User Manual

Version 8.15.5

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1. Getting Started

Before using the scanner

The application has been carefully packaged to avoid damage during transportation. Before operating the scanner, please remove the packaging materials. After removing the packaging materials, you will find the following:

- ScanShell scanner
- CD of the application
- USB interface cable
- User license card
- Calibration card (only with ScanShell 800)
- This manual

Minimum system requirements

The minimum system requirements are:

- Pentium III with 128MB
- Win 98 Second Edition or higher
- USB port
- 15 MB free storage space

Connecting the scanner

The scanner is connected to the computer via the USB port. To connect the reader, do the following:

- Place the scanner on a flat, firm, solid surface with easy access.
- Plug the USB interface cable into the USB port of the computer
- After the *Add new hardware wizard* dialog box appears, click *Next* until you are asked to set the driver for the reader. You'll find the driver on the Installation CD at:

  <CD ROM drive>:\Scanner Driver\ScanShell800 (for scanner model ScanShel800)

  <CD ROM drive>:\Scanner Driver\ScanShell800N (for scanner model ScanShel800N)

  <CD ROM drive>:\Scanner Driver\ScanShell1000 (for scanner model ScanShel1000)

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<CD ROM drive>:\Scanner Driver\MagShell900 (for magnetic reader model MagShel900)

After you specify the driver, click *Next* until the installation is complete.

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Installation

To install the software on the computer, do the following:

1. Close all programs.
2. Insert the CD into the CD ROM drive.
3. Wait until the install program begins and follow the instructions on the screen.
4. If the install program does not automatically start, click the My Computer icon on the desktop and then select the CD ROM drive.
5. Double click on the *Setup* program.

Once the *Setup* program starts, select the application name from the left list and click on the *Setup* icon. Enter your license key number when prompt, and follow the instructions.

Uninstall

To uninstall the software, open the *Add-Remove Program* control panel. Select the Application icon and click on *Add/Remove.* Follow the uninstall instructions until the operation is completed.

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2. Introduction

Important! *This manual refers to two versions of ScanShell:* ***ScanShell*** and ***ScanShellOCR. Please note*** *that if you purchased* ***ScanShell*** *only, some of* ***ScanShellOCR*** *advanced features (namely text recognition, extraction and manipulation) are not available in your version. Whenever this manual refers to options that are only included in* ***ScanShellOCR,*** *they will be marked as "*****OCR Only****".*

ScanShell scans medical insurance cards, and saves their image in a variety of ways. When using the automatic page-feed detection, ***ScanShell*** launches the scan job immediately upon the insertion of a document into the ScanShell 800 scanner. In the ScanShell 1000, the scan job is initiated by pressing any of the scanner buttons. The image is scanned and saved to the hard disk in a predefined color scheme, resolution, and scanning area, in a user-defined format (BMP, JPG, PCX, PNG, TIFF, TGA, PSD). The scanned image can also be rotated automatically, using predefined angles to obtain the proper orientation. ***ScanShell*** offers three naming conventions to the saved images: fixed name, ascending numerator name, and naming according to the customer name as extracted from the card.

Full automation of the scan process allows the user to chain-feed the media to the Scanshell 800 scanner while image processing takes place in the background.

The ScanShell 800 scanner is capable of scanning any photo media due to its powerful scanning engine – including paper photos, ID cards, and even rigid plastic credit cards.

The ScanShell 1000 scanner is designed for Passport reading but can also scan any 3" x 5" or smaller document including ID cards.

ScanShellOCR adds important functionality, namely extensive OCR capabilities. It extracts the textual information from the medical insurance card image into appropriate text fields, and saves them to external file, clipboard or third party software.

With an outstanding card scanning and processing speed of up to 4 seconds per card, combined with a powerful OCR engine ***ScanShell*** and ***ScanShellOCR*** are ideal for customer service offices, government agencies, various businesses, and third party kiosk applications.

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The Program Interface

The following figure shows the application main screen:

***Note**: Some features are only available in ScanShellOCR – see details below, and the first paragraph in chapter 2 - Introduction.*

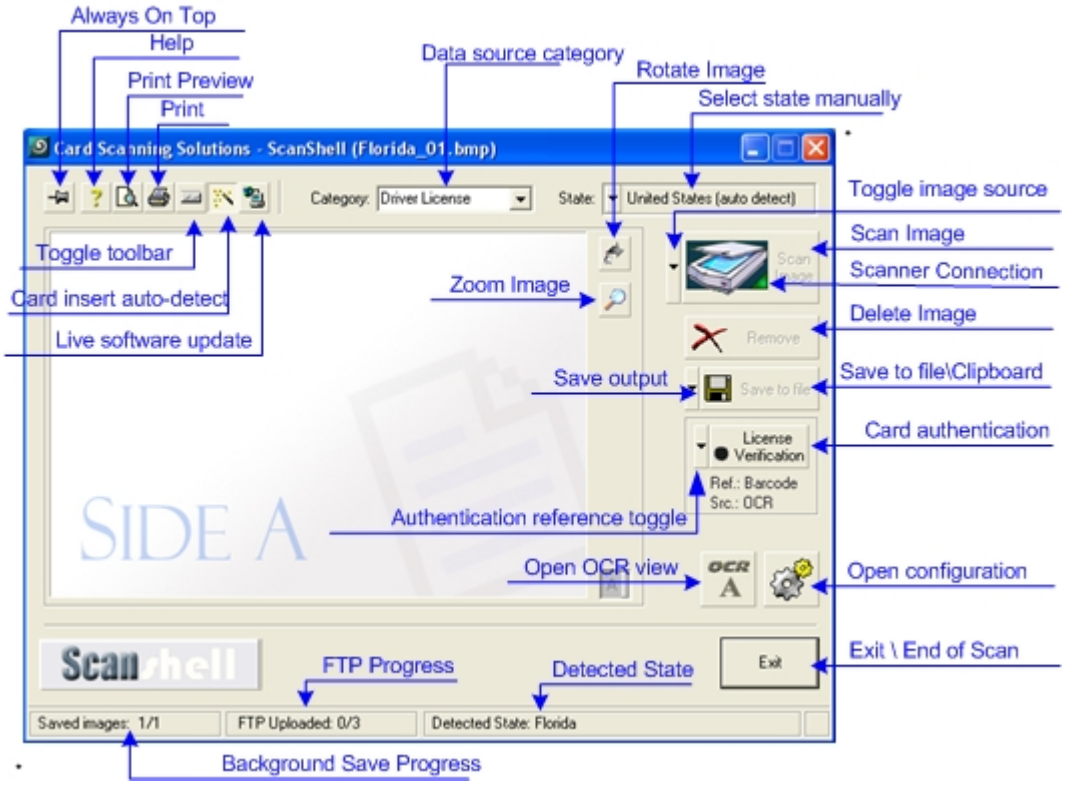

Figure 1: Main Screen

The main screen controls

- **Always on Top**: Toggles the application window between normal mode and always-on-top mode.
- **Help**: Shows this document.
- **Print Preview**: Shows the scanned image and the data before printing.
- **Print**: Prints the scanned image and the data.
- **Toggle Toolbar**: Minimizes the application screen to display only a toolbar with the application controls, and restores the full application screen again.
- **Card Insertion Auto-Detect**: Set the automatic detection of card insertion on and off.

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-  **Live Update**: Updates your software with the most recent version, using the Internet.
- 

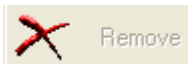
Category: Toggles between Bar Code / Driver License / Passport, and sets the source for data detection accordingly.

Driver's license country: Sets the country and state to be used for the OCR recognition template. In the case of the US you can select 'Auto Detect' (top of the list), or select a state manually from the state list.
-  **Rotate Image**: Rotates the image 90 degrees clockwise. This allows you to control the image orientation prior to saving.
-  **Zoom Image**: Click to enlarge the image for better reading.
- 

Scan Image: Starts the image scan if using manual scan and the image source is set to scanner. Otherwise, activates the FILE OPEN dialog.

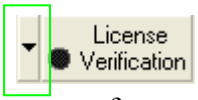
Note: *'Toggle to file' is possible only if a scanner is physically connected to the PC, or if the license key used is a temporary key.*

- 

Toggle Image Source: Sets the input image source to Scanner (ScanShell 800 or ScanShell 1000), Magnetic Strip, or an image file on the hard disk.
-  **Scanner Connection**: A green light indicates that the scanner is connected to the PC. A red light indicates that no scanner was found.
- 

Delete Image: Deletes the scanned image. This gives you a way to control the image prior to saving.
- 

Save to File: Active only in manual save mode: Opens the SAVE AS dialog if file saving is enabled, or saves the file to the clipboard.
-  **Toggle Image Output**: Active only in manual save mode: Sets the output destination to file or clipboard.
- 

Card Verification: Activates the verification function.
- 

Toggle reference (***ScanShellOCR Only**): Sets the reference source for card verification purposes.

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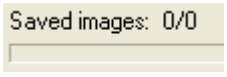
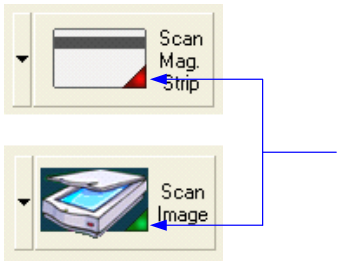
-  **Open OCR View** (***ScanShellOCR Only**): Opens extracted text view.
-  **Open Configuration Dialog**: Opens the configuration dialog screen in which all the application behavior can be set.
-  **Exit / End of Scan**: Used to close the application or to save the current image (used in automatic save mode only).
-  **Background Save Progress**: Shows the background saving progress (used in automatic save mode only).
-  **FTP Progress** (Status bar): Shows the progress of FTP Export
-  **Detected State** (Status bar): Displays the detected state when State Auto Detect is selected.



Device connection indicator
Red – device is not connected
Green – device is connected

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3. Configuring The Program

Before you start scanning, it would be a good idea to configure the program's scanning and file saving parameters. Click on the '*Open configuration screen'* button in the main screen (*see figure 1 page* 9). The following configuration panel will be displayed:

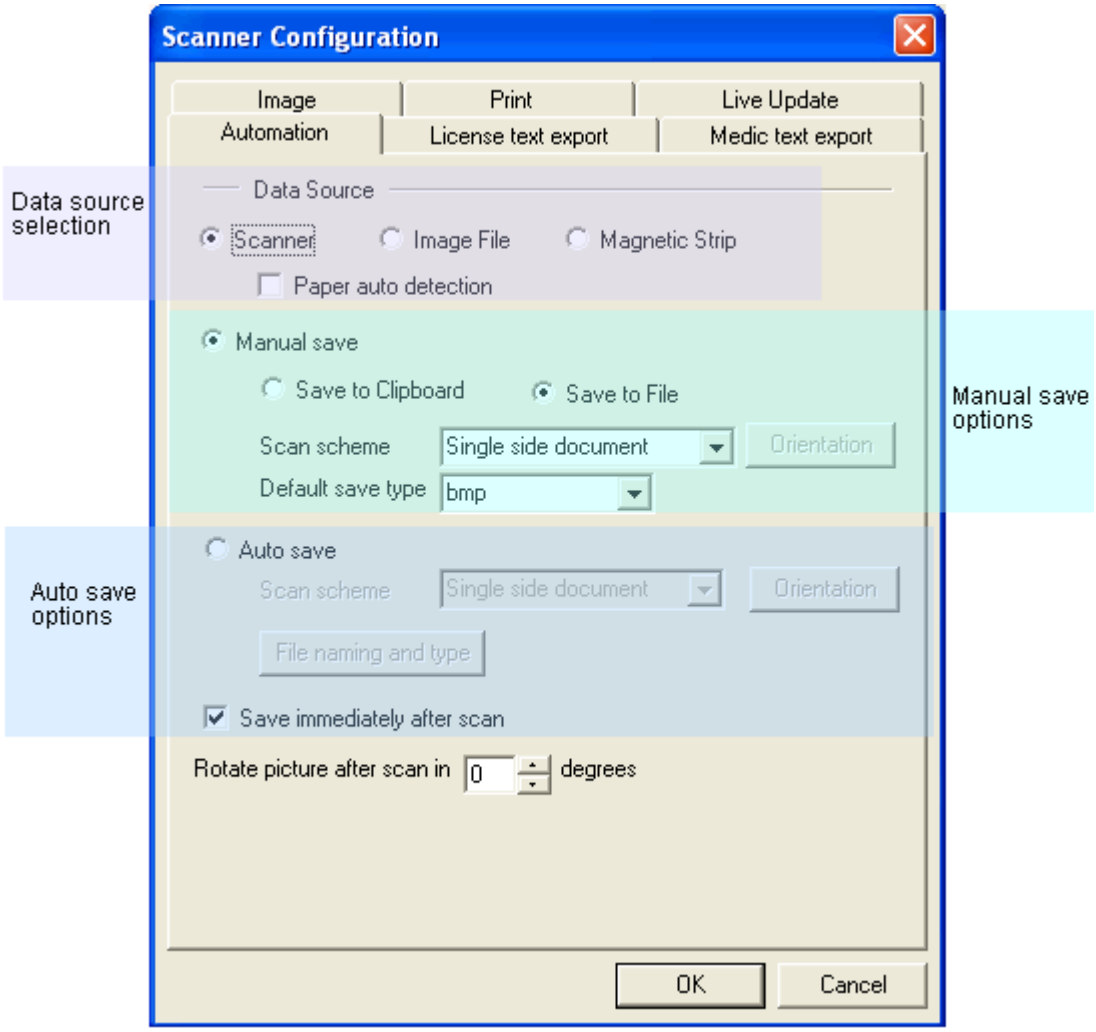

Figure 2: Scanner configuration panel

The configuration panel first tab is the *Automation tab*. Here you can set various parameters of scanning and saving data and images. The *Automation tab* consists of three main sections:

- Image source
- Manual file save
- Auto file save

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Data Source

The *Data Source* section determines the data input source: Scanners, magnetic strip or image file.

Checking the '*Scanner'* option does the following:

- Sets the scanner as the input image device.
- Sets the *Scan* button icon to a scanner image in the main screen.
- Enables the lower checkbox, titled '*Paper auto detection'*.

Checking the '*Magnetic Strip'* option does the following: (***ScanShellOCR Only**)?

- Sets the Magnetic Strip Reader as the input device.
- Sets the *Scan* button icon to a magnetic strip card image in the main screen.
- Disables the lower checkbox, titled '*Paper auto detection'*.

Checking the '*Image File'* option does the following:

- Sets the image source as a local image file from the hard disk.
- Sets the *Scan* button icon to an '*Open file'* image in the main screen.
- Disables the lower checkbox, titled '*Paper auto detection'*.

Paper auto detection - Checking this option will cause the scanner (ScanShell 800) to auto-detect document insertion and start the scanning and saving process automatically. When using the ScanShell 1000 scanner, any of the scanner buttons can be pressed to start the scan.

If the '*Paper auto detection*' is unchecked, the scanner starts scanning when you click on the *Scan* button in the main screen.

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Saving options

Once an image is imported, it can be saved to a file or to the clipboard. Images can be saved in two ways:

Manual save: The image is saved to the hard disk or to the clipboard as soon as the user clicks on the *Save* button or immediately after the scanning, depending on user settings.

Automatic save: The image is saved to the hard disk in a predefined directory. Saving can be performed as soon as scanning is complete, or when the next card scanning starts.

Image manual save

The scanned image can be saved manually either to a file on the hard disk, or to the clipboard. You select the file destination as follows:

Save to clipboard: To save the scanned image to the clipboard, check the '*Save to clipboard'* checkbox *(See Figure 2 page 12)*.

Note that the *Save* button in the main screen now displays a clipboard icon.

Save to file: To save the scanned image to a file, check the '*Save to file'* checkbox *(See Figure 2 page 12)*.

Note that the *Save* button in the main screen now displays a diskette icon.

Once this option is selected, you can set the default file format that will appear in the *Save As* dialog box. ***ScanShell*** supports seven image file formats: BMP, JPG, PCX, PNG, TIFF, TGA, PSD.

Scan scheme: This function is set to single-sided document in ScanShell.

Image auto save

Image auto save is particularly useful for large batch scanning jobs. This option enables chain-feeding the scanner while image saving is done automatically without user interference.

Scan scheme: This function is set to single-sided document in ScanShell.

Once the '*Auto save'* checkbox is checked, the '*File naming and type'* button is enabled, and clicking on it opens the '*AutoSave file naming'* configuration dialog:

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File Naming

Clicking on the '*File naming*' button will take you to the following configuration screen:

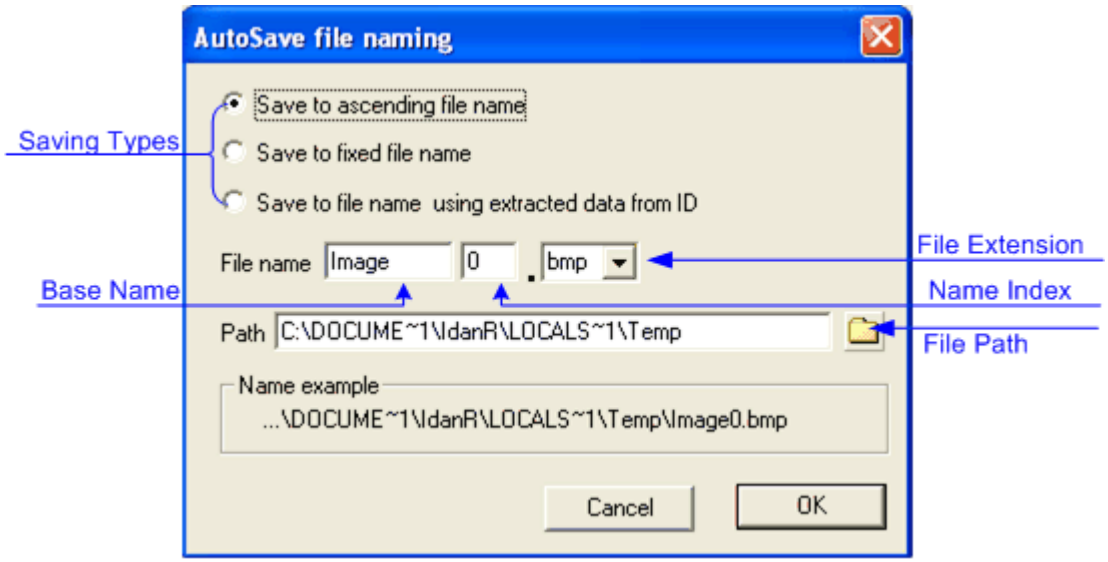

Figure 3: File naming configuration

This dialog sets the naming properties of the automatically saved image files. The file destination folder can be typed into the **'***File Path'*, or selected by clicking the *File Path* button. In the window that opens you can navigate to the directory in which you want to save the files. The file format may be one of seven supported formats (BMP, JPG, PCX, PNG, TIFF, TGA, PSD). You determine the file format in which the images will be saved by selecting the format extension in the '*File Extension'* combo box. The file name is determined by the '*Saving Types'* radio buttons as follows:

- **Save to ascending file name:** The software will create a new file name for each saved file, based on a combination of the '*Base File Name'* and the '*Name Index'* that determines the value by which the index is increased for each file.
  For example, if the '*Base Name'* is set to IMAGE and the '*Name Index***'** is set to 1, the first saved file name will be IMAGE1.BMP, the second saved file name will be IMAGE2.BMP, etc.
- **Save to a fixed file name:** This method saves the image to a fixed file name based on the value in '*Base Name'*. Each new scan saves a new image file that is written over the previous scanned image file.
- **Save to a file name using extracted data from ID:** The image file name is based on the value of a selected field. Currently, the only option is to use the NAME field from the ID card. Accordingly, if the ID card belongs to JOHN SMITH, the saved file name will be **J**OHN SMITH.BMP**.**

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Save immediately after scan - Checking the checkbox titled '*Save immediately after scan' (See Figure 2 page 12)*, will save the image and data immediately after the scan is done.

If the '*Save immediately after scan'* checkbox is unchecked, the saving will occur on the next scan job (in the automatic saving option) or when the user clicks on the *Save* button (in the manual saving option).

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Data extraction tab (*ScanShellOCR Only)

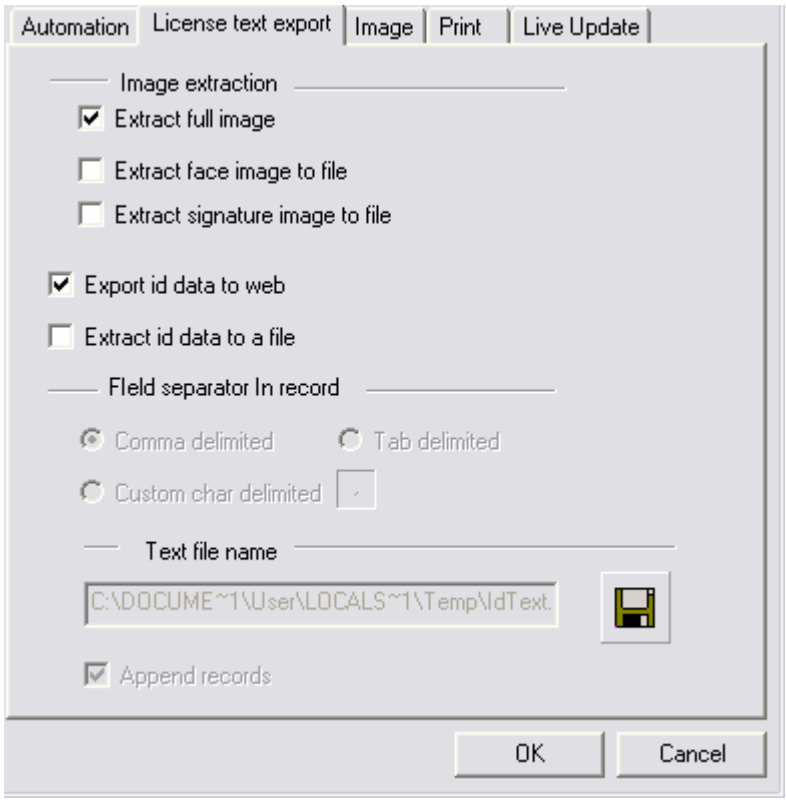

Figure 4: Scanner configuration panel - License data processing tab

- **Extract full image**: extracts the complete ID card image and saves it as a separate file.
- **Extract face image**: Isolates the face image rectangle from the ID card image and saves it as a separate file.
- **Extract signature image to file**: Isolates the signature image rectangle from the ID card image and saves it as a separate file.
- **Export id data to web**: Export the scanned card data to a predefined web address according to the settings in the data.txt file.
- **Extract ID data to a file**: Extracts the textual information from the ID card image and saves it to a text file.

To activate these features, select the 'License text export' tab in the configuration panel, and check the appropriate checkboxes.

Extract full image

The full card image is extracted from the ID image and saved to a file. The face image is saved under the ID image name (e.g. *c:/images/ID-1.bm*). To find out more about file naming methods, see the *Image manual save and Image auto-save sections on page* *14*.

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Extract face image to file

The face image rectangle is extracted from the ID image and saved to a file. The face image is saved under the ID image name with the *.Face* extension (e.g. if the card image name is *c:/images/ID-1.bmp*, the face image is saved as *c:/images/ID-1-Face.bmp*). To find out more about file naming methods, see the *Image manual save and Image auto-save sections on page 14.* The saved face image has the same properties as the ID card image (color scheme, resolution and file type).

To activate this feature, check the checkbox titled ***Extract face image to file.***

Extract signature image to file

The signature image rectangle is extracted from the ID image and saved to a file. The signature image is saved under the ID image name with the *Sig* extension, e.g. if the card image name is *c:/images/ID-1.bmp*, the signature image is saved as *c:/images/ID-1-Sig.bmp*). The saved signature image has the same properties as the ID card image (color scheme, resolution and file type).

To activate this feature, check the checkbox titled ***Extract signature image to file.***

Note: *The signature extraction feature is currently not supported by all the states. Appendix A shows the states that support signature extraction.*

Using the signature extraction feature in documents of states that do not support it yields no result.

Export id data to web

If you select this option, the scanned card data is exported automatically to a predefined web address, according to the settings in the data.txt file, located in the application (.exe file) directory.

Extract ID data to a file

The textual data is extracted from the ID image and saved to a user-selected text file. The data is organized in fields in a constant order separated by a unique character. The field separating character can be any of the following:

- Comma character "," (default).
- Tab character.
- Custom-defined character: any single character from the keyboard.

Each ID scan (record) is organized in a single line. Each record has the following organizational order:

ID number, License number, Name, Address, City, State, Zip, Issue date, Expiry date, Birth date, Sex, License class, Social security, ID image file name, First name, Middle name, Last name, Name suffix, Scan time, Scan date, Text line1, Text line2, Text line3.

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Notes:

1. If a specific field is not supported in the current state, its corresponding value is empty.
2. *ID number* and *License number* have the same value in the US.
3. *ID image file name* holds the full path and name of the ID card image file.
4. *First name, Middle name, Last name, Name suffix* fields are generated by parsing the *Name* field and not directly from the cards.
5. *Text lines 1-3* are extracted only for Chile driver licenses. These data fields are not extracted for other states or countries.
6. *Address2-Address5* are extracted for United Kingdom driver licenses.

Important! *This order is guaranteed to remain in this format in future versions of* ***ScanShell.*** *However, this list may expand in the future to include additional fields, as more states are supported. These new fields will be added to the end of the list.*

Append records:

The records can be written to the text file in two ways:

- **Appending mode**: In this mode, each new record is appended to the end of the text as a new text line. To activate this mode, check the checkbox titled '*Append Records'*.
- **Single record mode**: In this mode, each new record overwrites the previous record; thus the text file always contains a single record. To activate this mode, uncheck the box titled '*Append Records'*.

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Medic text export tab (*ScanShellOCR Only)

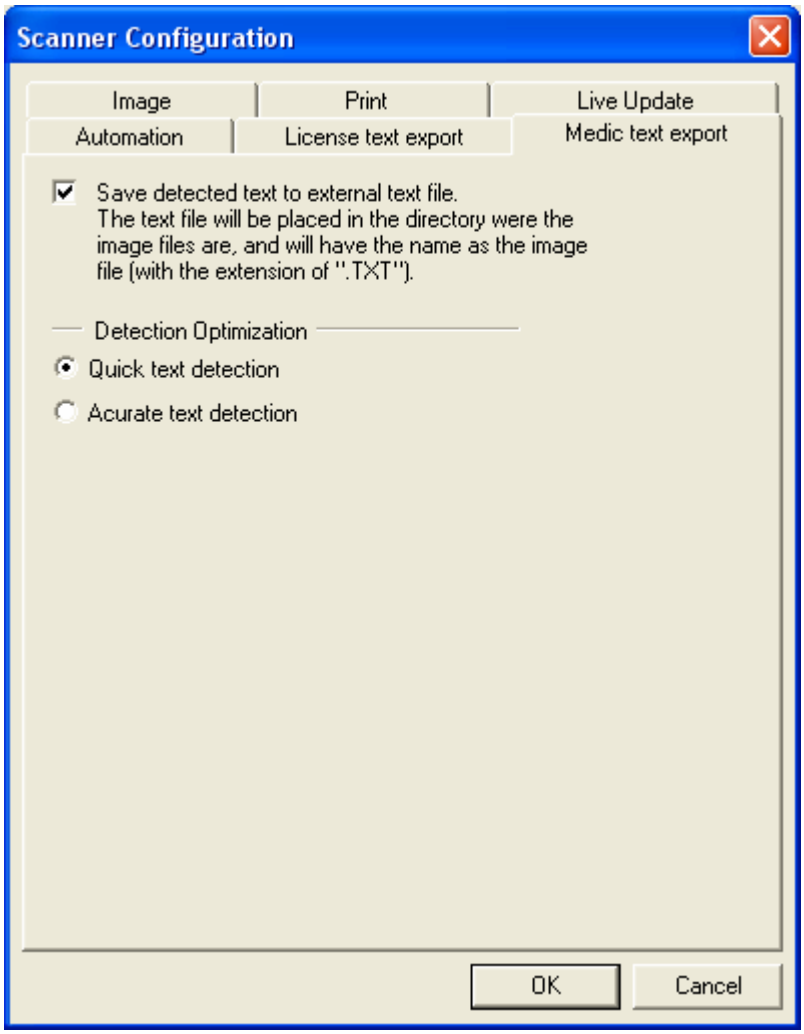

Figure 5: Scanner configuration panel – Image tab

By checking the first checkbox, text extracted from the scanned card will be saved to a text file, which will have the same name as the image file (ending with the .txt extension), and which will be placed in the directory where the image files are saved.

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Image tab

The following scanned image parameters can be controlled from the Image tab:

- **Document size**: The scanned area size in the document, Passport or Driver License.
- **Color scheme**: The number of colors used by the image.
- **Resolution**: Number of dots-per-inch used for scanning the image (dpi).
- JPG Quality: Set the image compression factor when saving the image in JPG format. The compression ratio (11-100) influences the image quality and file size when the lowest value (11) yields the smallest image size (with the lowest image quality) and the highest value (100) yields a large image file (with the highest image quality).

To set these values, select the *Image* tab in the configuration panel.

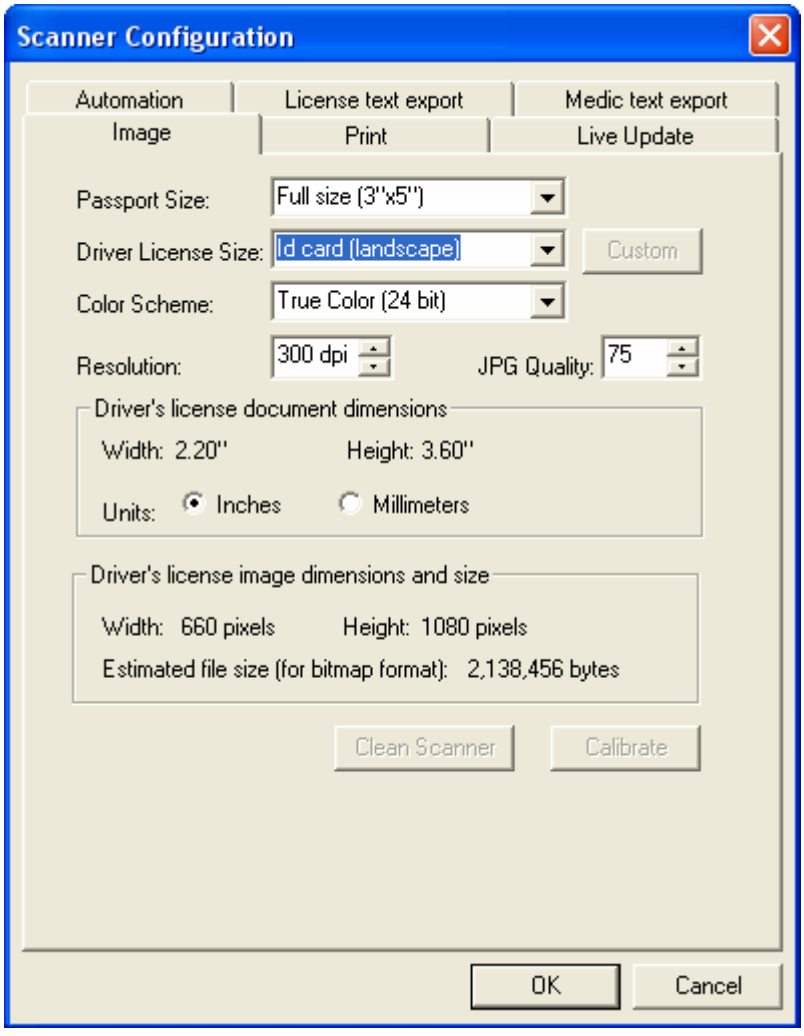

Figure 6: Scanner configuration panel – Image tab

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Document size: The document size determines the size of the scanned area. This area is defined by the width and height values, as shown in Figure 11 below using the ScanShell800 scanner:

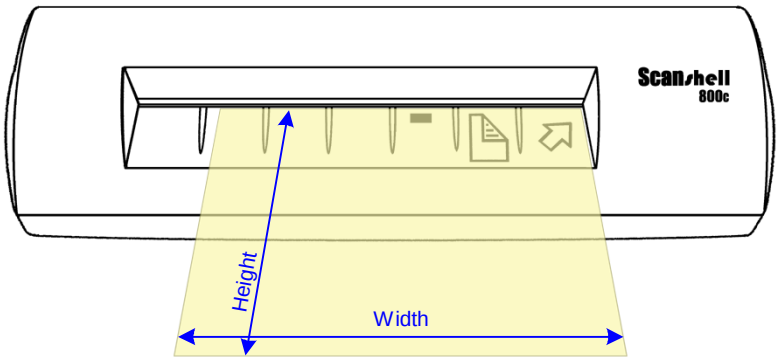

Figure 7: Document Measurements

The document *Passport* size drop-down list offers the following options:

- Full size (3"x5")
- Data section only

The document *Driver License* size drop-down list offers the following options:

- ID card (landscape)
- ID card (portrait)
- Photo size (3” x 5”)
- Large Photo size (4” x 6”)
- Custom size: offers variable scan size from (1.85” x 2”) to (4.1” x 9”) (W x H)

***Note**: If the scan size is smaller than the actual document, the image will be cropped to the size defined by the scan size.*

Color Scheme: Color scheme defines the number of colors used to display the image. In general, the higher the number of colors, the better and clearer is the image. However, please bear in mind that more colors result in a larger file size. ***ScanShell*** offers the following color schemes:

True color: 24-bit color image

256 colors: 8-bit color image

256 shades of gray: 8-bit gray image

Black and white: 1-bit image

As mentioned above, more colors mean larger image file size. The relation between color scheme and file size can be defined approximated as follows:

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File size = $2^{\text{number of bits}}$

Accordingly, if a certain document scanned in black and white format produces a file of 50KB, the same document produces an image file of 400KB when scanned in 256 colors (or gray scale), and 1.2 MB for true color.

Resolution: The resolution parameter defines how vividly the image will be displayed. In general, an image that is scanned in higher resolution shows more details of the original document image. However, as with the color scheme – higher resolution means larger image file size. ***ScanShell*** supports scanning resolutions in the range of 50 dpi to 600 dpi, in increments of 10 dpi.

ScanShell calculates the approximate file size for bitmap format based on the current document size, color scheme and resolution. The result is displayed under '*Image dimensions and size'.*

JPEG Quality: Sets the image quality when saving in JPEG format. This value range can be between 11 and 100. 100 represents the best image quality, but would also result in the biggest file size.

Scanner Calibration

With time, the scanner colors detection tends to change to incorrect values. This phenomenon affects the text detection accuracy as well as the resulted image quality. To reset the scanner to the proper colors, the scanner needs to be calibrated. To calibrate the scanner, click on the *Calibrate* button (located in the configuration panel's Image tab) and use the calibration paper card that was part of the scanner package, to calibrate the ScanShell 800 scanner. The ScanShell 1000 does not require a calibration paper.

Cleaning the Scanner

Cleaning the scanner improves the scan quality.

How to clean:

Scanner model ScanShell 800: Place the cleaning sheet (that come with the scanner package) in the scanner tray, and click on the *Clean Scanner* button. The sheet is fed back and forth through the scanner and cleans the scanner lens. Add a few drops of alcohol for better results.

Scanner model ScanShell 800: Use a soft cloth to clean the scanner glass surface.

Scanner model ScanShell 600: Unscrew the scanner cover (the screw is located on the bottom of the device). Use a soft cloth to clean the scanner lens.

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Printing – Print tab

Image Print Size

Surprisingly, the printed image size depends very much on the graphic program used. In some low-end graphic applications (such as Microsoft Paint that comes with Windows), the printed image size depends on the image resolution. The more dpi – the larger the image size that will be printed. To get a properly printed image size, use a more professional graphic package (such as Adobe Photoshop) that prints the image in the correct dimensions regardless of the image dpi.

The Print tab has the following options:

IDAN: Please get updated screen shot

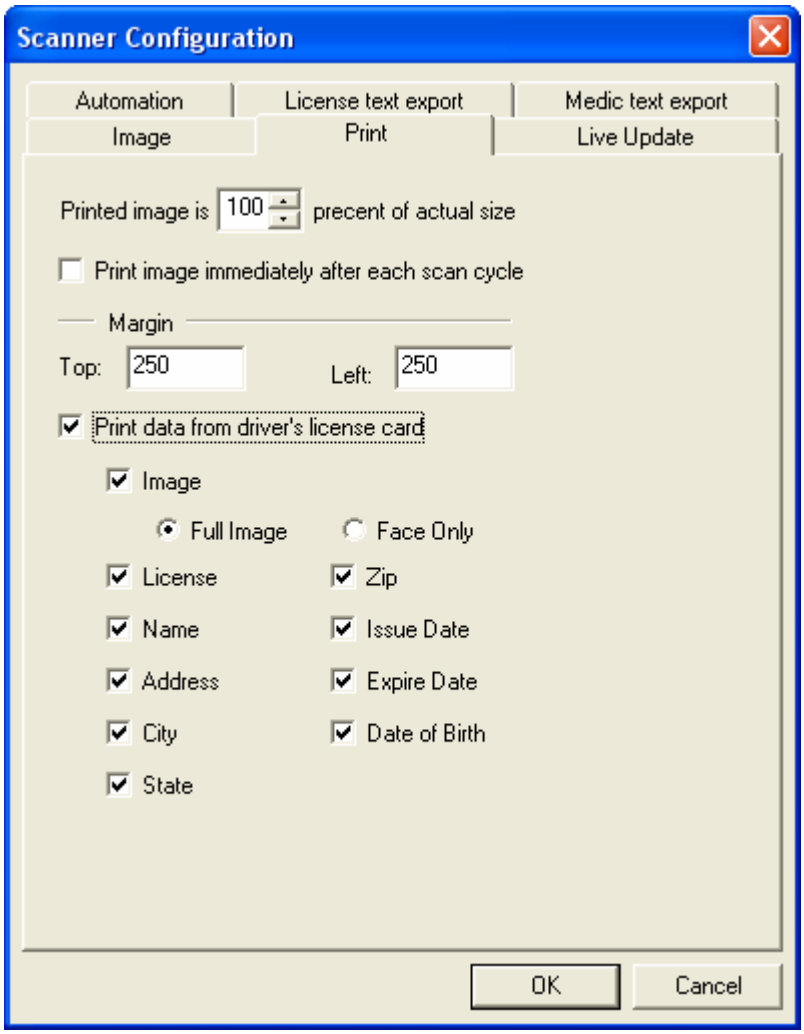

Figure 8: Scanner configuration panel – Print tab

Image size as percent of actual size: Reduces / enlarges the image size from 50% to 200% of the actual document size. Selecting the default (100%) prints the image the same size as the document.

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Print data from driver's license card: Places the data from the card under the card image. The printed image and data fields can be selected using the appropriate check boxes.

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Live Update

Live Update checks for updates whenever you are connected to the Internet, and updates your program automatically with the most recent version of your program available.

***Note**: If you don't configure your software for automatic Live Update, you can still update it manually using the Live Update button in the main screen.*

To use the automatic Live Update feature, go to the Live Update tab in the configuration screen:

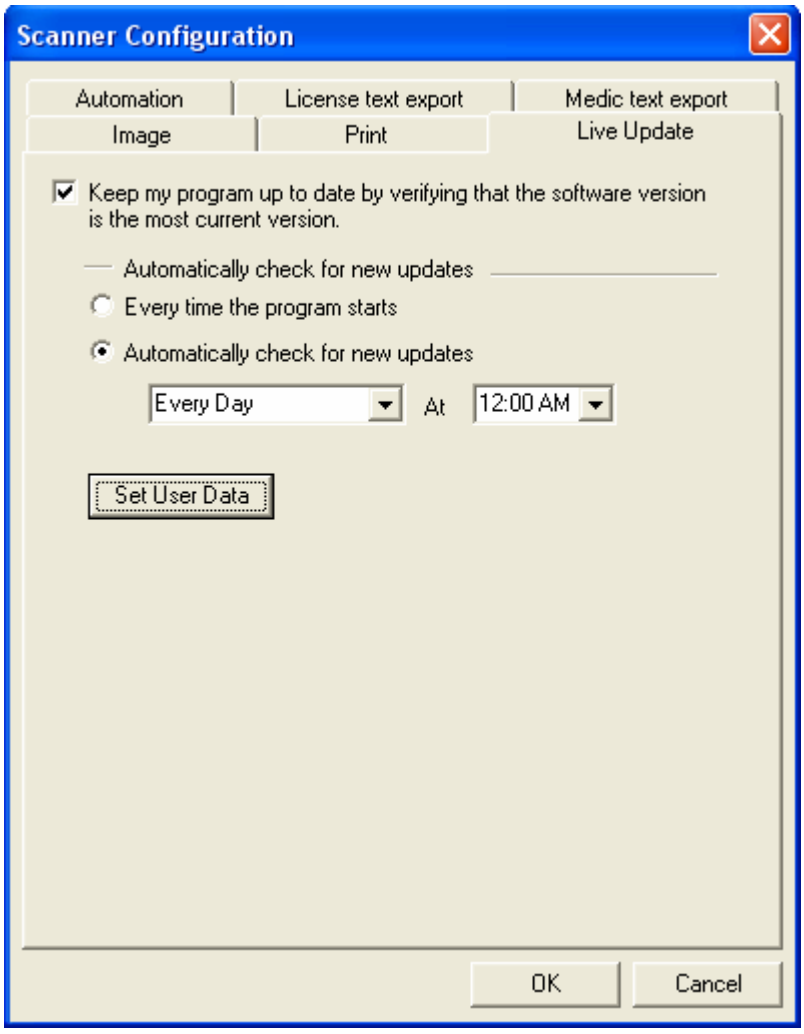

Figure 9: Live Update tab

1. Check the Live Update checkbox.
2. Choose the updating frequency:
    a. Every time the program is started (providing you are connected to the Internet)

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b. At preset times; Use the combo boxes to specify the updating frequency.

3. Click on the 'Set User Data' button.

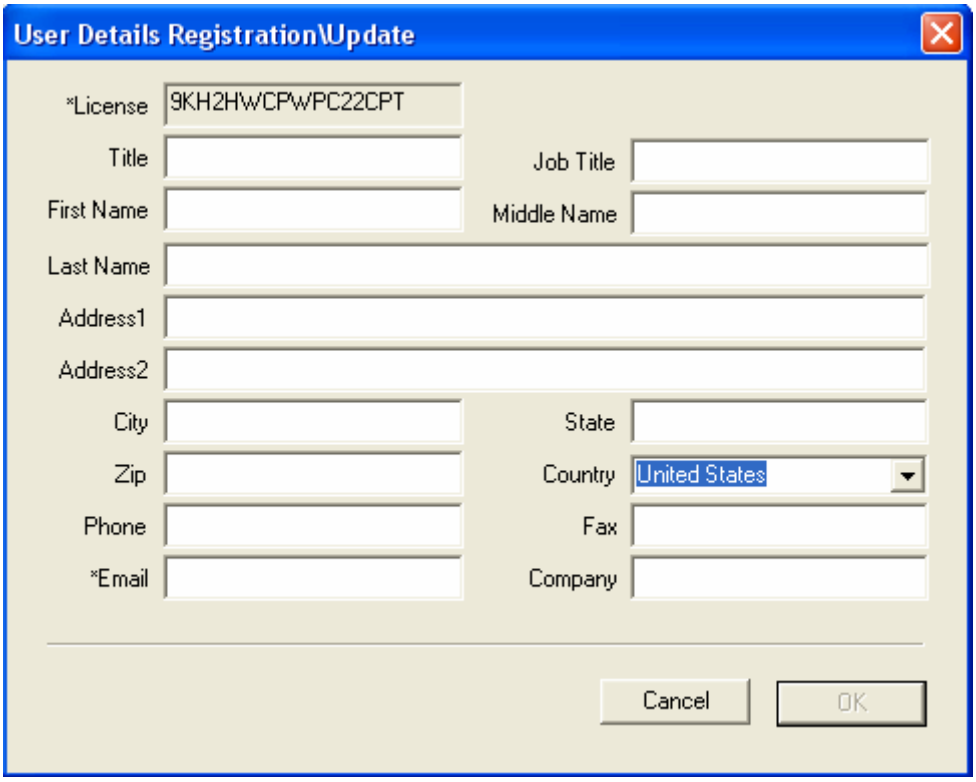

Figure 10: Live Update user details

4. Fill in your details.

***Note**: 'Email' is obligatory and must be filled in.*

5. Click 'OK'.

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4. Program Operation

Overview

ScanShell operation can be divided into six main operation categories:

1. Scanning and Image import
2. Saving and exporting data and images
3. Magnetic Strip reading (***ScanShellOCR Only**)
4. Extracted text manipulation and export (***ScanShellOCR Only**)
5. ID card Verification (***ScanShellOCR Only**)?
6. Setting Image formats and other parameters

Image scanning and import – Images can be imported from two sources: from a scanner (ScanShell 1000 or ScanShell 800) or from an existing image file. When using the ScanShell 800 scanner as input source, you can choose between two operating modes: manual scan, i.e. each scan starts when the user places the card in the scanner and clicks on the *Scan* button, or auto-scan, i.e. the scan starts automatically when the user inserts the card into the scanner. When using the ScanShell 1000 scanner, the scan starts as soon as one of the silver buttons on the scanner is pressed.

The text information in the imported image is extracted using one of two methods: Optical Character Recognition (OCR), in which the text is extracted directly from the scanned image, and Barcode reading, which extracts the data from a Barcode image. In both cases images are either scanned by the scanner or opened from a file.

Image export – Images can be exported to one of two destinations: An image file and the clipboard. When saving to an image file, the application offers two operating modes: manual save, i.e. the user clicks on the *Save* button to save the image using the *Save As* dialog box, and auto-save, i.e. the image is automatically saved to a predefined destination folder.

Magnetic Strip Detection (*ScanShellOCR Only) - Available when a magnetic strip reader is connected to the computer, and indicated in the ScanShell application as the data source.

Extracted text export (***ScanShellOCR Only**) - Saves the detected text from the card / passport (name, ID number, address, etc.) to a user-defined text file. The text is saved in records format of one record per line. The fields are separated by user defined separator characters.

ID Verification (***ScanShellOCR Only**) **–** Verification of the ID card authenticity by comparing two data sources, such as OCR and Barcode, OCR and magnetic strip information, etc.

Image format - Defines the way the input image is scanned (color scheme, resolutions, scan size) and saving format (BMP, JPG, PCX, PNG, TIFF, TGA, PSD).

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Scanning a new document

To scan a new document, just feed the driver's license into the scanner. If the scanner is set to automatic scan mode, the scanner will start scanning the card automatically. In manual scan mode, the scanner starts scanning when you click on the *Scan* button in the main screen. *See Paper auto detection page 13*. Once the scan is complete, the program will process the image. The scanned image and data will be saved according to the settings you specified in the configuration panel.

ID Data (*ScanShellOCR Only)

After scanning and processing the ID card, you can review the acquired text information by opening the *ID Data* window. To open the *ID Data* window, press the button titled '*OCR*' on the main screen.

The *ID Data* window shows the data retrieved either from the scanned image by OCR (Optical Character Recognition), or from the scanned image Barcode, depending on the option selected. Irrelevant fields are disabled (depending the state). The data shown in the *ID Data* window can be reviewed and edited. Once a new ID card is scanned, this data is transferred to a text file (if this option is enabled).

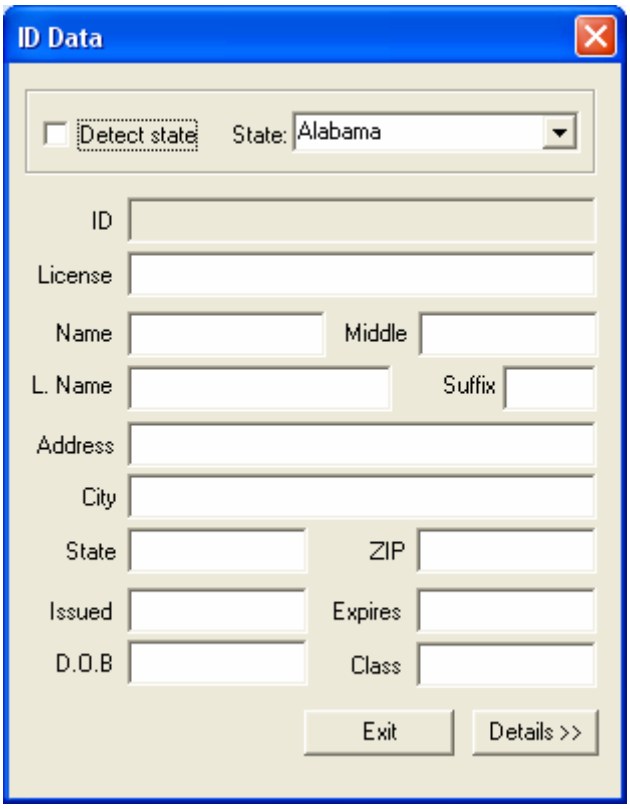


Figure 11: ID Data (detailed mode)

The *ID Data* window can be viewed in two modes:

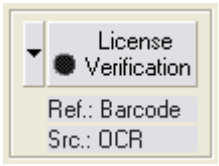
- **Basic mode**: Only the most important data is shown.
- **Detailed mode**: Shows all the data on the card.

You can toggle between the two modes using the *Basic / Detailed* button at the bottom of the *ID Data* window.

ID data saving

Text data saving options are controlled from the configuration panel 'Data Extraction' tab. *See 'Data extraction tab (*ScanShellOCR Only)' page 17.*

ID Card authentication (*ScanShellOCR Only)



Use this option to check if the card you scan is genuine. ScanShell will scan the data on the card using OCR, and then compare it to data from a second source on the card, either the barcode or the magnetic strip (if available). If the data from the two sources match, the card is genuine. Else, the card is either faked, or one of the data sources on the card is corrupted.

To authenticate a card:

1. Select *Record -> New Record* from the menu bar or click on the *New Record* button from tool bar.
2. The ***New Record*** Screen will appear.
3. Select a state from the *State* dropdown list or use the *State Detect* option (for OCR). You are advised to select the state manually, because if the state is not recognized for some reason, you'll have to repeat the process. You can also select a state from the quick state selection buttons, if you have predefined them. (To set a button for the desired state, right-click on the button. Select the desired state from the list. After you release the mouse button, you'll notice that the button name has been changed to the state you selected).
4. Use the popup menu of the card authentication button to select a second card data source (barcode or magnetic strip), which will be used for comparison with the OCR results.

5. Click on the *Card Authentication* button to start the authentication (When the authentication process is active, the icon on the button will flash, if it's not active it will be black)
6. Place the ID card in scanner.

   If you are not using the *Auto detect card insertion* option: Click on the *Scan* button to scan the data source (This scan will be saved to the database if you will save the record).

   If you are using the *AutoDetect card insertion* mode, just insert the card into the scanner

7. ScanShell will scan the card, and than prompt you to scan the card a second time. Insert the card again in the scanner/reader and repeat the steps above.
8. If the data from the two sources on the card matched, the icon on the authentication button will be green. If it did not match, the icon will be red, which means the card is not in order, (either faked, or one of the data sources on the card is corrupted.
9. Press *OK* to save the record to database.

Understanding the authentication status light

The status light provides indications for the authentication process, as follows:

- Solid black color, the authentication function is not activated.
- Solid brown color, the authentication function is activated and waits for the reference scan or swipe.
- Flashing brown light, the reference scan or swipe has been successful, waits for the scan of the source.
- Solid green color - the source was scanned successfully and the authentication is successful (the data of the two sources match).
- Solid red color - the source was scanned badly or the authentication is failed (the data of the two sources don't match).

What to do when verification fails?

If the status light remains solid red after the reference scan or swipe, it means that the data from the two sources don't match. He reason can be one of the following:

1. The card could be faked
2. Bad reading of either one of the source
3. Corruption of one of the data sources.

If verification fails, you can try the following:

- Make sure the current (US) *State box* is set to the correct state of the driver license.
- Try authenticating the card again

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Reading Passports (*ScanShellOCR Only**)**

Passports scanning can only be done with the ScanShell 1000 scanner. This scanner was designed specifically for reading / scanning of passports; however, it can be used also for ID / Driver License reading / scanning. With the ScanShell software the ScanShell 1000 has full functionality for Passport and ID / Driver Licenses.

Both Passport and ID cards should be placed on the glass of the scanner with the side to be scanned facing the glass.

When scanning ID cards, they should be placed on the top right corner as shown in the figure below.

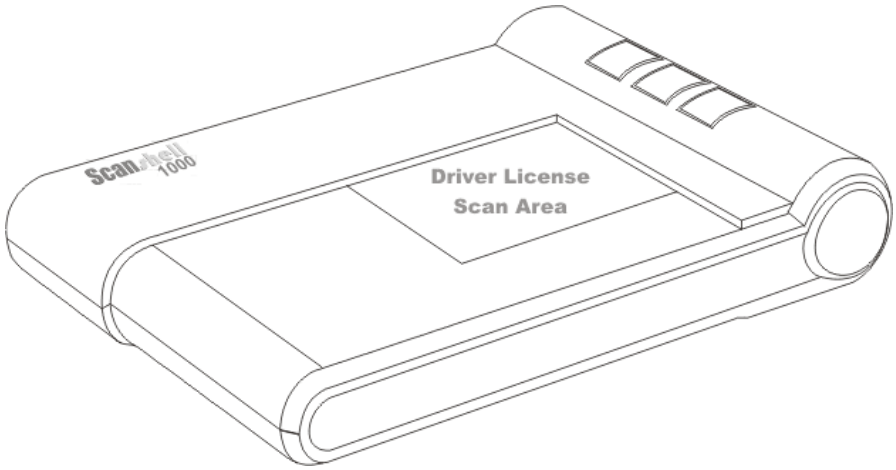

Figure 12: ScanShell 1000, ID placing

When scanning a passport, the entire glass surface (3" X 5") is being scanned unless the ScanShell software is configured to scan only the data lines of the passport.

The proper way to scan a passport is to put the information page (the page that includes the person picture) facing down on the glass, and the data lines (the lines at the bottom of the page) against the plastic frame closer to the ScanShell 1000 logo as shown below.

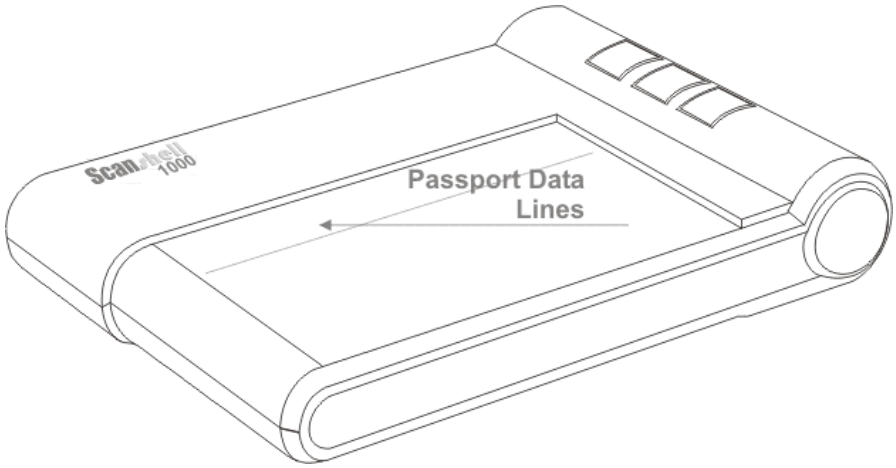

Figure 13: The placing of a passport

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5. Appendix A – Supported States for Detection

The following table shows the countries and states supported by ***ScanShell***. This list will be updated in each new version release of ***ScanShell***.

Country: USA

State Name	State id	Signature Extraction Support
Alabama	0	√
Alaska	1	√
Arizona	2	√
Arkansas	3	√
California	4	√
Colorado	5	√
Connecticut	6	√
Delaware	7	√
Washington D.C.	8	√
Florida	9	√
Georgia	10	√
Idaho	11	√
Illinois	12	√
Indiana	13	√
Iowa	14	√
Kansas	15	√
Kentucky	16	√
Louisiana	17	√
Maine	18	√
Maryland	19	√
Massachusetts	20	√
Michigan	21	√
Minnesota	22	√
Mississippi	23	√
Missouri	24	√
Montana	25	√
Nebraska	26	√
Nevada	27	√

New Hampshire	28	√
New Jersey	29	
New Mexico	30	√
New York	31	√
North Carolina	32	√
North Dakota	33	√
Ohio	34	√
Oklahoma	35	√
Oregon	36	No Signature on card
Pennsylvania	37	√
Rhode Island	38	√
South Carolina	39	√
South Dakota	40	√
Tennessee	41	√
Texas	42	√
Utah	43	√
Vermont	44	√
Virginia	45	
Washington	46	√
West Virginia	47	√
Wisconsin	48	√
Wyoming	49	√
Hawaii	54	√

Country Name: Australia

State Name	State id	Signature Extraction Support
New South Wales	50	
Australian Capital Territory	51	
Queensland	52	
Victoria	53	

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Country Name: Malaysia

State Name	State id	Signature Extraction Support
Malaysia	55	

Country Name: Canada

State Name	State id	Signature Extraction Support
Ontario	70	√
Alberta	71	√

Country Name: Chile

State Name	State id	Signature Extraction Support
Chile	80	√

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6. Appendix B – Supported Scanners

Before using ***ScanShell***, the scanner driver must be installed. ***ScanShell*** can work with the following scanner types:

- Scanshell 800: Driver for the scanner can be found at http://www.id-scan.com/FTP/Scanner_Drivers/scanshell800

- ScanShell 900: Driver for the scanner can be found at http://www.id-scan.com/FTP/Scanner_Drivers/MagShell900

- ScanShell 1000: Driver for the scanner can be found at http://www.id-scan.com/FTP/Scanner_Drivers/ScanShell1000

- Scanshell 600, USB 201: Driver for the scanner can be found at http://www.ID-scan.com/FTP/Scanner Drivers/USB 201

7. Appendix C - Maintaining the scanner

Calibrating the scanner

With time, the scanner colors detection tends to change to incorrect values. This phenomenon affects the text detection accuracy as well as the resulted image quality. To reset the scanner to the proper colors, the scanner needs to be calibrated.

How to calibrate?

To calibrate the ScanShell 800scanner, insert the calibration paper card that was part of the scanner package into the scanner, and click on the *Calibrate* button (located in the configuration panel's Image tab). The ScanShell 1000 does not require a calibration paper, just click on the *Calibrate* button.

Cleaning the scanner

Cleaning the scanner improves the scan quality.

To clean the scanner click on the "Clean Scanner" button. Follow the Cleaning Wizard instructions. This operation requires a cleaning sheet (supplied with the scanner) and alcohol solution.

How to clean?

Scanner model ScanShell 800: Place the cleaning sheet (that come with the scanner package) in the scanner tray, and click on the *Clean Scanner* button. The sheet is fed back and forth through the scanner and cleans the scanner lens. Add a few drops of alcohol for better results.

Scanner model ScanShell 800: Use a soft cloth to clean the scanner glass surface.

Scanner model ScanShell 600: Unscrew the scanner cover (the screw is located on the bottom of the device). Use a soft cloth to clean the scanner lens.

8. Appendix D - Minimized Interface Mode & Command-Line Switches

The ScanShell application behavior can be modified to best suit your needs. This is done by running the program while using command lines switches. *ScanShell* offers the following switches:

MI – Runs the application with minimum amount of control buttons on the main screen and eliminate access to the configuration dialog screens.

ShowGUI – When using the system tray icon, this switch adds the option to show/hide the application main screen from the system tray.

NOMAG – Eliminates the use of the magnetic strip engine. Using this option speeds up the application start-up.

Using the command line switches

To use the command line switch, add the switch to the application shortcut as follows;

Assuming that you have a shortcut to *ScanShell* on your desktop and you want to add to the program the MI switch that will cause it to run in minimized mode:

1. Right click on the shortcut and select *properties*.
2. Modify the TARGET field from "F:\Program Files\Card Scanning Solutions\ScanShellOCR Ver. 6.3.0\ScanShellOCR.exe"
   to: "F:\Program Files\Card Scanning Solutions\ScanShellOCR Ver. 6.3.0\ScanShellOCR.exe" /MI
3. Click *OK* to close the *properties* dialog.

***Important**: Make sure you type the switch value **after** the double quote character!*

You can add several switched one after the other as follows:

"F:\Program Files\Card Scanning Solutions\ScanShellOCR Ver. 6.3.0\ScanShellOCR.exe" /MI /NOMAG /ShowGUI

Running in Minimized Interface mode

Running in *Minimized Interface* mode displays the program with a minimum set of controls, thus preventing the user from altering the program configuration. Nevertheless, this operating mode allows the user to take full advantage of all the features embedded in the program.

To run in *Minimized Interface* mode, the program needs to be started with the /MI switch. To do so, change the program shortcut used to start the program from

"C:\Program Files\Card Scanning Solutions\…\ScanShellOCR.exe" to:

"C:\Program Files\Card Scanning Solutions\…\ScanShellOCR.exe" /MI

This alters the program main screen as follows:

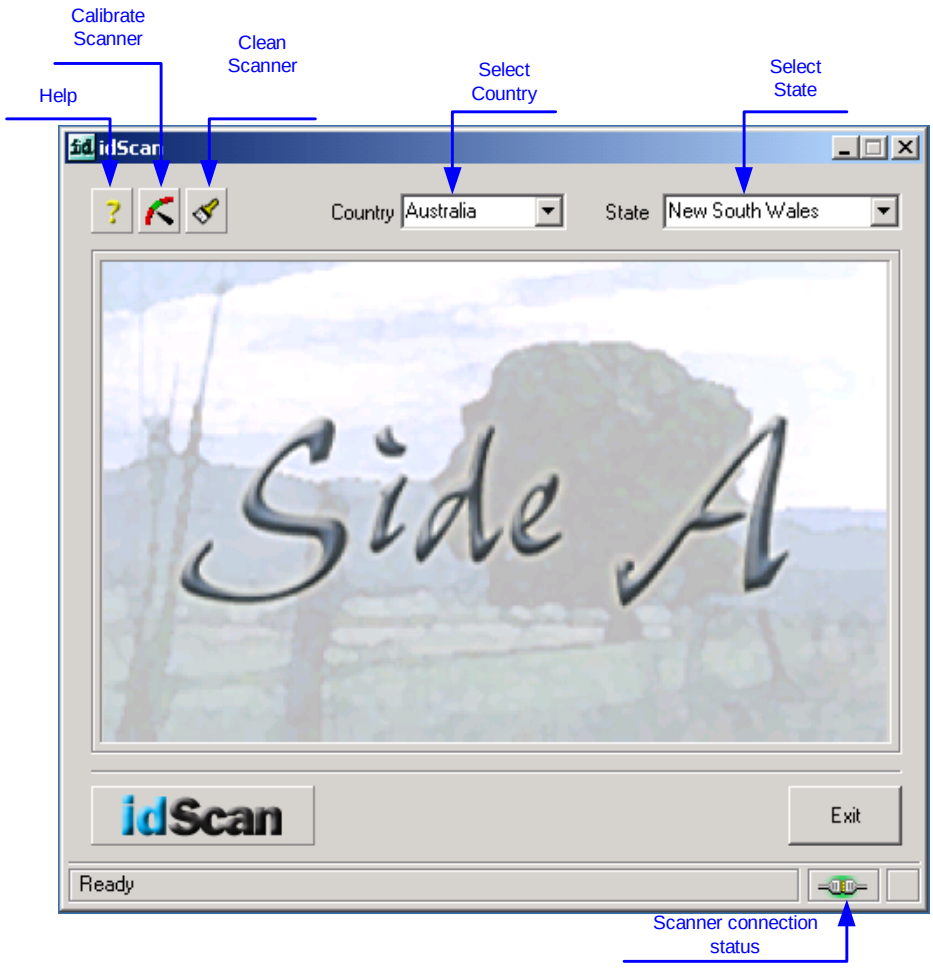

Figure 14: Main screen in minimized mode

Main screen function controls:

- **Help**: Opens this help document.
- **Calibrate Scanner**: Activates the scanner's Calibration Wizard.
- **Clean**: Activates the scanner Cleaning Wizard.
- **Country list**: Selects the current country. If the current country contains several states, the state list is loaded to the State List control.
- **State List**: Sets the current state detection algorithm.
- **Exit**: Closes the application.
- **Scanner connection status**: Indicates if the scanner is connected to the PC.

Note: *All the settings described in previous sections of this documents apply when running in Minimized Interface mode.*

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