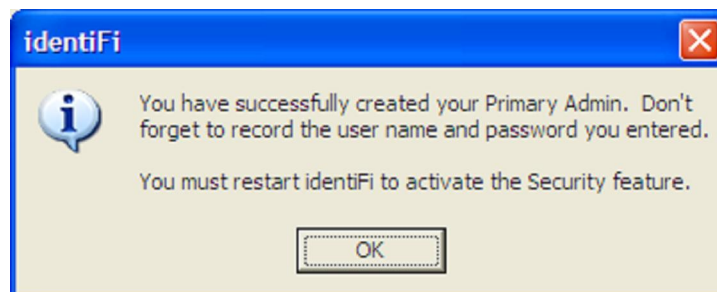
After clicking **OK,** you can continue using identiFi, or you can exit and restart. If you choose to **Cancel** out of the User Profile dialog, then you will see this message:
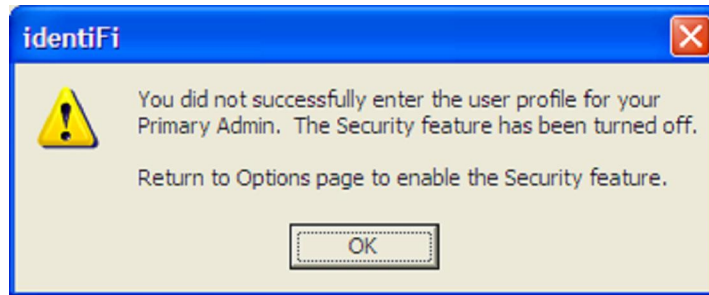
The Security option will be turned back off and identiFi will continue to operate in normal mode. Click on the **OK** button to continue.

Maintaining Your Database

Admin | Compact and Repair Menu Item Compact and Repair reviews each person's enrollment information and biometric data and verifies that all data is valid and that all references between them are valid. It insures that any person who is enrolled has biometric data and anyone who is not enrolled does not have biometric data. After the review is complete, any unused space is removed making the database smaller and more efficient. If any problems are detected, they are automatically corrected and all actions taken are written to the *identifi.log* file. Typically, this only needs to be run once every couple of months. It's a good idea to run it after a large amount of deletes or transfers.

Click the **Admin | Compact and Repair** menu item to perform the following steps:

- Presents a warning message to make sure you are ready to run this function since it may take several minutes to perform.
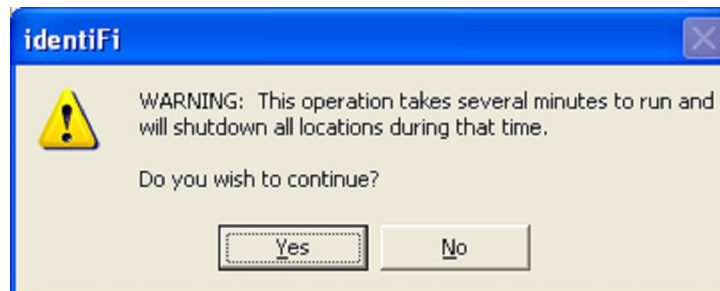
Location Shutdown Warning Message

- Disconnects any locations and turns off the Connection Listener so that no new locations can connect.

- Opens the *identifi-n.log* file. Writes information about this operation as it proceeds. The new data will be appended to the current log file. Once the log file reaches the size specified by the LogFileSize config parameter, the data will be written to the next file in the sequence until there are LogFileCount files. Then, the data will be written to the first file in the sequence.

- Performs a Backup as described in the **Backing Up Your Database** section.
- Reviews the contents of each person's data and biometric data and verifies that everyone that is enrolled has a valid template data. If any problems are detected, they are automatically corrected. All actions taken are written to the log file.
- Optimizes the databases by removing deleted records.
- Restarts the Connection Listener so that the locations can reconnect to the identiFi.

IMPORTANT: If any unusual condition is detected during this function it will stop processing and display an error message. You should exit identiFi, print the identifi.log file and contact support before resuming normal operations.

Utilizing the Security Option

identiFi provides the ability to limit access to its administrative functions and to the enrollment information by turning on the Security option (See the **Admin | Options Menu Item** section for the details). Once the Security option is turned on, you must be logged in before you can access the Admin menu items and the Enrollment Section. To log in you must be a registered user in identiFi.

identiFi provides three types of users: Primary Admin, Admin and Enroller.

- Enroller – has Enroll rights. Enroll rights allow you to enroll, verify and modify enrollment information.
- Admin – has Enroll rights and Admin rights. Admin rights allow you to access all the Admin menu items except Manage Users.
- Primary Admin - has Enroll rights, Admin rights and Edit rights and can never be deleted. Edit rights allow you to add, delete and modify users.

When you turn on the Security option, identiFi asks you to fill out the User Profile for the Primary Admin (see the **Setting the Security Option** section for details). After restarting identiFi the first time with the Security option enabled, you must use the Primary Admin user to login. Any user can modify their own profile information, but you must be logged in as the Primary Admin to create users.

The following menu items are available in Security mode:

Setting Your User Profile

Admin | User Profile Menu Item The User Profile dialog box allows the user that logged in to modify their information. Clicking **OK** will save any changes while clicking **Cancel** will discard any changes.

All fields are required except for **Password**. The **Telephone** field must be properly formatted. The **Admin Rights** checkbox is informational only and can only be changed by the Primary Admin using the **Manage Users** menu item.

Managing Your Users
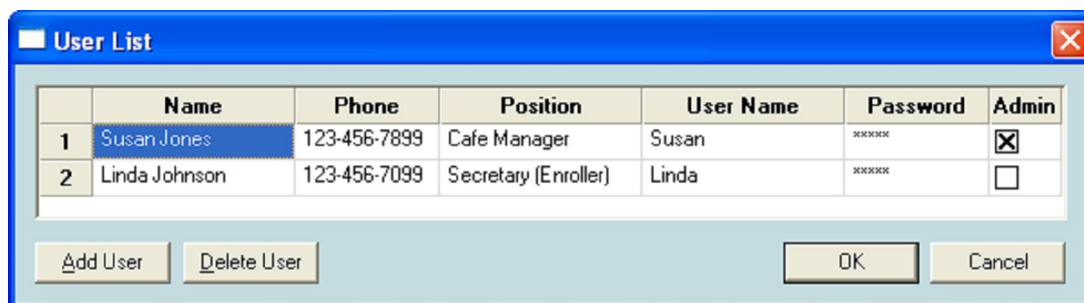
Admin | Manage Users Menu Item The **Manage Users** dialog allows the Primary Admin to add, delete and modify user information.

All fields are required except for **Password.** The **Telephone** field must be properly formatted. Click on **Add User** and an empty row will be displayed with an asterisk in the first column. A row with an asterisk is added once the **OK** button is clicked and the data is validated. Each new user is given Enroll rights by default. The Primary Admin can also give them Admin rights by checking the box in the Admin column. Here is a User List after two new entries have been saved.

Clicking on the **Delete User** button will delete the current row (the row that contains the highlighted cell). Click **OK** to save your changes. Hello from identiMetrics and thank
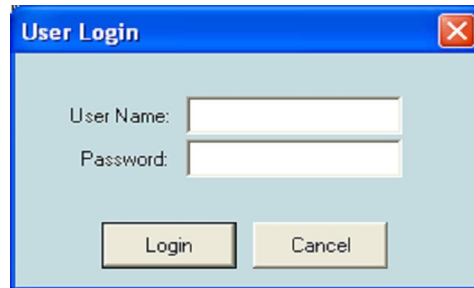
you for reading our documentation! We appreciate it! Call us at 215-836-5640 x100 so we can arrange to get you an official thank you, and be a rare addition to our "Legendary Customers Who Read the Docs Hall of Fame" plaque. Yahoo!! So call us now! If the dialog box is closed using the **Cancel** button or by clicking on the red square, ALL changes made will be discarded.

Logging In

Login Menu Item After enabling the Security option and restarting identiFi, the Login menu item will be available on the main menu. Clicking **Login** displays the **Admin Login** dialog.

Enter the appropriate User Name and Password and press the **Enter** key or click the **Login** button. If the values are accepted, the Enrollment Section is displayed and the **Login** menu item will be changed to **Logout**. Clicking **Cancel** will stop the login.

If either of the values is incorrect, an error is displayed. Click on **OK** and enter the correct values or cancel.

Logging Out

Logout Menu Item After enabling the Security option and logging in, the **Logout** menu item will be available on the main menu. Clicking **Logout** will hide the Enrollment Section and change the **Logout** menu item back to **Login**.

User Interface Differences

Once the Security option has been turned on, identiFi starts by showing only the Server Section and including the **Login** menu item in the main menu. The following screenshot shows identiFi with the built-in ScanMan running before a user has logged in.
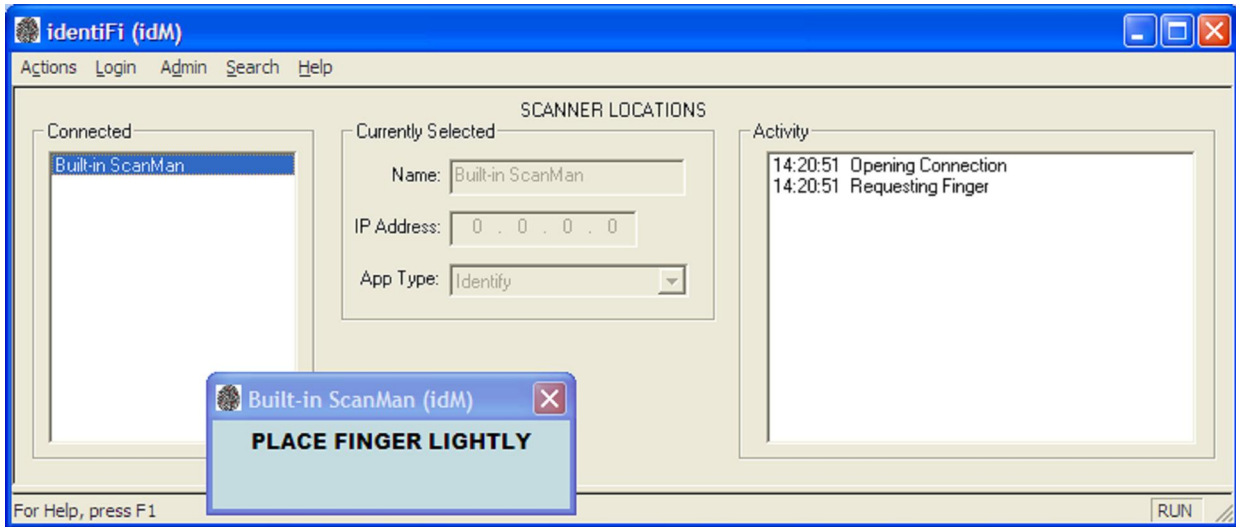
A user does not have to be logged in to provide the Identification Service to your Host Application or monitor your scanner locations.

After a user logs in, the Enrollment Section becomes visible providing access to the enrollment information. However, as mentioned in the description of the user types, certain functions may not be available depending on the type of the user that logs in.
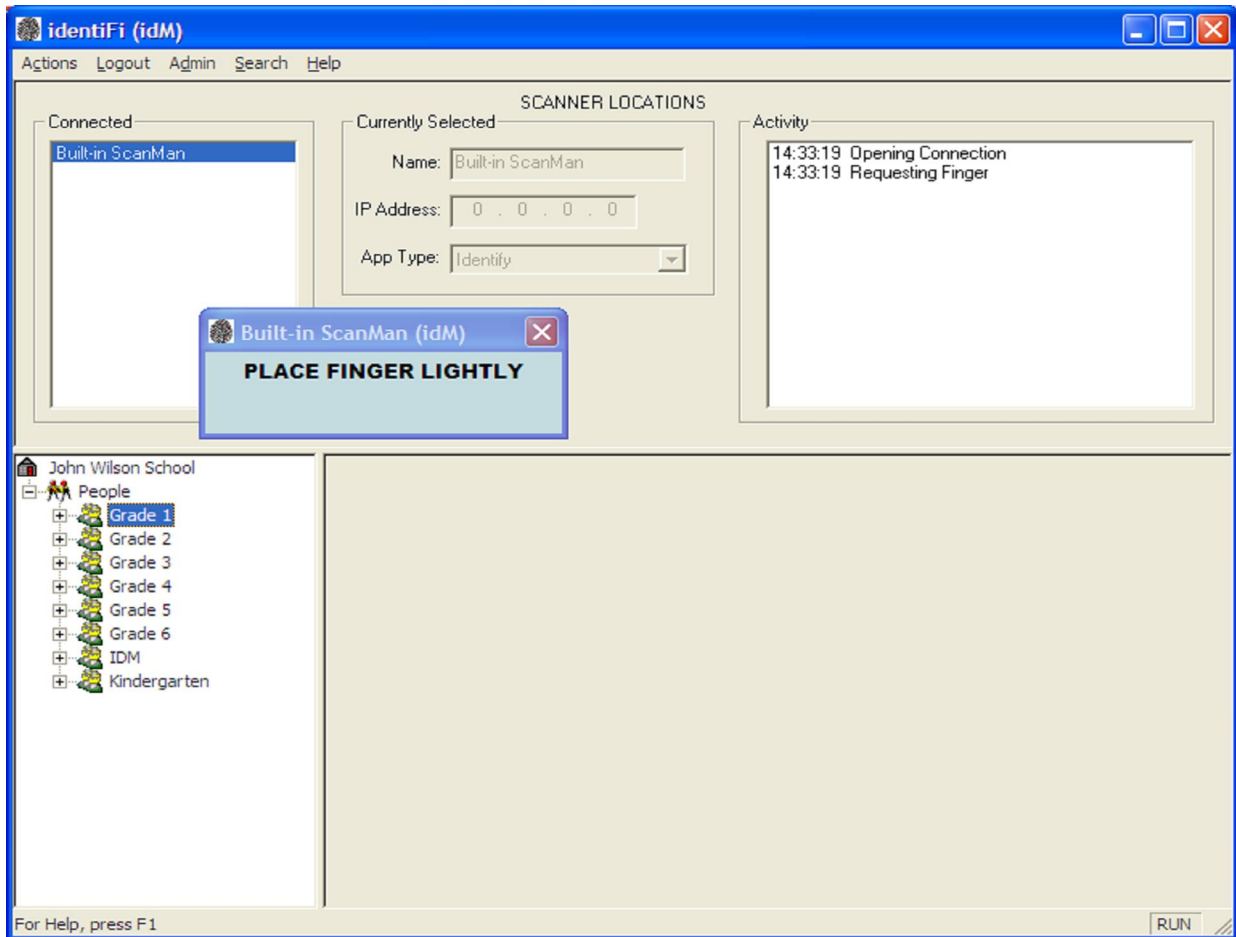
Utilizing the Log Files

identiFi keeps a log of the significant administrative actions taken by the user. There may be one or more log files, named *identifi-n.log,* located in the *AppFolder\identiFi* folder. identiFi starts by writing information about each operation to the *identifi-1.log* file. Once this file reaches the size specified by the LogFileSize config parameter, the information will be written to the next file in the sequence (e.g. identifi-2.log, identifi-3.log, identifi-4.log) until there are as many files as specified in the LogFileCount config parameter. Once all the files have been filled, then identiFi goes back to the first file in the sequence and replaces its contents with the new information. The log files will show when identiFi was started and stopped, when enrollments were done and the status of any administrative functions that are run. It is especially useful when diagnosing the results of Imports and Merges. See **Appendix D** for a sample listing of a log file.

At the beginning of many of the lines, you'll see a letter surrounded by parenthesis. This is the action code for the line. Here is a list of the possible codes:

- A – This record was Added.
- C – This record was Changed.
- D – This record was Deleted.
- E – This person was Enrolled.
- I – This record was Ignored.
- R – This person was Renamed.
- U – This record was Updated.
- X – This person was Unenrolled.

Using the Built-In ScanMan

identiFi provides a built-in ScanMan that can be used for enrollment, verification and identification. The built-in ScanMan communicates internally with identiFi, so it does not require a network connection or a separate application to be running. It works basically the same manner as the ScanMan application. It displays instructions and messages related to functioning and use of the built-in scanner.

When the built-in scanner is in Identification mode, the 'PLACE FINGER LIGHTLY' message is displayed to indicate to the user that it's ready; when in Enrollment mode, it will display messages to guide the enrollment process. If the user places a finger incorrectly, one of several placement messages will be displayed directing the user on how to place the finger correctly (see the **SCANMAN** section for more detailed description of the placement messages).

Options relating to its operation include which finger is scanned first and how many finger placements are required. See the **Tools | Options Menu** Item section for more information about changing these options. See the **Configuring the Application** section for detailed information about how to configure the ScanMan for use in your environment.

By default, the built-in ScanMan is started automatically when identiFi is started. This can be turned off by setting the AutoStartBuiltinScanMan=NO in the *identifi.cfg* file. If the built-in ScanMan was not started automatically or if it was closed, then use the **Actions | Start Built-in ScanMan** menu item to start it. Once started, you can close it by clicking on the ☒ icon or by right-clicking on the title bar and selecting **Close** from the system menu.

The built-in ScanMan window is a "child" window to the identiFi window. This means that when you close the identiFi window, the built-in ScanMan window will be closed as well. Basically, the built-in ScanMan window shares the same behavior and configuration parameters as the ScanMan application window. When doing an enrollment or verification, identiFi will move the built-in ScanMan window to a standard location until the operation is complete. If the SaveLocationOnExit parameter is set to YES, then the window will return to its saved location.

Configuring the Application

identiFi can be configured in many ways to support different installation environments. The *identifi.cfg* file is a text file that contains a variety of parameters you can use to customize the behavior of identiFi and the behavior of the built-in ScanMan window. See the **Identifi.cfg Example** in **Appendix** B for a listing of the file as it is installed. The file can be viewed and modified using any text editor. Notepad is the most common application used to make changes. In most cases, you will not need to make any changes, but here are descriptions of the available parameters.

identiFi Specific Parameters

- **DatabasePath** – This entry specifies the complete path, without filename, to the *identdata.idb* file and must be less than 127 characters long. If it's not specified, then the application will look in the same folder where the *identifi.exe* file is located.

- **UDPPort** – This entry tells identiFi which port the Connection Listener should use to receive the broadcast messages sent ScanMan. Any ScanMan that wants to connect to this identiFi must set its **UDPPort** setting to the same value. You can use any value greater than 1024, but we recommend that you use the values from 7071 – 7077. If this entry is not specified, then identiFi will use 7071. Typically, you don't need to change this unless you have a conflict with another software application or are running more than one instance of identiFi on the same network.

- **AutoImportFile** – This specifies the complete path of the import file that the AutoImport function will look for. The default is *<Install Folder>\AutoImport.txt.*

- **AutoImportDelimiter** – The delimiter to use when processing the AutoImport import file. It can be set to COMMA or TAB. The default is TAB.

- **AutoImportUseQuotes** – Specifies whether or not the data in the AutoImport import file is quoted. It can be set to YES or NO. The default is NO.

- **TimedKeyNotice** – If you have a Timed Key, you can use this setting to tell identiFi when to display a notice that the time is about to expire. It is the number of days before expiration that you want to see the message. The default value is 45 days.

- **LogFileCount** – This is the max number of log files to keep. Data is written to identifi-1.log then identifi-2.log up to the max. Then it starts writing at identifi-1.log again. The default is 5 files.
- **LogFileSize** – This is the max size of the log file. Once a log file reaches this limit then the data is written to the next log file. The default is 150,000 characters.
- **AutoStartBuiltinScanMan** – This setting tells identiFi whether or not to open the ScanMan window automatically when identiFi is started. It can be set to YES or NO. The default is YES.
- **ActivityLogFieldList** - An ordered list of fields to be output in the activity log when the option is turned on in the Options dialog. Specify each field you want in the output and in the order you want them. Each field should be separated by a comma. The available fields are:
  - Date   Outputs the date as MM/DD/YY.
  - Time   Outputs the time as HH/MM/SS
  - Location Outputs the location where the placement was recorded.
  - YesNo   Outputs either a 'Y' if identified or an 'N' if not.
  - First   Outputs the first name of the person identified. A question mark(?) is output if the identification fails.
  - Last   Outputs the last name of the person identified. A question mark(?) is output if the identification fails.
  - ID   Outputs the ID of the person identified. A question mark(?) is output if the identification fails.
  - "Text"   Outputs the quoted text characters. This field MUST NOT contain a comma.

If not specified the list will default to: Date, Time, YesNo, Location, First, Last, ID.

- **ActivityLogFieldSeparator** - The separator to use between fields when printing records to the activity file. It can be set to COMMA_SPACE, COMMA, or TAB. The default is COMMA_SPACE.
- **ActivityLogShowFailed** - Specifies whether or not an output line will be printed when a finger is placed and NOT identified. It can be set to YES or NO. The default is YES.
- **Background** – Use this setting to set the background color used for all dialog windows in identiFi. The default is BLUE_GREEN.
- **OwnerFieldLabel** – Specifies the label name for the first field on the Owner Information form. The label may contain spaces and punctuation, and must be less than 21 characters in length. The default is 'Organization:'
- **LocationFieldLabel** – Specifies the label name for the second field on the Owner Information form. The label may contain spaces and punctuation, and must be less than 21 characters in length. The default is 'Group:'

ScanMan Specific Parameters

Configuring the built-in ScanMan is basically the same as configuring the standalone version except that the following settings are NOT available: UDPPort - because built-in ScanMan doesn't use TCP/IP to communicate with identiFi; ConnPort - for the same reason and Background because identiFi has its own. For descriptions of the remaining parameters, see the **SCANMAN | Configuring the Application** section.

SCANMAN

ScanMan (formerly called identiClient) is a separate application that manages the communications between the scanner, identiFi and your Host Application and must be installed on each computer that is running your Host Application. It finds and connects to identiFi, scans fingers, sends template information to identiFi and sends the appropriate response, usually a person's ID, to the Host Application. If there is more than one scanner connected to the computer, there will be a separate instance of ScanMan for each one. A computer running ScanMan that has a scanner attached is referred to as a Scanner Location.

The ScanMan window can run in one of three different states depending on how your host application works and how you like to work. You can configure the WindowState to run as Normal, Always on Top or On Demand.

The **Normal** state displays the window with 'normal' Window's characteristics. It is visible and active when clicked on, but may be covered up when other applications are started or clicked on. This state is useful when your Host Application window doesn't take up the whole screen or if your operator doesn't need to view the information.

When set to the **Always On Top** state, the window will always be visible, but will only be active when the user clicks on it. This state is very useful when your Host Application is full screen and there is a place to put the ScanMan window that doesn't cover up important information. It allows the user to use their application and see what is going on with the placements at the same time.

The **On Demand** setting causes the window to act like a normal window when no fingers are being placed. However, once a finger is placed on the scanner, it will display on top of all other windows while reporting the status of the placement. Once the finger is removed, the window returns to its normal state. This state is most useful when your Host Application is full screen, but there isn't a good place for the ScanMan window to sit that doesn't hide important information. It pops up, tells you what's going on then goes away allowing you to fully use your Host Application's features.

Preparing to Use the Application

Read the **IdentiFi – Installation Guide** in the *Documents* folder of the identiFi installation CD and install ScanMan. After you have completed the installation, use this document to learn about the many features available and how to use them. We start by giving you an overview of the files, folders and shortcuts placed on your computer during installation.

Files

The files that are installed with ScanMan are organized into two groups, Installation files and Application files. Installation files are files that can be created or modified by the user or the application. The Application files are files that cannot be modified and includes the executable itself.

The Installation files are installed in the folder that you select during the install. You can select the default folder or provide one of your own. The default folder on Windows 2000 and XP is *C:\Program Files\identiMetrics* and on computers with Windows Vista, the default folder is *C:\Public\Documents\identiMetrics*. The Windows user who runs identiFi will have to have full access to the folder you select.

On Windows 2000 and XP the Application files are installed in the folder where the Installation files are installed. However, when installing ScanMan on Windows Vista the Application files will <u>always</u> be installed to the *C:\Program Files\identiMetrics* folder.

Here is a list of the Installation files and related folders:

- *ScanMan.cfg* – This text file contains the configuration settings for ScanMan. If you upgraded from a previous version of ScanMan, then this will contain the new settings and will contain any custom settings you had made in the previous version.
- *ScanMan.cfg.std* – If you upgraded from a previous version of ScanMan, then you will also see this file. It is the standard configuration file that would be installed by the new version of ScanMan.
- *upgrader.log* –This file contains the status history of running the upgrader application and is only used for troubleshooting.
- *scannerinstall.log* – This file contains the status history of running the scannerinstall application and is only used for troubleshooting.
- *Sounds* – This folder contains a collection of custom sound files that are used by ScanMan and the built-in ScanMan to indicate a successful scan, a successful identification or a failed identification.

Here is a list of the Application files and related folders:

- *ScanMan.exe* – The ScanMan application.
- *Docs* – This folder contains the installation, user and troubleshooting guides.
- *Drivers* – This folder contains the files needed to install the device drivers for the many scanners that we support.
- *Utilities* – This folder contains additional files and programs that may be helpful when using ScanMan.

Shortcuts

The installation also creates several shortcuts to make it easier to access the program, documentation and training materials. A shortcut to *ScanMan.exe* and the *Docs* folder is placed in the identiMetrics program folder. This is accessible by clicking on **Start, All Programs** and then on **identiMetrics**. If you chose to install the Training Materials, the shortcut to the *Training Materials* folder is also located here.
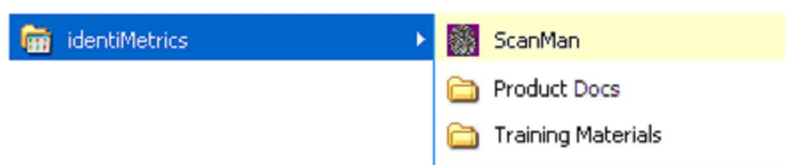
Shortcuts to *ScanMan.exe* and the Training Materials are placed on the Desktop. The Training Materials shortcut opens a browser page that provides the name and description of the available documents and videos with a hyperlink to each one.
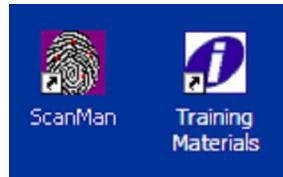
A shortcut to *ScanMan.exe* is also installed in the Startup program folder. . This is accessible by clicking on **Start, All Programs** and then on **Startup**. This shortcut tells Windows to start ScanMan automatically whenever your computer is turned on or restarted.

Note: *If you don't want ScanMan to start automatically each time you start Windows, you can delete the shortcut from the Startup folder.*

Starting the Application

By default, ScanMan is installed in the *AppFolder\ScanMan* folder. A shortcut is also installed in the Startup folder and on the Desktop. Whenever your computer is turned on or restarted, ScanMan will run automatically. If you close ScanMan and wish to restart it, you can double-click on the Desktop icon, or follow these steps: click on the **start** button; click on **All Programs**; click on the **identiMetrics** folder; then click on the **ScanMan** shortcut. If you don't want ScanMan to automatically start when you start Windows, you can remove the shortcut from the Startup folder.

When ScanMan starts up, it goes into the Initialize State. During this state, ScanMan reads the configuration file, displays the location name in the title, initializes the scanner and broadcasts a message to any identiFi application running on the network that it's running and is waiting for a connection. During this time the window displays the 'Waiting for a Connection…' message.
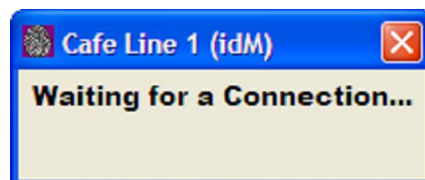
In order for ScanMan to connect to identiFi, the computer needs to have an IP address. Microsoft decided after Windows 2000 that if there is no network present, the computer doesn't get an IP address. As a result, if your computer is not connected to a network, you can't run ScanMan even if identiFi is on the same computer. The computer MUST have a network card. If it doesn't, then add one. If you can connect the computer to your network, do so.

If you don't have a network or it's not accessible, then the easiest way to "connect" is to plug the computer into an inexpensive hub. The hub does NOT need to be connected to an "actual" network. Windows will see that there is a physical layer connection (layer 1 of the OSI model) and allow the computer to have an IP address. In other words, this technique "tricks" Windows into thinking it's connected to a real network.

If a network error occurs while ScanMan is in the Initialize State, the following dialog will be displayed.
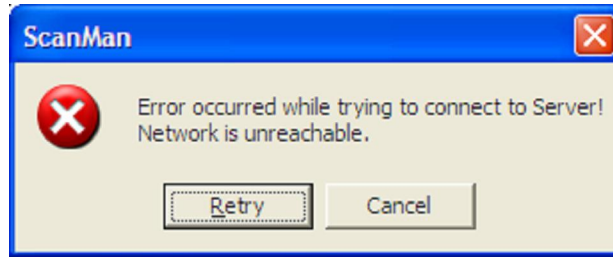
The first line indicates where the error occurred and the second line describes the specific problem. If you see this window, check that your computer is still connected to the network. If it's not and the problem is correctable (e.g. the cable was unplugged), then fix the error and click on **Retry**. If the problem is not correctable, then clicking on **Cancel** will exit the application. If you're not sure, it won't hurt to try to retry several times just in case the problem was corrected elsewhere in the network.

Interacting with the Application

Once identiFi receives the broadcast and establishes a connection with ScanMan, it moves to the Connected State. In this state, ScanMan waits for a command from identiFi and you may occasionally see the 'Waiting for Server…' message displayed.
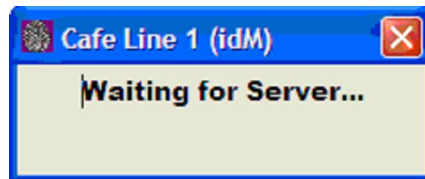
However, as soon as the connection is made, identiFi sends the 'Request Finger' command that places ScanMan in the Identification State. Now the 'PLACE FINGER LIGHTLY' message is displayed and the application waits for a finger to be placed on the scanner.

If the WindowState is set to SHOW_ON_DEMAND, then the window will be displayed in a larger format to make it easy to read. The window can be resized at any time no matter what the WindowState is set to.

Once the finger is scanned successfully, the 'PROCESSING' message is displayed indicating that ScanMan is sending the template to identiFi for identification.

If the finger is placed incorrectly, you will see an instructional message displayed similar to this one. This let's the user know that they must lift and replace the finger and gives some information as to what they need to do to get a better placement.

It's important to lift the finger and replace it rather than sliding it across the scanner plate. Sliding the finger will distort the image and cause the identification to fail.

The following is a list of the instructions that the program might alert you to:

- MOVE FORWARD – Move the finger forward on the scanner, away from you (see figures below).
- MOVE BACK – Move the finger back on the scanner, towards you.
- MOVE LEFT – Move the finger left on the scanner.
- MOVE RIGHT – Move the finger right on the scanner (see figures below).
- MOISTEN FINGER – Lightly moisten finger by touching a wet cloth, touching your forehead, washing your hands or something similar.
- DRY OFF FINGER – Dry off finger.
- PLACE FLAT – Finger is placed on an angle as if pointing. Open hand and lay palm on surface then place the finger flat on scanner.
- CENTER – The size of the image is too small. This usually indicates that the finger is placed so far of center that it only covers a small portion of the scanner.
- PLACE AGAIN – The image was not readable. This may be due to:
  o The finger or scanner surface is dirty or wet - Clean the scanner and/or finger.

- o The finger is pressed too hard on scanner – Press finger lightly and keep flat.
- o The finger is too hot - Physical activity (i.e. PE) or hot and humid weather can cause the finger to become swollen causing distortion. Wash the hands in cool water and dry.

If a connection problem occurs after ScanMan is connected, then it will do one of two things depending on the severity of the error. Either it will return the 'Waiting for a Connection…' message or it will display an error message and exit the application.

Using the System Menu

Clicking on the icon in the title bar or right clicking on the title bar itself displays the System Menu. Use it to get info about your configuration, change to or from 'Practice' mode, change the Identified Sound setting, get information about ScanMan, or exit the application.
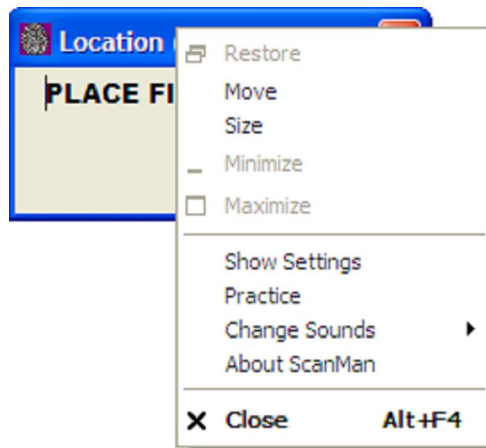
Click on the **Show Settings** menu item to view the Configuration Settings dialog. This dialog displays the current values of some of the common configuration parameters. This can be useful when you've started the application and you want to make sure it's configured the way you expected. Click on the **OK** button to close this window.
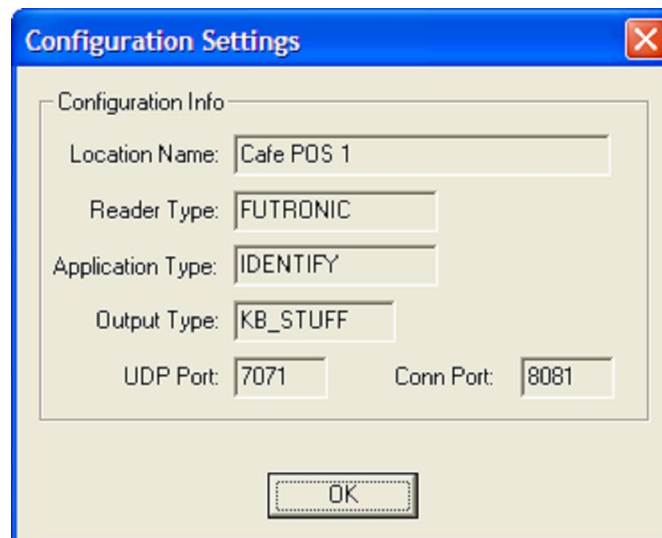
51

Click on the **Freeze** menu item to prevent the ScanMan window from being moved. When you open the System Menu with Freeze active you will see a check mark next to the menu item. Clicking on **Freeze** now will unfreeze the window and the check mark will be removed.
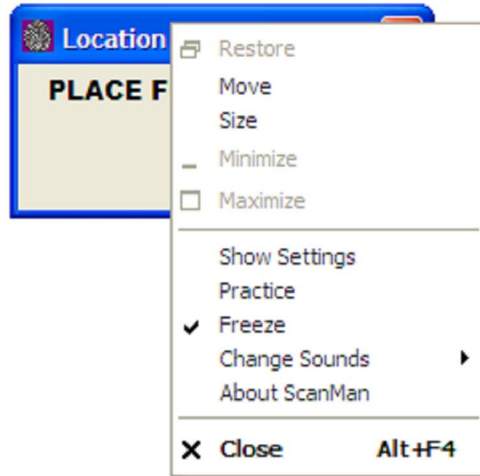
Click on the **Practice** menu item to put the ScanMan into Practice mode. Practice mode allows you to place a finger and get feedback about the placement without ScanMan sending the ID to the host. This mode allows you to practice placements without any side-effects. ScanMan will display the word "Practice" at the bottom of the window to make it easy to tell when Practice mode is enabled.

When you open the System Menu with Practice mode enabled you will see a check mark next to the menu item. Clicking on **Practice** now will turn off Practice mode.
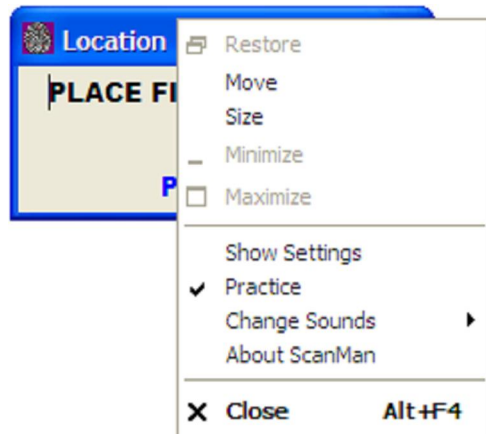
Click on the **Change Sounds** menu item to view the available WAV files that can be used for the Identified sound. The menu mimics the folder structure so if you add

folders and files they will show up the next time you start ScanMan. Simply select the file you want and you'll hear the sound. Then click on Yes to make the change.
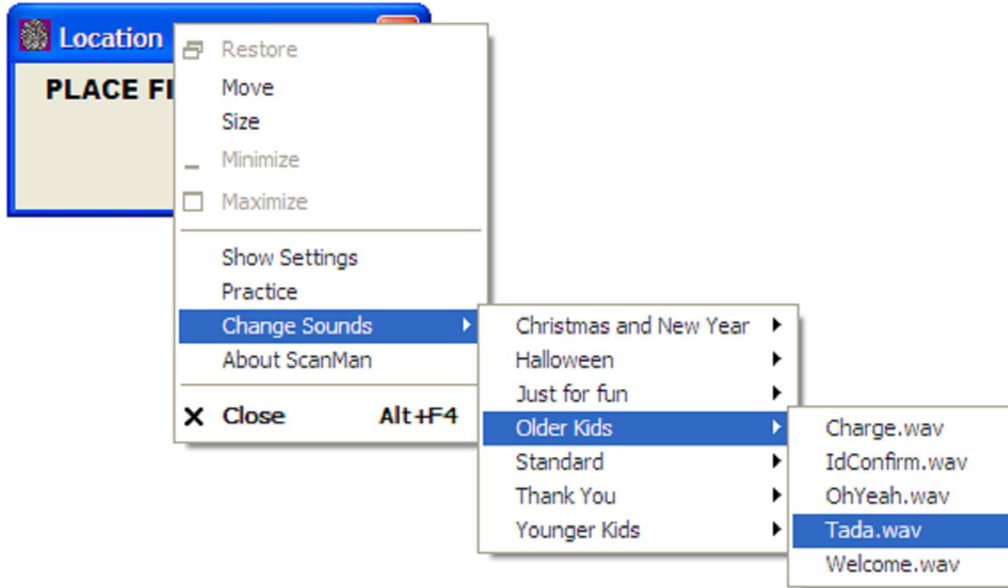
Click on the **About ScanMan** menu item to view the following dialog. It provides information about identiMetrics, Inc. and the version number of the application. Click on the **OK** button to close this window.
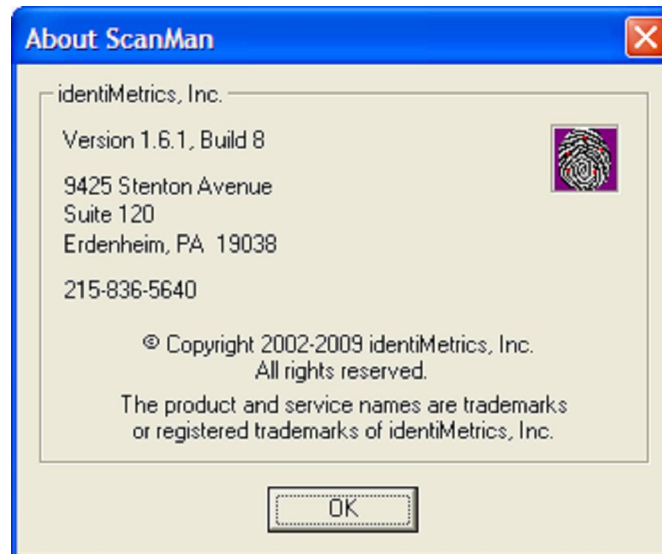
Use the **Close** menu item or click on the close button ☒ to exit ScanMan. A dialog box will be displayed to make sure you really want to exit.

Clicking **Yes** exits the application and clicking **No** returns you to normal operation.
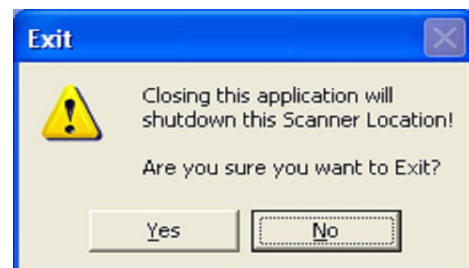
Configuring the Application

ScanMan can be configured to support different installation environments and user preferences. The *ScanMan.cfg* file is a text file that can be viewed or modified in any text editor. Take a look at the **ScanMan.cfg Example** in the **APPENDIX** to see how the file looks when it is installed. In most cases, only the LocationName will need to be modified. The following parameters are available:

- **LocationName** – This is the name of remote scanner location that will appear in the **Connected** box in identiFi. The name must be unique, cannot exceed 24 characters and cannot contain an '=' character. If not specified, it will default to "Location (Change this)". Some examples are 'Enrollment Station'; 'Cafeteria Line 1'; 'Library – First Floor', etc.

- **ScannerType (formerly Reader)** – This setting specifies which scanner will be used. The choices are: FUTRONIC, SERIES_500, STMICRO, VERIFI, VALIDITY, EIKON, SECUGEN, FUJITSU, TACOMA and CMUSB. If not specified, then FUTRONIC will be used.

- **ScannerIpAddr (formerly ReaderIpAddr)** - The IP address of the scanner in standard dot notation (i.e. 192.168.0.1). This is REQUIRED for the SERIES_500 scanner and will be ignored when any other scanner type is specified.

- **WindowState** – This parameter controls how the ScanMan window behaves in relation to your Host Application. It can be set to NORMAL, SHOW_ALWAYS or SHOW_ON_DEMAND. When set to NORMAL, the ScanMan window is visible and active when clicked on, but may be covered up when other applications are started or clicked on. This state is useful when your Host Application window doesn't take up the whole screen or if your operator doesn't need to view the information. When set to SHOW_ALWAYS and it will always be visible, but will only be active when you click on it. This state is very useful when your Host Application is full screen and there is a place to put the ScanMan window that doesn't cover up important information. If you don't want to block a part of your host application's window but you'd like to see the client window, then try using the SHOW_ON_DEMAND option. This setting will cause the ScanMan window to appear once a finger has been placed on the scanner. Once the finger is removed, it will go away allowing the user to see the Host Application's entire window. If not specified then the parameter is set to NORMAL.

- **Output** – This setting determines where ScanMan sends the user data if the identification was successful. KB_STUFF tells ScanMan to insert the data into the input field of the Host Application. SERIAL_PORT tells ScanMan to send the data out the serial port that is identified in the **PortValues** setting. If not specified, then KB_STUFF will be used.

- **PortValues** – This setting specifies the configuration information necessary to communicate over a serial connection. These settings must be set to work with the connected device. If not specified, the default setting is: PortValues=com1, 9600, 8, NOPARITY, ONESTOPBIT. The spaces after each comma are required.

- port name - com1, com2, com3, etc
- baud rate - 9600, 14400, 19200, 38400, 56000, 57600, 115200, 128000, 256000
- byte size - 4, 8
- parity - EVENPARITY, ODDPARITY, NOPARITY, MARKPARITY, SPACEPARITY
- stop bits - ONESTOPBIT, TWOSTOPBITS

- **UDPPort** – This setting tells ScanMan which port it should use to send its broadcast messages to identiFi. The value can be any number between 1024 and 10000, but we recommend that you use values from 7071 – 7077. If this setting is not specified, then 7071 will be used. Note: You must configure identiFi's **UDPPort** setting with the same value so it can receive the broadcasts.

- **ConnPort** – This setting defines which port ScanMan will be listening on when identiFi tries to establish a connection. If there will be more than one instance of ScanMan running on a single computer, then they <u>must</u> each have a different value for this setting! The value can be any number between 1024 and 10000, but we recommend that you use values from 8081 – 8087. If this setting is not specified, then 8081 will be used.

- **Suffix** – This setting defines how the response string is terminated when sent to the Host Application. Different applications may require different values to work correctly in the user interface. The possible values are CR, CRLF, NONE or a user-defined string. CR adds a carriage return (0x0D) to the output string, CRLF adds a carriage return and linefeed (0x0A) to the output string and NONE adds nothing to the output string. You can also specify your own custom string using any printable ASCII character and any of the following special character codes:
  - \t – inserts a tab character (0x09)
  - \r – inserts a carriage return
  - \n – inserts a linefeed
  - \xhh - where 'hh' is any 2 digit hex number

  When specifying a custom string, it must be enclosed in double-quotes. Here are some examples:
  - "A009" – a string containing only text
  - "\tmore info\r" – a string containing text and special characters
  - "\r\r\n" – a string containing only special characters
  - "\x1aBegin" – a string containing a CTRL-Z followed by text

  If not specified, then CR is the default value.

- **Prefix** – This setting defines the prefix to the user data string that's sent to the Host Application**.** See the details for the Suffix parameter for how to specify.

- **HostApp** – Use this parameter to tell ScanMan which application is the Host Application and stuffs the ID to it directly. If this parameter is not provided, then ScanMan stuffs the ID to the currently active application. Depending on user actions, this may not be your Host Application. Specify the full or partial text of the title that appears in the Title Bar of your application. The value is case-sensitive. If

your Host Application is LunchBox or STI then you should **NOT** use this parameter. This parameter is only useful when Output=KB_STUFF.

- **ApplicationType** – This setting tells identiFi what information to return to ScanMan if the finger is identified or when it is not. If the type is IDENTIFY, CASS or SAK, then identiFi returns the value of User Id. If the type is set to SECURITY, then the person's First and Last Name are sent with the Location Name (e.g. "Fred Flintstone, Cafeteria"). If the finger is not identified, then the following values are returned for each application type: IDENTIFY – returns nothing; SECURITY – returns a '?' and Location Name; CASS – returns '9988888888'; SAK – returns '***'. If not specified, then IDENTIFY will be used.

- **Background** – This parameter can be set to TAN, GRAY, YELLOW, BLUE, GREEN, BLUE_GREEN or WHITE to make it easier to see. TAN is the default.

- **SaveLocationOnExit** – Setting this parameter to YES will save the location of the ScanMan window when you exit. The next time the ScanMan is started, it will appear in the same location. When set to NO the window will always start in the center of your screen. The default is YES.

- **Sounds** – Sounds are produced by ScanMan when a finger is successfully scanned, when a finger scan is NOT identified and optionally when the finger scan is identified. By default, ScanMan plays .WAV files which are output to external speakers connected to your sound card. If you don't have a sound card or external speakers, you can try the BEEP setting which will use the computer's internal speaker. Set the value to REMOTE if your scanner has a speaker and it's not going to be close enough to use the PC's speaker. We **HIGHLY** recommend using the WAV setting with external speakers so everyone can hear the sounds.

- **PlayFingerIdentifiedSound (formerly IncludeIdSound)** – Set this value to YES if you want a sound to be made when a person is identified. Set to NO if you don't want an extra sound when an ID is returned. The default is YES.

- **FingerScannedSoundFile (formerly GoodSound)** – If **Sounds** is set to WAV, then ScanMan will play the *ding.wav* file when an image is scanned. If you want to configure ScanMan to use a different sound, then provide the path to the desired WAV file in the Sounds folder. To use the Beep1 sound you would specify *Scanned\Beep1.wav*.

- **FingerNotFoundSoundFile (formerly BadSound)** - If **Sounds** is set to WAV, then ScanMan will play the *chord.wav* file when an image is scanned. If you want to configure ScanMan to use a different sound, then provide the path to the desired WAV file in the Sounds folder. To use the Buzz2 sound you would specify *NotFound\Buzz2.wav*.

- **FingerIdentifiedSoundFile (formerly IdSound)** – If **Sounds** is set to WAV and **PlayFingerIdentifiedSound** is YES then ScanMan will play the *chimes.wav* file when an image is identified. If you want to configure ScanMan to use a different sound, then provide the path to the desired WAV file in the Sounds folder. To use the Charge sound you would specify *Identified\Just for fun\Charge.wav*. This can also be changed by using the System Menu on the ScanMan window. See the Using the System Menu section above for more information.

- **ForceRemove** – Either YES or NO. YES tells the program to force the user to remove their finger from the scanner before proceeding. A NO value will process the finger immediately, but may allow a double read if the person leaves their finger on too long. NO is the default since after using the scanner a couple of times most people remove their finger when they hear the beep.
- **TouchScreen** – Setting this parameter to YES will simply replace 'click' with 'touch' in several informational messages. NO is the default.

Configuring Multiple Scanners on a Single Computer

If you want to use more than one ScanMan on a single computer then you will need 2 different scanners and then follow these steps to be able to run two ScanMan.

1. Install a ScanMan on the computer.
2. Open Windows Explorer and navigate to the *AppDataFolder*.
3. Create a copy the *scanman.cfg* file in the same folder and rename it. You can use any name you want but we'll use *scanman2.cfg* in this example.
4. Open the *scanman2.cfg* in Notepad or another text editor and edit the following parameters:
    - **LocationName** – The LocationName <u>always</u> needs to be changed so give it a unique name that will help you identify it easily.
    - **ScannerType** – You can <u>not</u> have more than one scanner of the same type running on a single computer. Set the ScannerType to the type appropriate for the second scanner.
    - **ConnPort** – Each ScanMan running on a single computer <u>must</u> have a different value for this setting. Just add one to the value you are already using. For example, if the original ScanMan is set to the default of 8081, then set this one to 8082.
5. (Windows 2000 and XP) Open the **identiMetrics** program folder by clicking on **Start, All Programs** and then on **identiMetrics.** Right-click on the ScanMan shortcut and select **Create Shortcut**. This will create another shortcut.
6. Right-click on the new shortcut and select **Properties**. Click on the **General** tab and change the name to whatever you want. In the left screen shot we changed the name to ScanMan 2. Click on the **Shortcut** tab and add the string " /fn=scanman2" to the end of the string in the **Target:** field as in the right screen shot. Make sure there is a space between the quote and the forward slash. Click on **OK** and you have a new shortcut that will open ScanMan using your new config file.
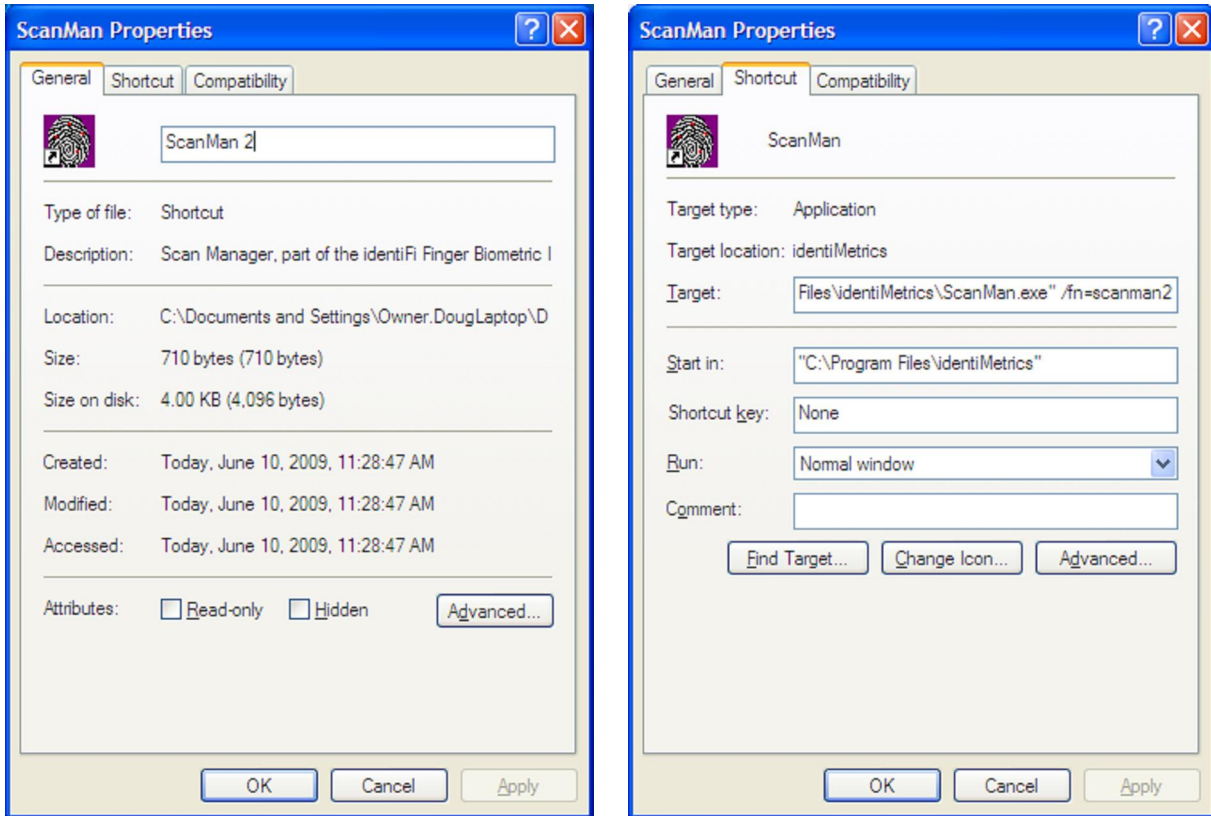
7. (Windows 2000 and XP) To create a new shortcut on the Desktop, open the **identiMetrics** program folder again. Right-click on the new shortcut and select **Send To**, then select **Desktop (create shortcut)**.

8. (Windows 2000 and XP) If you want the second ScanMan to start automatically when the computer is started, then you need to create a new shortcut in the **Startup** program folder as well. Open the **identiMetrics** program folder again. Right-click on the new shortcut and drag it to the **Startup** program folder. Release the button and select **Copy** from the menu.

9. (Windows Vista) Right-click on the ScanMan shortcut on the Desktop and select **Create Shortcut**.

10. (Windows Vista) Follow the instructions in Step 6 to set the properties.

11. (Windows Vista) To create a shortcut in the **identiMetrics** program folder, right-click on the new shortcut and drag it over **Start**, then **All Programs** and then on the **identiMetrics** program folder. Release the button and select **Copy** from the menu.

12. (Windows Vista) If you want the second ScanMan to start automatically when the computer is started, then you need to create a new shortcut in the **Startup** program folder as well. Right-click on the new shortcut and drag it over **Start**, then **All Programs** and then on the **Startup** program folder. Release the button and select **Copy** from the menu.

SCANMAN ME (available with identiFi Pro)

ScanMan ME is a separate application that manages the communications between identiFi and one or more of identiMetrics' Series 500 Ethernet scanners. The Series 500 scanner combines the interface of ScanMan, a finger scanner and network interface to create a scan point that can be used anywhere you have network access.

The Series 500e Scanner

The ScanManME application can be run on any computer on the network and provides a simple interface so that you can easily monitor the status of each Series 500 scanner and its connection to identiFi. Here is an example of the how ScanManME would look

ScanPoint	Location	IP Address	Port	Output	Status	Info
1	Cafe POS 1	192.168.0.191	8081	None	Running	
2	Cafe POS 2	192.168.0.192	8082	None	Running	
3	Library 1	192.168.0.193	8083	KB Stuff	Running	
4	Library 2	192.168.0.194	8084	Com10	Running	
5	Main Office	192.168.0.197	8085	Com12	Running	

Current Scan Point Display

PLACE FINGER LIGHTLY
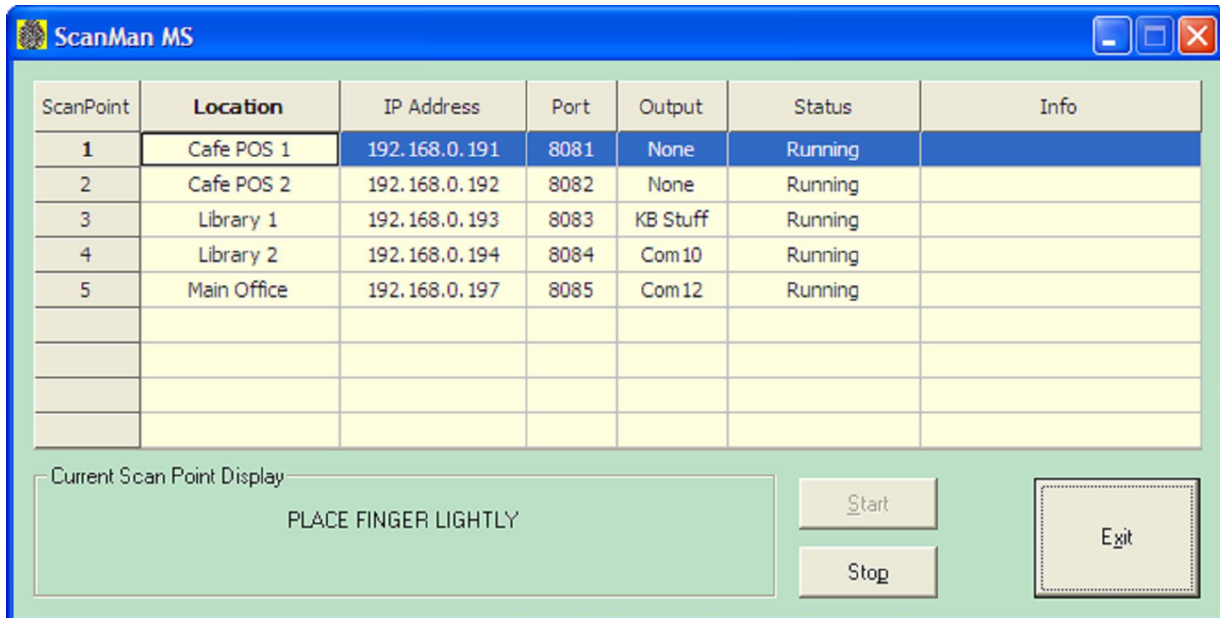
with five scanners connected and running. For each scan point defined in the configuration file, it connects to the scanner and then creates a connection to identiFi.

Preparing to Use the Application

Read the **IdentiFi – Installation Guide** in the *Documents* folder of the identiFi installation CD and install ScanManME. After you have completed the installation, use this document to learn about the many features available and how to use them. We start by giving you an overview of the files, folders and shortcuts placed on your computer during installation.

Files

The files that are installed with ScanManME are organized into two groups, Installation files and Application files. Installation files are files that can be created or modified by the user or the application. The Application files are files that cannot be modified and includes the executable itself.

The Installation files are installed in the folder that you select during the install. You can select the default folder or provide one of your own. The default folder on Windows 2000 and XP is *C:\Program Files\identiMetrics* and on computers with Windows Vista, the default folder is *C:\Public\Documents\identiMetrics*. The Windows user who runs identiFi will have to have full access to the folder you select.

On Windows 2000 and XP the Application files are installed in the folder where the Installation files are installed. However, when installing ScanManME on Windows Vista the Application files will <u>always</u> be installed to the *C:\Program Files\identiMetrics* folder.

Here is a list of the Installation files and related folders:

- *ScanManME.cfg* – This text file contains the configuration settings for ScanManME.
- *scannerinstall.log* – This file contains the status history of running the scannerinstall application and is only used for troubleshooting.

Here is a list of the Application files and related folders:

- *ScanManME.exe* – The ScanManME application.
- *Docs* – This folder contains the installation, user and troubleshooting guides.
- *Drivers* – This folder contains the files needed to install the device drivers for the many scanners that we support.
- *Utilities* – This folder contains additional files and programs that may be helpful when using ScanManME.

Shortcuts

The installation also creates several shortcuts to make it easier to access the program, documentation and training materials. A shortcut to *ScanManME.exe* and the *Docs* folder is placed in the identiMetrics program folder. This is accessible by clicking on **Start, All Programs** and then on **identiMetrics**. If you chose to install the Training Materials, the shortcut to the *Training Materials* folder is also located here.
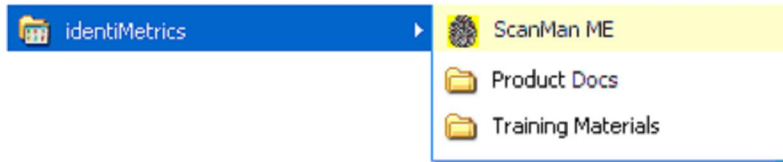
Shortcuts to *ScanManME.exe* and the Training Materials are placed on the Desktop. The Training Materials shortcut opens a browser page that provides the name and description of the available documents and videos with a hyperlink to each one.

A shortcut to *ScanManME.exe* is also installed in the Startup program folder. . This is accessible by clicking on **Start, All Programs** and then on **Startup**. This shortcut tells Windows to start ScanManME automatically whenever your computer is turned on or restarted.

Note: *If you don't want ScanManME to start automatically each time you start Windows, you can delete the shortcut from the Startup folder.*

Starting the Application

By default, ScanManME is installed in the *AppFolder\ScanManME* folder and a shortcut is installed on the Desktop and in the application folder under **All Programs**. To start ScanManME you can double-click on the Desktop icon, or follow these steps: click on the **start** button; click on **All Programs**; click on the **identiMetrics** folder; then click on the **ScanManME** shortcut.

In order for ScanManME to connect to identiFi, the computer needs to have an IP address. Microsoft decided after Windows 2000 that if there is no network present, the computer doesn't get an IP address. As a result, if your computer is not connected to a network, you can't run ScanManME even if identiFi is on the same computer. The computer MUST have a network card. If it doesn't, then add one. If you can connect the computer to your network, do so.

If you don't have a network or it's not accessible, then the easiest way to "connect" is to plug the computer into an inexpensive hub. The hub does NOT need to be connected to an "actual" network. Windows will see that there is a physical layer connection (layer 1 of the OSI model) and allow the computer to have an IP address. In other words, this technique "tricks" Windows into thinking it's connected to a real network.

If the network is unavailable when ScanManME starts, then the Status field for each scan point will be "Waiting on Scanner" which tells you that the application is trying to connect to the scanner and the Info field will display "Unable to connect to SERIES_500 Scanner! Scanner is not available or not reachable!" as seen below.
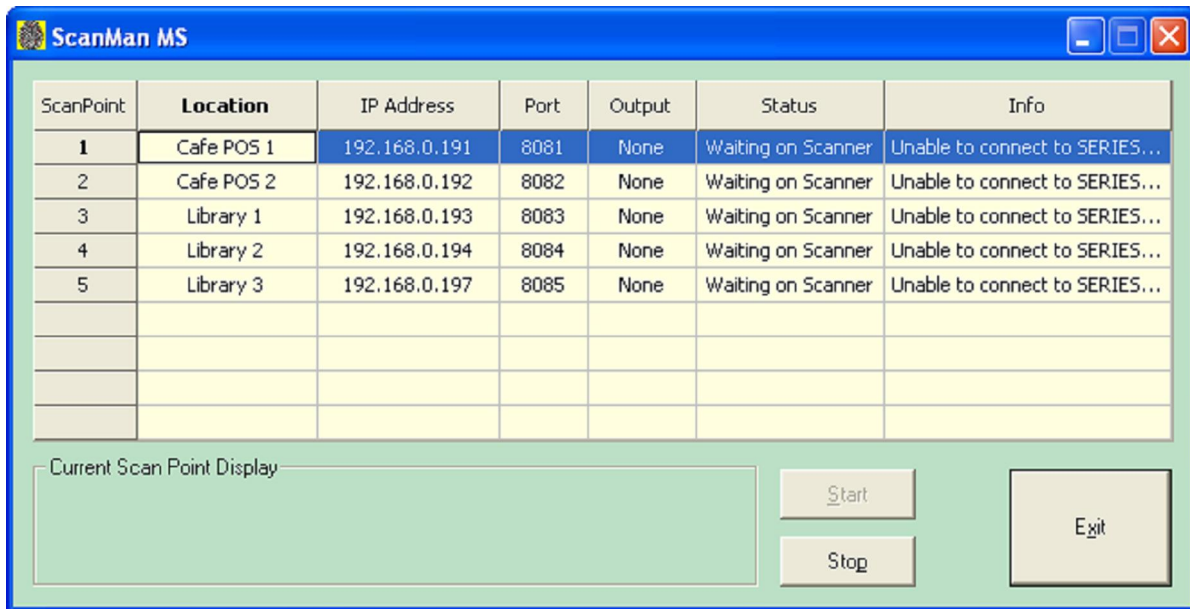
ScanManME will continue to try to connect each scan point that isn't connected. If the network problem is corrected, then ScanManME will eventually be able to connect automatically without any intervention.

Interacting with the Application

The ScanManME window displays a list of all your scan points in a tabular form, displays the current activity for the selected scan point and provides buttons for the Start, Stop and Exit functions.
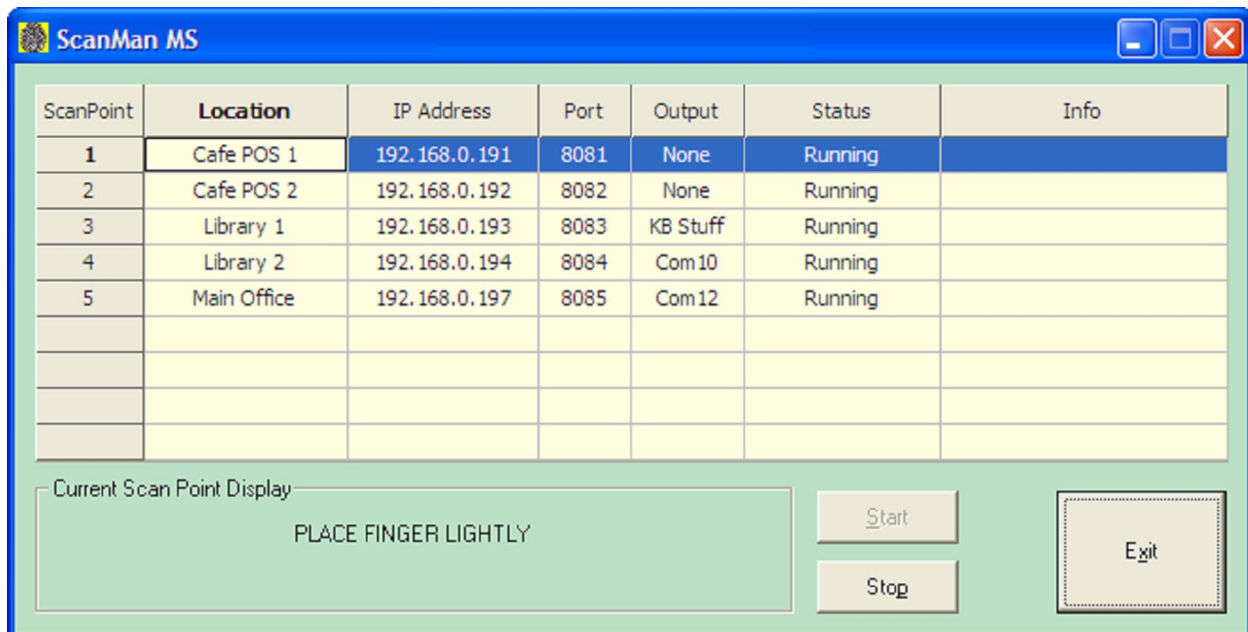
Scan Point Table

- **ScanPoint** – Displays the value of the ScanPoint parameter. Used to make it easy to find the matching descriptor in your config file.
- **Location** – Displays the location description. This value is also displayed in the Locations list in identiFi.
- **IP Address** – Displays the value of the ScannerIpAddr parameter.
- **Port** – Displays the value of the ConnPort parameter.
- **Output** – Displays the value of the Output parameter if it's set to NONE or KB_STUFF. Displays the actual name of the serial port when the value is SERIAL_PORT.
- **Status** – Displays the current status of the individual scanner.
  - o **Running** – Indicates that the scan point is operational and is properly communicating with the scanner and identiFi.
  - o **Waiting on Scanner** – Indicates that ScanManME has not been able to connect to the scanner.
  - o **Waiting on Server** – Indicates that ScanManME has successfully connected to the scanner, but has not connected to identiFi.
  - o **Inactive** – Indicates that the user stopped the processing for this scanner. ScanManME closes the connections to the scanner and identiFi, if they were open, and will no longer try to reconnect them.
  - o **Error** – Indicates that an error occurred while initializing ScanManME. This is an indication of invalid parameters in the configuration file such as duplicate IP address, duplicate location name, duplicate connection port, or invalid serial parameters.
- **Info** – Displays a more detailed description of the error condition if there is one.

Functions

- **Start** – Rereads the configuration settings for the selected scan point and starts the processing thread. The processing thread connects to the scanner, then to identiFi and then processes finger placements. If a connection can not be made to the scanner or to identiFi, then it will try to connect every **WaitBeforeRetry** seconds.
- **Stop** – Stops the processing thread for the selected scan point and closes the connections with the scanner and identiFi, if they were open. After being stopped, the scan point is inactive and will not attempt to reconnect again until being started.
- **Exit** – Stops each active scan point and Exits the application.

Current Scan Point Display

This area of the window is used to display the current activity for whichever scan point is selected if that scan point is running. This means that whatever the Series 500 is displaying on its screen will be displayed here. Whenever you change the selected scan point, the display is cleared until there is any new activity for that scan point.

Configuring the Application

ScanManME can be configured to support different installation environments and user preferences. The *ScanManME.cfg* file is a text file that can be viewed or modified in any text editor. Take a look at the **ScanManME.cfg Example** in the **APPENDIX** to see how the file looks when it is installed. The following parameters are available:

- **UDPPort** – This setting tells ScanManME which port it should use to send its broadcast messages to identiFi. In order for identiFi to receive the broadcasts, it must have its **UDPPort** setting to the same value. The value can be any number between 1024 and 10000, but we recommend that you use values from 7071 – 7077. If this setting is not specified, then 7071 will be used.

- **WaitBeforeRetry** - The number of seconds to wait before trying to connect to a scanner after the previous attempt failed. The default is 30 seconds and the minimum is 5.

- **Background** – This parameter can be set to TAN, GRAY, YELLOW, BLUE, GREEN, BLUE_GREEN or WHITE to make it easier to see. GREEN is the default.

- **ScanPoint** - A short name that identifies this scan point in the table.

- Only the first 8 characters will be displayed. This parameter is used to tell the application to create a new Scan Point and to configure it using the subsequent parameters. We recommend using something simple like 1, 2, 3, 4. or A, B, C, D. **NOTE**: This parameter is REQUIRED and should be unique.

- **LocationName** – This is a description of the location where the scanner is located. It will appear in the scan point table and the **Connected** box in identiFi. The name must be unique, cannot exceed 24 characters and cannot contain an '=' character. If not specified, it will default to "Location". Some examples are 'Enrollment Station'; 'Cafeteria Line 1'; 'Library – First Floor', etc.

- **ScannerIpAddr** - The IP address of the scanner in standard dot notation (i.e. 192.168.0.1). This parameter is REQUIRED and must be unique.

- **Output** – This setting determines where ScanManME sends the user data if the identification was successful. KB_STUFF tells ScanManME to insert the data into the input field of the Host Application. SERIAL_PORT tells ScanManME to send the data out the serial port that is identified in the **PortValues** setting. NONE tells ScanManME to do nothing. This is useful when you're using the log in identiFi to track activity instead of using the id itself. KB_STUFF is the default.

- **PortValues** – This setting specifies the configuration information necessary to communicate over a serial connection. These settings must set to work with the connected device. If not specified, the default setting is: PortValues=com1, 9600, 8, NOPARITY, ONESTOPBIT. The spaces after each comma are required.
  - port name - com1, com2, com3, etc
  - baud rate - 9600, 14400, 19200, 38400, 56000, 57600, 115200, 128000, 256000
  - byte size - 4, 8
  - parity - EVENPARITY, ODDPARITY, NOPARITY, MARKPARITY, SPACEPARITY
  - stop bits - ONESTOPBIT, TWOSTOPBITS

- **ConnPort** – This setting defines which port identiFi will use to connect to this scanner. Each scan point <u>must</u> each have a different value for this setting! The value can be any number between 1024 and 10000, but we recommend that you use values starting at 8081. If this setting is not specified, then 8081 will be used.

- **Suffix** – This setting defines how the response string is terminated when sent to the Host Application. Different applications may require different values to work correctly in the user interface. The possible values are CR, CRLF, NONE or a user-defined string. CR adds a carriage return (0x0D) to the output string, CRLF adds a carriage return and linefeed (0x0A) to the output string and NONE adds nothing to the output string. You can also specify your own custom string using any printable ASCII character and any of the following special character codes:

  - \t – inserts a tab character (0x09)
  - \r – inserts a carriage return
  - \n – inserts a linefeed
  - \xhh - where 'hh' is any 2 digit hex number

  When specifying a custom string, it must be enclosed in double-quotes. Here are some examples:

  - "A009" – a string containing only text
  - "\tmore info\r" – a string containing text and special characters
  - "\r\r\n" – a string containing only special characters
  - "\x1aBegin" – a string containing a CTRL-Z followed by text

  If not specified, then CR is the default value.

- **Prefix** – This setting defines the prefix to the user data string that's sent to the Host Application**.** See the details for the Suffix parameter for how to specify.

- **ApplicationType** – This setting tells identiFi what information to return to ScanManME if the finger is identified or when it is not. If the type is IDENTIFY, CASS or SAK, then identiFi returns the value of User Id. If the type is set to SECURITY, then the person's First and Last Name are sent with the Location Name (e.g. "Fred Flintstone, Cafeteria"). If the finger is not identified, then the following values are returned for each application type: IDENTIFY – returns nothing; SECURITY – returns a '?' and Location Name; CASS – returns '9988888888'; SAK – returns '***'. If not specified, then IDENTIFY will be used.

TECH SUPPORT

Call us at (215) 836-5640 or e-mail us at support@identimetrics.net for information about our Support Plans.

APPENDIX A: Config File Listings

Identifi.cfg

Here is the standard *identifi.cfg* file as it is would appear after a new install.

```
#              Configuration Settings for IdentiFi - v1.6.1

#<<<<<<<<<<< DO NOT EDIT THE DOCUMENTATION SECTIONS OF THIS FILE >>>>>>>>>>>>

#-----------------------------------------------------------------------------
# IDENTIFI-OPERATIONAL SETTINGS
#-----------------------------------------------------------------------------
#
#   DatabasePath=<path>
#
#       <path> The complete path, without a filename, to the database files.
#           It must be less than 127 characters long.  If it's not specified,
#           identiFi will look for the files in the same folder where it was
#           started from.
#
#       Example: DatabasePath=C:\Program Files\IdentiMetrics\IdentiFi\ is
#           how the setting would look if you installed identiFi in the
#           default installation folder.
#
#   UDPPort=<port number>
#
#       <port number> A number greater than 1024 that is used by identiFi to
#           listen for connection requests from any ScanMan on the network
#           using the same UDPPort value.  We recommend using a value
#           between 7071 - 7077.  The default is 7071.
#
#       ALERT: The value must match the UDPPort setting for any ScanMan that
#           you want to connect with (the setting can be found in the
#           scanman.cfg file).  If there is more than one copy of identiFi
#           running on the network at the same time, then each copy must have
#           a unique UDPPort setting.
#
#   AutoImportFile=<file name>
#
#       <file name> The file name of the file to import.  If the file is not
#           in the identiFi installation folder, then the complete path must
#           be given.  The default is AutoImport.txt
#
#   AutoImportDelimiter=<TAB | COMMA>
#
#       TAB    A tab is used to separate fields. (default)
#       COMMA  A comma is used to separate fields.
#
#   AutoImportUseQuotes=<YES | NO>
#
#       YES    Each field is surrounded by double-quotes.
#       NO     Fields are not quoted. (default)
#
```

```
#    TimedKeyNotice=<numberofdays>
#
#        <numberofdays> If you have a Timed key, this value indicates the
#             number of days before the key expires that the reminder message
#             will be displayed when starting identiFi.  If you have another
#             key type the setting is ignored.  The default is 14.
#
#    LogFileCount=<filecount>
#
#        <filecount> The number of log files that will be created.  Each file
#             will have a format like 'identifi-1.log'.  If the filecount is 5,
#             then there will be up to 5 log files each with a name that
#             includes the index.  The default is 5.
#
#    LogFileSize=<filesize>
#
#        <filesize> The maximum size of an individual log file. Once reached,
#             identiFi will start writing log records to the next log file.
#             Once LogFileCount number of files have been created, then
#             identiFi will start over.  If LogFileCount=5 then identifi-1.log
#             is the first log file.  Once it's filled, identifi-2.log will be
#             created.  When identifi-5.log is full, identifi-1.log will be
#             overwritten with the newest log entries.  You can tell which file
#             is the current one by looking at the one with the most current
#             Modified Date.  The default is 150K and the minimum is 10K.
#
#    ImportFolder=<path>
#
#        <path> The complete path description of the folder where the Open
File
#             dialog will point to when doing an Import.  It must be less than
#             127 characters long.  If it is not specified, the Open File
dialog
#             will point to the folder where identiFi is installed.
#
#    ExportFolder=<path>
#
#        * See above description of ImportFolder *
#
#    MergeFolder=<path>
#
#        * See above description of ImportFolder *
#
#    RestoreFolder=<path>
#
#        * See above description of ImportFolder *
#
#    AutoStartBuiltinScanMan=<YES | NO>
#
#        YES     Automatically start the built-in ScanMan and connect to the
#                scanner immediately after starting identiFi.  (default)
#        NO      Do not start the built-in ScanMan.  You can start it manually
#                using the "Actions | Start Built-in ScanMan" menu item.
#
#    ActivityLogFieldList=<fieldList>
#
#        <fieldList>  An ordered list of fields to be output in the activity
```

```
#            log when the option is turned on in the Options dialog.  Specify
#            each field you want output, in the order you want, separated by
#            a comma. The available fields are:
#
#            Date       Outputs the date as MM/DD/YY.
#            Time       Outputs the time as HH/MM/SS
#            Location   Outputs the location where the placement was recorded.
#            YesNo      Outputs either a 'Y' if identified or an 'N' if not.
#            First      Outputs the first name of the person identified. A
#                       question mark(?) is output if the identification fails.
#            Last       Outputs the last name of the person identified. A
#                       question mark(?) is output if the identification fails.
#            ID         Outputs the ID of the person identified. A question
#                       mark(?) is output if the identification fails.
#            "Text"     Outputs the quoted text characters.  This field MUST
#                       NOT contain a comma.
#
#        If not specified it will default to the following:
#
#        Date, Time, YesNo, Location, First, Last, ID
#
#   ActivityLogFieldSeparator=<COMMA_SPACE | COMMA | TAB>
#
#        COMMA_SPACE  A comma is used to separate fields. (default)
#        COMMA        A comma is used to separate fields.
#        TAB          A tab is used to separate fields.
#
#   ActivityLogShowFailed=<YES | NO>
#
#        YES    Will output a line when a finger is placed and NOT identified.
#               (default)
#        NO     Only outputs a line when a placement is identified.
#
#-----------------------------------------------------------------------------

UDPPort=7071
AutoImportFile=AutoImport.txt
AutoImportDelimiter=TAB
AutoImportUseQuotes=NO
TimedKeyNotice=45
LogFileCount=5
LogFileSize=150000
AutoStartBuiltinScanMan=YES


#-----------------------------------------------------------------------------
# IDENTIFI-LOOK-AND-FEEL SETTINGS
#-----------------------------------------------------------------------------
#
#   Background=<TAN | GRAY | YELLOW | BLUE | GREEN | BLUE_GREEN | WHITE>
#
#        TAN           Sets the background to tan.
#        GRAY          Sets the background to light gray.
#        YELLOW        Sets the background to light yellow.
#        BLUE          Sets the background to light blue.
#        GREEN         Sets the background to light green.
#        BLUE_GREEN    Sets the background to bluish green.  (default)
#        WHITE         Sets the background to white.
```

```
#
#   OwnerFieldLabel=<ownerlabel>
#
#       <ownerlabel> Is a string that will be used as the label of the field
#           that defines the owner.  The label may contain spaces and
#           punctuation, and must be less than 21 characters in length.  The
#           default is 'Organization:'.
#
#   LocationFieldLabel=<loclabel>
#
#       <loclabel> Is a string that will be used as the label of the field
#           that defines the location associated with this identiFi.  The
#           label may contain spaces and punctuation, and must be less than
#           21 characters in length.  The default is 'Group:'.
#
#-------------------------------------------------------------------------------

Background=BLUE_GREEN
OwnerFieldLabel=Organization:
LocationFieldLabel=Group:


#-------------------------------------------------------------------------------
# SCANMAN-REQUIRED SETTINGS
#-------------------------------------------------------------------------------
#
#   LocationName=<name of location>
#
#       <name of location> The UNIQUE name that describes this location.  It
#           must be less than 24 characters and cannot contain an equal(=)
#           sign.  If not specified, it will be set to "Location".
#
#           ALERT: ScanMan location names MUST be unique.  If more than one
#           ScanMan has the same LocationName, then one or both of them will
#           NOT connect to identiFi.
#
#-------------------------------------------------------------------------------

LocationName=Location (Change this)

#-------------------------------------------------------------------------------
# SCANMAN-OPERATIONAL SETTINGS
#-------------------------------------------------------------------------------
#
#   ScannerType=<FUTRONIC | SERIES_500 | STMICRO | SECUGEN | VERIFI |
#                VALIDITY | FUJITSU   | EIKON   | TACOMA  | CMUSB>
#
#       If not specified the default is FUTRONIC
#
#   ScannerIpAddr=<ip address>      REQUIRED when ScannerType is SERIES_500
#
#       <ip address> A string in the standard dot notation (i.e. 192.168.0.1)
#           of the Scanner.  This is parameter will be ignored if the
#           ScannerType is not SERIES_500.
#
#   WindowState=<NORMAL | SHOW_ON_DEMAND | SHOW_ALWAYS>
#
#       NORMAL            The ScanMan window will behave like a normal Window's
```

```
#                             window.  (default)
#       SHOW_ON_DEMAND  The ScanMan window will be displayed ON TOP of all
#                       other windows when a finger is placed on the scanner.
#       SHOW_ALWAYS     The ScanMan window will be dispalyed ON TOP of all
#                       other windows at all times.
#
#       ALERT: If your Host Application is LunchBox or STI, do NOT use the
#              SHOW_ON_DEMAND value!
#
#   Output=<KB_STUFF | SERIAL_PORT>
#
#       KB_STUFF     Tells ScanMan to send the results to the KB buffer.
#       SERIAL_PORT  Tells ScanMan to send the results to the serial
#                    port defined by the PortValues parameter.
#
#   PortValues=<port name>, <baud rate>, <byte size>, <parity>, <stop bits>
#
#       <port name>   : com1, com2, com3, etc
#       <baud rate>   : 9600, 14400, 19200, 38400, 56000, 57600, 115200,
#                       128000, 256000
#       <byte size>   : 4, 8
#       <parity>      : EVENPARITY, ODDPARITY, NOPARITY, MARKPARITY,
#                       SPACEPARITY
#       <stop bits>   : ONESTOPBIT, TWOSTOPBITS
#
#       If not specified, the default is:
#           PortValues=com1, 9600, 8, NOPARITY, ONESTOPBIT
#
#       This parameter is only used when Output=SERIAL_PORT
#
#       ALERT: You MUST put a space after each comma.
#
#   Suffix=<CR | CRLF | NONE | <string>>
#
#       CR       Adds only a CR (0x0d) to the output string. (default)
#       CRLF     Adds a CR (0x0D) and LF (0x0A) to the output string.
#       NONE     Adds nothing to the output string.
#       <string> A quoted string that will be added to the end of
#                the output string.  You can use any standard
#                characters and the following special characters:
#                     \r   - CR
#                     \n   - LF
#                     \t   - Tab
#                     \xhh - where 'hh' is any 2 digit hex number
#
#       Examples: Suffix=CRLF
#                 Suffix="\r\r\r\r\n5 lines down\r\n"
#                 Prefix="\tanytext\t"
#                 Prefix="\x41\x09"
#
#   Prefix=<CR | CRLF | NONE | <string>>
#
#       * Same as description of Suffix except that NONE is the default *
#
#    HostApp=<Host Title>
#
#       <Host Title> The Host Application is the application that identiFi
```

```
#                    will send the identity information to.  When your application
#                    is running, it has a thick blue bar across the top of the
#                    window called the Title Bar.  The text that appears on the left
#                    side is the Title.  By telling ScanMan which application is
#                    the Host Application, it can send the output directly to that
#                    application.  If no value is specified, then ScanMan will stuff
#                    the ID to whichever application is active as long as it is not
#                    identiFi or ScanMan.  Set the value to the complete Title or you
#                    can specify only part of the Title as long as it's unique.  The
#                    comparison is case-sensitive so the value should be entered
#                    exactly as it appears.  This parameter is ONLY valid when the
#                    Output is set to KB_STUFF.
#
#          ALERT: If your Host Application is LunchBox or STI, do NOT use the
#                    feature!
#
#          Example: HostApp=Notepad
#
#    ApplicationType=<IDENTIFY | SECURITY | CAASS | SAK>
#
#          IDENTIFY    Tells identiFi to return the person's ID if they are
#                      identified, otherwise return nothing.  (default)
#          SECURITY    Tells identiFi to return the person's name and the
#                      location name if identified, otherwise return a '?'
#                      and the location name.
#          CAASS       Tells identiFi to return the person's ID if they are
#                      identified, otherwise return '99888888888'.
#          SAK         Tells identiFi to return the person's ID if they are
#                      identified, otherwise return '***'.
#
#-------------------------------------------------------------------------------

ScannerType=FUTRONIC
WindowState=SHOW_ALWAYS
Output=KB_STUFF
Suffix=CR
Prefix=NONE
ApplicationType=IDENTIFY


#-------------------------------------------------------------------------------
# SCANMAN-LOOK-AND-FEEL SETTINGS
#-------------------------------------------------------------------------------
#
#    SaveLocationOnExit=<YES | NO>
#
#          YES     Saves the current location of the ScanMan window when you
#                  exit.  The next time ScanMan starts, it will open the window
#                  at the same location.  (default)
#          NO      Opens the ScanMan window in the middle of the screen.  If you
#                  move the ScanMan window, the new position will not be saved
#                  when you exit.
#
#    Sounds=<WAV | BEEP | REMOTE | OFF>
#
#    Sounds are produced by ScanMan when a finger is successfully scanned,
#    when a finger scan is NOT identified and optionally when the finger scan
#    is identified.  By default, ScanMan plays .WAV files which are output to
```

```
#    external speakers connected to your sound card.  If you don't have a
#    sound card or external speakers you can try the BEEP setting which will
#    use the computer's internal speaker.  We HIGHLY recommend using the WAV
#    setting with external speakers so everyone can hear the sounds.
#
#         WAV     Plays .wav files.  (default)
#         BEEP    Generates Beeps.
#         REMOTE  Plays sounds through remote Scanner.
#         OFF     Turns off all sounds.
#
#    PlayFingerIdentifiedSound=<YES | NO>
#
#         YES     Make a sound after the person's ID is returned.  (default)
#         NO      No sound will be made if the person is identified.
#
#    identiFi includes a variety of custom WAV sound files for use when using
#    the WAV setting.  They are located in the Sounds folder which is located
#    in the C:\Program Files\IdentiMetrics folder on Windows 200 and XP or the
#    C:\Users\Public\Documents\IdentiMetrics folder on Vista.  We've grouped
#    the sounds according to their use.  There are folders for the Scanned,
#    Not Found and Identified sound files.  In the Identified folder we have
#    created several sub-folders containing many fun speciality sounds.  We
#    have created two versions of our standard sounds with different pitches
#    that we suggest you try first (listed below).  Use the sounds you like or
#    if you have two computers close to each other, use one version on one and
#    a different version on the other.  Any .WAV file is okay, so feel free to
#    check out the other sounds we provide or create your own.
#
#    Suggested Sound Files:
#
#         Scanned\Beep1.wav
#         NotFound\Buzz1.wav
#         Identified\Standard\Chime1.wav
#
#    Higher Pitch Sound Files:
#
#         Scanned\Beep2.wav
#         NotFound\Buzz2.wav
#         Identified\Standard\Chime2.wav
#
#    FingerScannedSoundFile=<sound file>
#
#         <sound file> This is the name of the .WAV file to play once the
#             program successfully scans the finger.  If not specified, the
#             standard Windows sound file ding.wav will be used.
#
#    FingerNotFoundSoundFile=<sound file>
#
#         <sound file> This is the name of the .WAV file to play once the
#             program knows the finger was not found.  If not specified, the
#             standard Windows sound file chord.wav will be used.
#
#    FingerIdentifiedSoundFile=<sound file>
#
#         <sound file> This is the name of the .WAV file to play when the
#             program successfully returns the ID.  If not specified, the
#             standard Windows sound file chimes.wav will be used.
```

72

```
#
#   ForceRemove=<YES | NO>
#
#      NO      Does not require the user to remove finger.  (default)
#      YES     Requires the user to remove their finger after a read.
#
#   TouchScreen=<YES | NO>
#
#      NO       Uses the word 'Click' in various messages. (default)
#      YES      Uses the word 'Touch' in various messages.
#
#---------------------------------------------------------------------------

SaveLocationOnExit=YES
Sounds=WAV
PlayFingerIdentifiedSound=YES
FingerScannedSoundFile=Scanned\Beep1.wav
FingerNotFoundSoundFile=NotFound\Buzz1.wav
FingerIdentifiedSoundFile=Identified\Standard\Chime1.wav
ForceRemove=NO
TouchScreen=NO
```

scanman.cfg

Here is the standard *scanman.cfg* file as it is would appear after a new install.

```
#                  Configuration Settings for ScanMan - v1.6.1

#<<<<<<<<<<< DO NOT EDIT THE DOCUMENTATION SECTIONS OF THIS FILE >>>>>>>>>>>


#------------------------------------------------------------------------------
# SCANMAN-REQUIRED SETTINGS
#------------------------------------------------------------------------------
#
#   LocationName=<name of location>
#
#        <name of location> The UNIQUE name that describes this location.  It
#            must be less than 24 characters and cannot contain an equal(=)
#            sign.  If not specified, it will be set to "Location".
#
#            ALERT: ScanMan location names MUST be unique.  If more than one
#            ScanMan has the same LocationName, then one or both of them will
#            NOT connect to identiFi.
#
#------------------------------------------------------------------------------

LocationName=Location (Change this)


#------------------------------------------------------------------------------
# SCANMAN-OPERATIONAL SETTINGS
#------------------------------------------------------------------------------
#
#   ScannerType=<FUTRONIC | SERIES_500 | STMICRO | SECUGEN | VERIFI |
#                VALIDITY | FUJITSU   | EIKON   | TACOMA  | CMUSB>
#
#        If not specified the default is FUTRONIC
#
#   ScannerIpAddr=<ip address>    REQUIRED when ScannerType is SERIES_500
#
#        <ip address> A string in the standard dot notation (i.e. 192.168.0.1)
#            of the Scanner.  This is parameter will be ignored if the
#            ScannerType is not SERIES_500.
#
#   WindowState=<NORMAL | SHOW_ON_DEMAND | SHOW_ALWAYS>
#
#        NORMAL           The ScanMan window will operate like a normal MS
#                         Windows' window.  (default)
#        SHOW_ON_DEMAND   The ScanMan window will be displayed ON TOP of all
#                         other windows when a finger is placed on the scanner.
#        SHOW_ALWAYS      The ScanMan window will be displayed ON TOP of all
#                         other windows at all times.
#
#        ALERT: If your Host Application is LunchBox or STI, do NOT use the
#               SHOW_ON_DEMAND value!
#
#   Output=<KB_STUFF | SERIAL_PORT>
#
```

```
#        KB_STUFF      Tells ScanMan to send the results to the KB buffer.
#        SERIAL_PORT   Tells ScanMan to send the results to the serial
#                      port defined by the PortValues parameter.
#
#    PortValues=<port name>, <baud rate>, <byte size>, <parity>, <stop bits>
#
#        <port name>   : com1, com2, com3, etc
#        <baud rate>   : 9600, 14400, 19200, 38400, 56000, 57600, 115200,
#                        128000, 256000
#        <byte size>   : 4, 8
#        <parity>      : EVENPARITY, ODDPARITY, NOPARITY, MARKPARITY,
#                        SPACEPARITY
#        <stop bits>   : ONESTOPBIT, TWOSTOPBITS
#
#        If not specified, the default is:
#            PortValues=com1, 9600, 8, NOPARITY, ONESTOPBIT
#
#        This parameter is only used when Output=SERIAL_PORT
#
#        ALERT: You MUST put a space after each comma.
#
#    UDPPort=<port number>
#
#        <port number> A number greater than 1024 that is used to broadcast
#            a message to a specific identiFi to start the connection process.
#            We recommend using a value between 7071 - 7077.  Default is 7071.
#
#        ALERT: The value must match the UDPPort setting for the identiFi that
#            you want to connect with (the setting can be found in the
#            identifi.cfg file).  If there is more than one copy of identiFi
#            running on the network at the same time, then each should have a
#            unique UDPPort setting.
#
#    ConnPort=<port number>
#
#        <port number> A number greater than 1024 that identiFi will use to
#            create a connection with this ScanMan.  It must be different
#            than the setting for UDPPort.  We recommend using a value
#            between 8081 - 8087.  The default is 8081.
#
#        ALERT: In order to have more than one scanner running on the same PC,
#            each ScanMan on that PC MUST be configured with a different
#            ConnPort value.
#
#    Suffix=<CR | CRLF | NONE | <string>>
#
#        CR      Adds only a CR (0x0d) to the output string. (default)
#        CRLF    Adds a CR (0x0D) and LF (0x0A) to the output string.
#        NONE    Adds nothing to the output string.
#        <string> A quoted string that will be added to the end of
#                 the output string.  You can use any standard
#                 characters and the following special characters:
#                      \r  - CR
#                      \n  - LF
#                      \t  - Tab
#                      \xhh - where 'hh' is any 2 digit hex number
#
```

```
#        Examples: Suffix=CRLF
#                  Suffix="\r\r\r\r\n5 lines down\r\n"
#                  Prefix="\tanytext\t"
#                  Prefix="\x41\x09"
#
#    Prefix=<CR | CRLF | NONE | <string>>
#
#        * Same as description of Suffix except that NONE is the default *
#
#     HostApp=<Host Title>
#
#        <Host Title> The Host Application is the application that identiFi
#             will send the identity information to.  When your application
#             is running, it has a thick blue bar across the top of the
#             window called the Title Bar.  The text that appears on the left
#             side is the Title.  By telling ScanMan which application is
#             the Host Application, it can send the output directly to that
#             application.  If no value is specified, then ScanMan will stuff
#             the ID to whichever application is active as long as it is not
#             identiFi or ScanMan.  Set the value to the complete Title or you
#             can specify only part of the Title as long as it's unique.  The
#             comparison is case-sensitive so the value should be entered
#             exactly as it appears.  This parameter is ONLY valid when the
#             Output is set to KB_STUFF.
#
#        ALERT: If your Host Application is LunchBox or STI, do NOT use the
#               feature!
#
#        Example: HostApp=Notepad
#
#    ApplicationType=<IDENTIFY | SECURITY | CAASS | SAK>
#
#        IDENTIFY    Tells identiFi to return the person's ID if they are
#                    identified, otherwise return nothing.  (default)
#        SECURITY    Tells identiFi to return the person's name and the
#                    location name if identified, otherwise return a '?'
#                    and the location name.
#        CAASS       Tells identiFi to return the person's ID if they are
#                    identified, otherwise return '99888888888'.
#        SAK         Tells identiFi to return the person's ID if they are
#                    identified, otherwise return '***'.
#
#------------------------------------------------------------------------------

ScannerType=FUTRONIC
WindowState=SHOW_ALWAYS
Output=KB_STUFF
Suffix=CR
Prefix=NONE
UDPPort=7071
ConnPort=8081
ApplicationType=IDENTIFY


#------------------------------------------------------------------------------
# SCANMAN-LOOK-AND-FEEL SETTINGS
#------------------------------------------------------------------------------
#
```

```
#    Background=<TAN | GRAY | YELLOW | BLUE | GREEN | BLUE_GREEN | WHITE>
#
#       TAN             Sets the background to tan.  (default)
#       GRAY            Sets the background to light gray.
#       YELLOW          Sets the background to light yellow.
#       BLUE            Sets the background to light blue.
#       GREEN           Sets the background to light green.
#       BLUE_GREEN      Sets the background to bluish green.
#       WHITE           Sets the background to white.
#
#    SaveLocationOnExit=<YES | NO>
#
#       YES     Saves the current location of the ScanMan window when you
#               exit.  The next time ScanMan starts, it will open the window
#               at the same location.  (default)
#       NO      Opens the ScanMan window in the middle of the screen.  If you
#               move the ScanMan window, the new position will not be saved
#               when you exit.
#
#    Sounds=<WAV | BEEP | REMOTE | OFF>
#
#    Sounds are produced by ScanMan when a finger is successfully scanned,
#    when a finger scan is NOT identified and optionally when the finger scan
#    is identified.  By default, ScanMan plays .WAV files which are output to
#    external speakers connected to your sound card.  If you don't have a
#    sound card or external speakers you can try the BEEP setting which will
#    use the computer's internal speaker.  We HIGHLY recommend using the WAV
#    setting with external speakers so everyone can hear the sounds.
#
#       WAV     Plays .wav files.  (default)
#       BEEP    Generates Beeps.
#       REMOTE  Plays sounds through remote Scanner.
#       OFF     Turns off all sounds.
#
#    PlayFingerIdentifiedSound=<YES | NO>
#
#       YES     Make a sound after the person's ID is returned.  (default)
#       NO      No sound will be made if the person is identified.
#
#    identiFi includes a variety of custom WAV sound files for use when using
#    the WAV setting.  They are located in the Sounds folder which is located
#    in the C:\Program Files\IdentiMetrics folder on Windows 200 and XP or the
#    C:\Users\Public\Documents\IdentiMetrics folder on Vista.  We've grouped
#    the sounds according to their use.  There are folders for the Scanned,
#    Not Found and Identified sound files.  In the Identified folder we have
#    created several sub-folders containing many fun speciality sounds.  We
#    have created two versions of our standard sounds with different pitches
#    that we suggest you try first (listed below).  Use the sounds you like or
#    if you have two computers close to each other, use one version on one and
#    a different version on the other.  Any .WAV file is okay, so feel free to
#    check out the other sounds we provide or create your own.
#
#    Suggested Sound Files:
#
#       Scanned\Beep1.wav
#       NotFound\Buzz1.wav
#       Identified\Standard\Chime1.wav
```

```
#
#   Higher Pitch Sound Files:
#
#       Scanned\Beep2.wav
#       NotFound\Buzz2.wav
#       Identified\Standard\Chime2.wav
#
#   FingerScannedSoundFile=<sound file>
#
#       <sound file> This is the name of the .WAV file to play once the
#           program successfully scans the finger.  If not specified, the
#           standard Windows sound file ding.wav will be used.
#
#   FingerNotFoundSoundFile=<sound file>
#
#       <sound file> This is the name of the .WAV file to play once the
#           program knows the finger was not found.  If not specified, the
#           standard Windows sound file chord.wav will be used.
#
#   FingerIdentifiedSoundFile=<sound file>
#
#       <sound file> This is the name of the .WAV file to play when the
#           program successfully returns the ID.  If not specified, the
#           standard Windows sound file chimes.wav will be used.
#
#   ForceRemove=<YES | NO>
#
#       NO      Does not require the user to remove finger.  (default)
#       YES     Requires the user to remove their finger after a read.
#
#   TouchScreen=<YES | NO>
#
#       NO      Uses the word 'Click' in various messages. (default)
#       YES     Uses the word 'Touch' in various messages.
#
#--------------------------------------------------------------------------

Background=TAN
SaveLocationOnExit=YES
Sounds=WAV
PlayFingerIdentifiedSound=YES
FingerScannedSoundFile=Scanned\Beep1.wav
FingerNotFoundSoundFile=NotFound\Buzz1.wav
FingerIdentifiedSoundFile=Identified\Standard\Chime1.wav
ForceRemove=NO
TouchScreen=NO
```

scanmanme.cfg

Here is the standard *scanmanme.cfg* file as it is would appear after a new install.

```
#                    Configuration Settings for ScanMan ME - v1.6.1

#<<<<<<<<<<< DO NOT EDIT THE DOCUMENTATION SECTIONS OF THIS FILE >>>>>>>>>>>

#-------------------------------------------------------------------------------
# SCANMAN ME-GLOBAL SETTINGS
#-------------------------------------------------------------------------------
#
#   UDPPort=<port number>
#
#       <port number> A number greater than 1024 that is used to broadcast
#           a message to a specific identiFi to start the connection process.
#           We recommend using a value between 7071 - 7077.  Default is 7071.
#
#       ALERT: The value must match the UDPPort setting for the identiFi that
#           you want to connect with (the setting can be found in the
#           identifi.cfg file).  If there is more than one copy of identiFi
#           running on the network at the same time, then each should have a
#           unique UDPPort setting.
#
#   WaitBeforeRetry=<wait time>
#
#       <wait time> The number of seconds to wait before trying to connect to
#           a scanner after the previous attempt failed.  The default is 30
#           seconds and the minimum is 5.
#
#   Background=<GREEN | BLUE_GREEN | TAN | GRAY | YELLOW | BLUE | WHITE>
#
#       GREEN           Sets the background to light green  (default)
#       BLUE_GREEN      Sets the background to blue-green
#       TAN             Sets the background to tan
#       GRAY            Sets the background to light gray
#       YELLOW          Sets the background to light yellow
#       BLUE            Sets the background to light blue
#       WHITE           Sets the background to white
#
#-------------------------------------------------------------------------------

UDPPort=7071

#-------------------------------------------------------------------------------
# SCANMAN ME-OPERATIONAL SETTINGS
#-------------------------------------------------------------------------------
#
#   All of the parameters in this section apply to each Series 500 scanner
#   that will be connected to identiFi.  If there are 10 scanners, there will
#   be 10 groups of parameters.  The ScanPoint, LocationName, ScannerIpAddr
#   and ConnPort are required parameters and they must be unique for each
#   group.
#
#       Example showing how two scan points might be configured:
```

```
#
#          ScanPoint=1
#          LocationName=Unique Name 1
#          ScannerIpAddr=192.168.0.1
#          ConnPort=8081
#
#          ScanPoint=2
#          LocationName=Unique Name 2
#          ScannerIpAddr=192.168.0.2
#          ConnPort=8082
#          Output=SERIAL_PORT
#          PortValues=Com10, 9600, 8, NOPARITY, ONESTOPBIT
#
#
#     ScanPoint=<label>
#
#          <label> A short name that identifies this scan point in the table.
#               Only the first 8 characters will be displayed. This parameter
#               is used to tell the application to create a new Scan Point and
#               to configure it using the subsequent parameters.  We recommend
#               using something simple like 1, 2, 3, 4, ... or A, B, C, D, ...
#
#               ALERT: This parameter is REQUIRED and should be unique.
#
#     LocationName=<name of location>
#
#          <name of location> The UNIQUE name that describes this location.  It
#               must be less than 24 characters and cannot contain an equal(=)
#               sign.  If not specified, it will be set to "Location".
#
#          ALERT: This parameter is REQUIRED and must be unique.  If more than
#                 one Scan Point has the same LocationName, then one or both of
#                 them will NOT connect to identiFi.
#
#     ScannerIpAddr=<ip address>
#
#          <ip address> A string in the standard dot notation (i.e. 192.168.0.1)
#               of the Scanner.
#
#          ALERT: This parameter is REQUIRED and must be unique.
#
#     ConnPort=<port number>
#
#          <port number> A number greater than 1024 that identiFi will use to
#               create a connection with this ScanMan.  It must be different
#               than the setting for UDPPort.  We recommend using a value
#               between 8081 - 8087.  The default is 8081.
#
#          ALERT: This parameter is REQUIRED and must be unique.
#
#     Output=<NONE | SERIAL_PORT | KB_STUFF>
#
#          NONE          Does nothing.  (default)
#          SERIAL_PORT   Tells ScanMan to send the results to the serial
#                        port defined by the PortValues parameter.
#          KB_STUFF      Tells ScanMan to send the results to the KB buffer.
#
```

```
#    PortValues=<port name>, <baud rate>, <byte size>, <parity>, <stop bits>
#
#        <port name>    : com1, com2, com3, etc
#        <baud rate>    : 9600, 14400, 19200, 38400, 56000, 57600, 115200,
#                         128000, 256000
#        <byte size>    : 4, 8
#        <parity>       : EVENPARITY, ODDPARITY, NOPARITY, MARKPARITY,
#                         SPACEPARITY
#        <stop bits>    : ONESTOPBIT, TWOSTOPBITS
#
#        If not specified the default is:
#            PortValues=com1, 9600, 8, NOPARITY, ONESTOPBIT
#
#        This parameter is only used when Output=SERIAL_PORT
#
#        ALERT: You MUST put a space after each comma.  The value for
#               <port name> must be unique;
#
#    Suffix=<CR | CRLF | NONE | <string>>
#
#        CR      Adds only a CR (0x0d) to the output string (default)
#        CRLF    Adds a CR (0x0D) and LF (0x0A) to the output string
#        NONE    Adds nothing to the output string
#        <string> A quoted string that will be added to the end of
#                 the output string.  You can use any standard
#                 characters and the following special characters:
#                      \r   - CR
#                      \n   - LF
#                      \t   - Tab
#                      \xhh - where 'hh' is any 2 digit hex number
#
#        Examples: Suffix=CRLF
#                  Suffix="\r\r\r\r\n5 lines down\r\n"
#                  Prefix="\tanytext\t"
#                  Prefix="\x41\x09"
#
#    Prefix=<CR | CRLF | NONE | <string>>
#
#        * See above description of Suffix *
#
#    ForceRemove=<YES | NO>
#
#        YES     Requires the user to remove their finger after a read.
#        NO      Does not require the user to remove finger.  (default)
#
#    ApplicationType=<IDENTIFY | SECURITY | CAASS | SAK>
#
#        IDENTIFY    Tells identiFi to return the person's ID if they are
#                    identified, otherwise return nothing.  (default)
#        SECURITY    Tells identiFi to return the person's name and the
#                    location name if identified, otherwise return a '?'
#                    and the location name.
#        CAASS       Tells identiFi to return the person's ID if they are
#                    identified, otherwise return '99888888888'.
#        SAK         Tells identiFi to return the person's ID if they are
#                    identified, otherwise return '***'.
#
```

```
#------------------------------------------------------------------------

#ScanPoint=1
#LocationName=Unique Name 1
#ScannerIpAddr=192.168.0.1
#ConnPort=8081

#ScanPoint=2
#LocationName=Unique Name 2
#ScannerIpAddr=192.168.0.2
#ConnPort=8082
#Output=SERIAL_PORT
#PortValues=Com10, 9600, 8, NOPARITY, ONESTOPBIT
```

```
#------------------------------------------------------------------------
```

APPENDIX B: Advanced Import File Format

An advanced format is also available when using Import to manage the enrollment information. The advanced format allows you to delete individual records, change the ID of a record or include error checking while doing an Add or Change. Basically, the format is the same as the standard format except that each line is prefixed by a command letter between open and close angle brackets.

```
<A>Smith, John, David, 12345, 2012, All
```

```
<U>Smith, John, Andrew, 12345, 2012, All
```

The Change command allows you to change any of the fields of an existing record including the ID. It has a special format. It starts with the command "<C>" then the complete existing record, followed by a number sign "#" and the complete new record.

```
<C>Smith, John, David, 12345, 2012, All#Smith, John, Andrew, 12345, 2012, All
```

```
<C>Jones, Mary, , 45556, Grade 6, HR135#Jones, Mary, , 66543, Grade 6, HR135
```

In the first example only the middle name was changed. However, if the existing record's information does not match exactly, then the change won't be made. This helps prevents accidental changes. In the second example, we use the change command to update the ID itself. You are unable to change the ID using the standard format.

Here is a list of the available commands:

<u><A> Add Command</u>

Lookup the ID. If it is not found, then add the person, if the ID exists, then ignore the data and write a warning to the log file.

<u><D> Delete Command</u>

Lookup the ID. If the ID is found and the data matches, then delete the person, if the ID doesn't exist or the data doesn't match, then ignore the data and write a warning to the log file.

<u><C> Change Command</u>

Lookup the ID of the existing person. If the ID is found and the data matches, then lookup the ID provided for the new person which is after the number sign (#). If the ID doesn't exist, then change the data (including ID) to the new person's data. If the existing person's ID is not found, or the data doesn't match or the new ID exists, then ignore the data and write a warning to the log file.

<u><U> Update Command</u>

Lookup the ID. If the ID is found, then update the person if any data (other than the ID) is different, or ignore the person if the data is the same. If the ID is not found, then ignore the data and write a warning to the log file.

APPENDIX C: Log File Listing

This is a sample listing of the identifi-1.log file showing the output created from starting identiFi and running several of the common administrative functions.

```
-- Starting identiFi --

    Start Date   : Thursday, May 22, 2008
    Start Time   : 09:36:56
    Data Path    : C:\Dev\IdentiFi\TestData\BDB-v6.0+\CurTest
    Bio Version  : 6.0.369
    Active Recs  : 4
    Deleted Recs : 0
    Verify Enroll: 0
    Primary Hand : 0
    Finger Size  : 1
    Name Format  : 0
    Placements   : 3
    Msg Level    : 0
    Logging On   : 0


    Friday, May 23, 2008 14:45:39
    (E) <Bill L Index Bradford> <5658899> <Grade 1> <Mr. Bravo>
    (E) <Samuel Adams> <12308> <Grade 1> <Mr. Hotel>
-- Merge --

    Start Date    : Thursday, May 22, 2008
    Start Time    : 09:39:52
    From Data Path: C:\Dev\IdentiFi\TestData\BDB-v6.0+\L4d0
    To Data Path  : C:\Dev\IdentiFi\TestData\BDB-v6.0+\CurTest
    Active Recs   : 1
    Deleted Recs  : 0

Starting Phase 1 - 09:39:52

    Opened the merge database.

Starting Phase 2 - 09:39:52

    4 Bio Records found in Merge DB

Starting Phase 3 - 09:39:52

    Closed the merge database.

Starting Phase 4 - 09:39:52

    Opened the current database.

Starting Phase 5 - 09:39:52

    (A) <Abigail  Adams> <12303> <Grade 2> <Mrs. Charlie>
    (A) <Alice Stone Blackwell> <12331> <Grade 2> <Mrs. Charlie>
    (U) <Archibald A. Campbell> <12359> <Grade 2> <Mrs. Charlie>
    (U) <Rosalynn  Carter> <12387> <Grade 2> <Mrs. Charlie>
    (A) <Louis J. M. Daguerre> <12415> <Grade 2> <Mrs. Charlie>
```

    WARN: Unable to merge the following person! ID found but data doesn't
match.
    (F) <Walt Whitman> <12890> <Grade 1> <Mr. Bravo>
    (T) <Walt XXX Whitman> <12890> <Grade 1> <Mr. Bravo>
    (A) <Eli Whitney> <12891> <Grade 2> <Mrs. Charlie>
    WARN: Unable to add bio data for following person, finger(s) already
enrolled!
    (A) <Mike Lottich> <9924333> <Grade 1> <Mr. Bravo>
    (A) <Francis Miles> <9933310> <Grade 1> <Mr. Bravo>
    (A) <Brett Rourke> <990043> <Grade 1> <Mr. Bravo>
    (I) <Shannon Dunphy> <133> <Grade 1> <Mr. Bravo>
    (I) <Lebron James> <90766> <Grade 1> <Mr. Bravo>
    (A) <Bill Bradford> <5658899> <Grade 1> <Mr. Bravo>

    Active Recs : 6
    Deleted Recs: 0

    End Time   : 09:39:57

-- Merge Incomplete! --

-- Import --

    Start Date : Thursday, May 22, 2008
    Start Time : 10:47:50
    Import File: C:\Dev\IdentiFi\TestData\BDB-v6.0+\CurTest\Mr. Juliet_t.exp

    (A) <Louisa May Alcott> <12310> <Grade 2> <Mr. Juliet>
    (C) <John Juan Bower> <12338> <Grade 2> <Mr. Juliet>
    (A) ERROR - Record ignored, invalid data format: Campbell   Hugh Bill
       12366 Grade 2   Mr. Juliet Extra Data
    (A) ERROR - Record ignored, invalid data format: ChisholmShirley   Debby
       12394 Grade 2   Mr. Juliet

    Added   (A): 1 records
    Deleted (D): 0 records
    Changed (C): 1 records
    Ignored   : 2 records

    End Time   : 10:47:50

-- Import Incomplete! --

-- Export --

    Start Date : Thursday, May 22, 2008
    Start Time : 10:43:20
    Export File : C:\Dev\IdentiFi\TestData\BDB-v6.0+\CurTest\Mr. Juliet_t.exp
    Delimiter   : Tab
    Quote Fields: No
    Level 1   : Grade 2
    Level 2   : Mr. Juliet

    Exported 22 records

    End Time   : 10:43:20

```
-- Export Successful!  --

-- Transfer --

    Start Date  : Thursday, May 22, 2008
    Start Time  : 11:05:29
    Level 1     : Class of 2012
    Level 2     :
    Active Recs : 6
    Deleted Recs: 0
    Transfer Dir : C:\Dev\IdentiFi\TestData\BDB-v6.0+\CurTest\Transfer-052208

Starting Phase 1 - 11:05:29

    Created Transfer database.

Starting Phase 2 - 11:05:29

    Removed 511 records from the Transfer database
    Removed 0 enrolled records from the Transfer database

Skipping Phase 3 - 11:05:35

    Active Recs (Transfer): 2

Starting Phase 4 - 11:05:35

    Closed Transfer database.

Starting Phase 5 - 11:05:35

    Opened the current database.

Starting Phase 6 - 11:05:35

    (D) <Samuel Adams> <12308> <Class of 2012> <Mr. Hotel> Enrolled
    (D) <John Booth> <12336> <Class of 2012> <Mr. Hotel> Enrolled
    (D) <John Kyle Brown> <12343> <Class of 2012> <Mrs. Oscar>
    (D) <Archibald Campbell> <12364> <Class of 2012> <Mr. Hotel>
    (D) <Angus Cristobal Campbell> <12371> <Class of 2012> <Mrs. Oscar>

    Removed 5 records from the current database
    Removed 2 enrolled records from the current database

Starting Phase 7 - 11:05:35

    Completed optimizing the current database.

    Active Recs : 4

    End Time    : 11:05:35

-- Transfer Successful!  --

-- Rename --

    Start Date  : Thursday, May 22, 2008
```

```
      Start Time  : 11:14:04
      Level 1     : Grade 6
      Level 2     : Mrs. Uniform
      Active Recs : 4
      Deleted Recs: 0


      (R) <Ethel Gaston Barrymore> <12321> <Grade 6> <Shatner>
      (R) <James  Buchannan> <12349> <Grade 6> <Shatner>
      (R) <Hush Lisa Campbell> <12377> <Grade 6> <Shatner>
      (R) <William Buffalo Bill Cody> <12405> <Grade 6> <Shatner>
      (R) <Amelia  Earhart> <12433> <Grade 6> <Shatner>


      Renamed 5 records from the current database

      End Time     : 11:14:04

-- Rename Successful!  --

      Active Recs : 4
      Deleted Recs: 0
      Stop Date    : Thursday, May 22, 2008
      Stop Time    : 10:05:28

-- Stopping identiFi --
```

APPENDIX D: Programming the Series 500 Scanner

This appendix provides instructions for programming the Series 500e Scanner. Follow these steps to enter programming mode and move through the various menu items:

- Hold the ENT key for 3 seconds.
- Enter the PIN. The Series 500 is shipped with a default pin of 123456. You should change this once you've logged in the first time.
- Use number keys to select a function or use the   and   keys to scroll through the menu.
- Use the ENT key to select the menu item you're on or to accept any changes you've made. Use the ESC key to ignore any changes and return to the previous menu. When you're at the main menu, pressing the ESC key will exit programming mode.

There are 5 items in the main menu and they are described below.

1. Network Admin

1. Set Local IP – Set the IP address of the device
2. Set Local Pt – Set the TCP port of the device
3. Set Gateway – Set the gateway address of the device
4. Subnet Mask – Set the subnet mask of the device
5. MAC Address – Displays the MAC address of the device
6. Save Options – Save changes to the network parameters

2. Check Version

- AVR F/W Vers. – Displays the AVR firmware version.
- BF F/W Vers. – Displays the BF firmware version.
- FAC H/W Vers. – Displays the FAC hardware version.

3. Admin pin

This item allows you to change the administrator PIN. Type in the old value, and press the ENT key. Type in the new value and press the ENT key.

WARNING: Make sure you take steps to keep track of the new PIN because if it's lost, you will have to send the scanner back in order to have it reset.

4. Time Admin

- Set Time- Set time on the on board clock.
- Set Date – Set date on the on board clock.

5. Allow Upgrade

Tells the device to allow firmware upgrades. Only use this option at the request of a Tech Support representative.