



## Quote Builder

ScannerVision™ v5

## Contents

Contents.....	2
Introduction .....	3
ScannerVision™ introduction .....	4
Concept.....	4
Components.....	4
Deploying ScannerVision™ .....	5
Supported Operating Systems .....	5
Running under Virtualization.....	5
Hardware Recommendations .....	5
Deployment Considerations .....	6
Product Licensing / Activation .....	6
Software Assurance Program ( SAP ) .....	7
Pay Per Billing ( PPB ) .....	8
Credit Balance .....	9
Document Cost Calculation .....	10
Reports .....	13
Using ScannerVision™ .....	16
Metadata .....	16
Regular Expression Editor ( REE ) .....	18
Operation .....	22
Desktop Client.....	22
Special Desktop Client Packs.....	22
Desktop Client Boost Pack.....	22
Desktop Client Automate Pack.....	22
Desktop Client Expert Pack.....	22
Embedded Client.....	23
Virtual Ink.....	23
Security .....	24
Security and network overview .....	24
User Authentication .....	27
Encryption .....	28
Communication .....	28
Extending ScannerVision™ .....	28
Templates export / import tool .....	29
Connectors .....	29
Scripting.....	29
Sinapsis SDK program .....	30

## Introduction

In today's economic climate organizations are actively looking to increase efficiency and save costs. Consumers are also becoming aware of the costs associated with document production, distribution and storage.

ScannerVision™ is an advanced, user-friendly document capture solution which enables users to scan, digitize, route, store and optimize their business critical information. Created with the philosophy of manageability, reliability and flexibility, but above all simplicity, ScannerVision™ can operate from the panel of many popular multifunctional devices, or from the PC desktop.

With a touch of a button, even inexperienced users can start to utilize document workflows, formatting and correctly tagging critical information and ensuring it reaches the right destination: automation promotes efficiency, reduces errors, and saves money.

Welcome to ScannerVision™.



## ScannerVision™ introduction

### Concept

The technology and functionality in ScannerVision™ is utilized by organizations to facilitate policy-driven data capture and storage. It is designed around the belief that operators should be insulated from the complexities of document processes and policies, in order to increase efficiency, minimize errors and reduce training requirements.

The functionality in ScannerVision™ can be categorized into three groups:

- **CAPTURE:** File capture via multifunctional, desktop client or existing electronic media (such as TIFF file archive).
- **PROCESS:** Image enhancement; form, character and barcode recognition.
- **STORE:** Transfer to document storage system or distribution via corporate address book to file server.

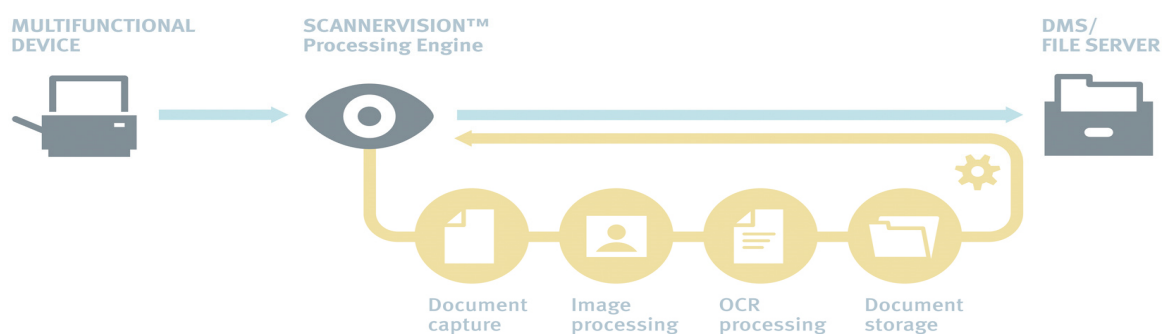
Document workflow *templates* are created centrally (by a system administrator) and automatically distributed to each scanning client connected to the ScannerVision™ processing engine, ensuring all users have the correct settings and policies at all times.

### Components

ScannerVision™ is made up of several components which can be categorized into four sections:

- **Clients:** input functions such as desktop, multifunctional embedded and web.
- **Modules:** throughput processes such as character, barcode and marks recognition.
- **Connectors:** facilitates output to a variety of platforms and document systems.
- **ScannerVision™ Processing Engine:** application which hosts modules and connectors and communicates with clients.

A document workflow usually starts with a client, if the documents are in hardcopy format.



*An example of a simple document distribution workflow*

## Deploying ScannerVision™

### Supported Operating Systems

The ScannerVision™ Processing Engine application can be deployed to the following Windows platforms:

#### 32-bit version

Windows 2000 /Server Service Pack 4  
 Windows XP Service Pack 3  
 Windows Server 2003 Service Packs 1 and 2  
 Windows Vista Service Pack 2  
 Windows Server 2008  
 Windows 7 Professional Service Pack 1  
 Windows 8 and 8.1

#### 64 bits version

Windows XP SP2  
 Windows Server 2003 Service Packs 1 and 2  
 Windows Vista SP2  
 Windows Server 2008  
 Windows Server 2008 R2 including Service Pack 1  
 Windows 7 Service Pack 1  
 Windows 8 & 8.1  
 Windows Server 2012

### Running under Virtualization

The ScannerVision™ Processing Engine is supported in virtual hardware environments, such as Microsoft Virtual Server and VMWare.

### Hardware Recommendations

The hardware requirements for ScannerVision™ Processing Engine will depend greatly on the operating system selected, desired performance and workload placed onto it. Suggested configurations are as follows:

CPU	Suggested Minimum	Recommended
	Dual Core 2GHz	Quad Core 2.66GHz
Memory	2GB RAM	4GB RAM
Disk	40GB	160GB
Space	100Mb	1Gb

Many components in the ScannerVision™ Processing Engine are **multithreaded**, or designed to run as a separate process. Therefore these components may benefit from multicore-enabled operating systems and hardware.

## Deployment Considerations

### Installing

The ScannerVision™ Processing Engine installation executable contains all pre-requisite runtime libraries. Once configured, it operates as a Windows service and may be left unattended.

Likewise, the ScannerVision™ Desktop client installer is self-contained and can be deployed to each PC as required.

### Communications

As standard, multifunctional and desktop clients connect over a TCP socket using port **1983**. This can be changed to a different port from the Settings screen in the Processing Engine and clients, if required.

## Product Licensing

### Activation

You have to activate your ScannerVision installation before you would be able to author CPS templates or run the ScannerVision services.

ScannerVision includes a rich set of features as standard but there are several features and connectors that can be purchased separately. A ScannerVision license can be tailored to your specific needs. Your license is tied to the serial number you received with your purchase. If you have not received a serial number or have lost it please contact your reseller. This serial number will not change with future changes to your license.

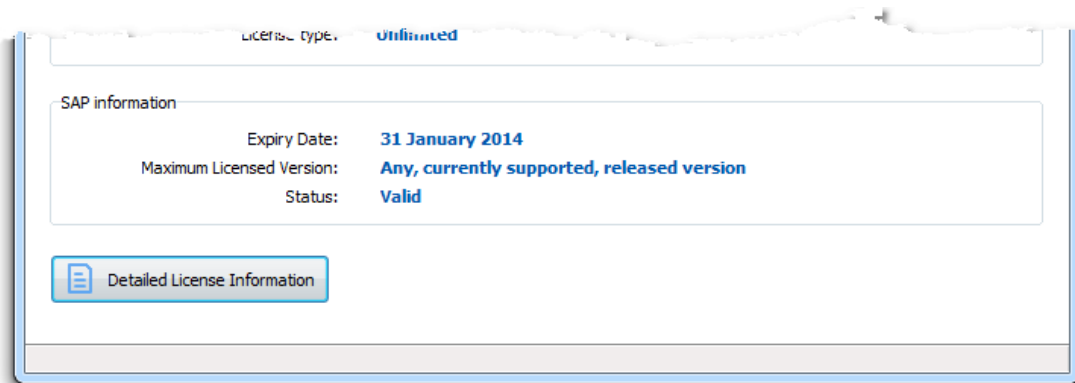
In addition to the feature set of your installation ScannerVision also supports 3 different licensing models from version 5 onwards. Traditionally you would have bought the product outright with the required modules included and there would be no limit on the number of documents that can pass through the system.

You also have to option to pay only for the number of pages that have gone through the system which is called Per Page Billing (PPB). Per page billing can be done on a prepaid or a post-paid basis. The specifics of these models are discussed later in this document.

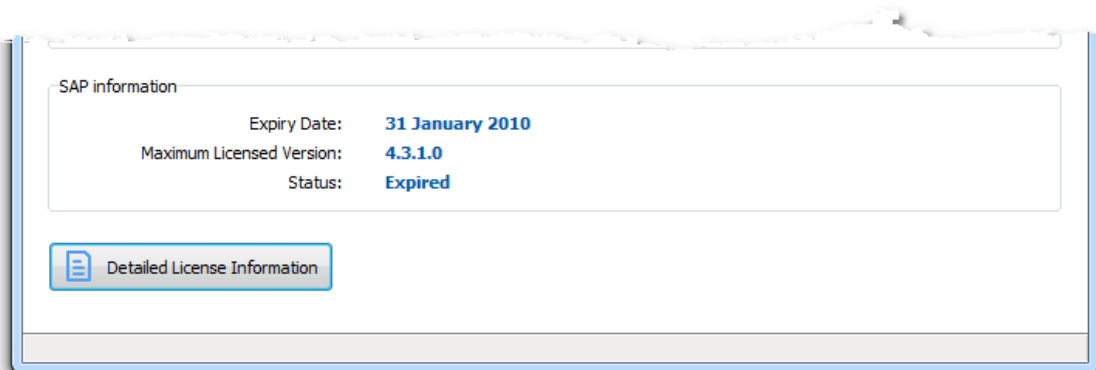
### Software Assurance Program (SAP)

Starting with Version 5 ScannerVision introduces a software assurance program. If your SAP subscription up to date you are entitled to any major version of ScannerVision that is released during the your SAP period. If your SAP subscription expires, you are entitled to run the latest version of ScannerVision that was released at the time your subscription expired.

If your SAP subscription is up to date (not expired) the License Manager will show the following:



If your SAP has expired the License Manager will show the following:



The "Maximum Licensed Version" indicates the version you are entitled to run may not be the same version that you are running. If your version is higher you will not be able to run it and if it is lower, you can upgrade your installation to the version indicated.

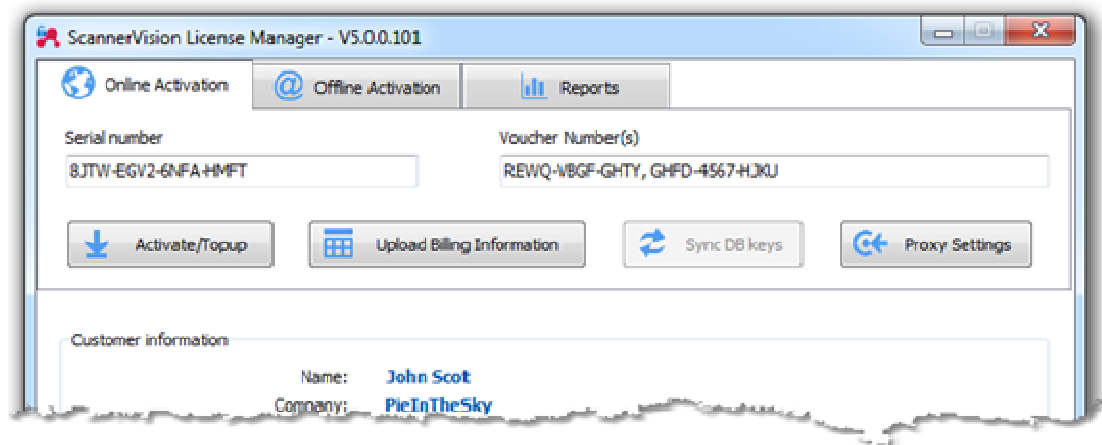
## Per Page Billing ( PPB )

### Activation

Per page billing allows you to pay only for the pages that passes through ScannerVision on a prepaid or post-paid basis. With the prepaid option you buy vouchers that you load into ScannerVision through the License Manager. The voucher represents a number of credits which will be loaded into the database after which your ScannerVision is ready to process documents. With the post-paid option you pay for the documents that have passed through the system at the end of the month. You can also load vouchers for the post-paid option in which case the number of credits will be added to your balance.

Depending on your specific license a portion of your unused credits can be carried over to the following month. Unused credits above what the license allows for are lost. How this works is discussed in the Document cost calculation section.

When activating you license you can enter any voucher numbers you may have into the "Voucher Number(s)" edit box before you click the "Activate" button as shown below. You can redeem vouchers after you have activated your license by entering them into the "Voucher Number(s)" edit box and clicking the activate button.



#### NOTE

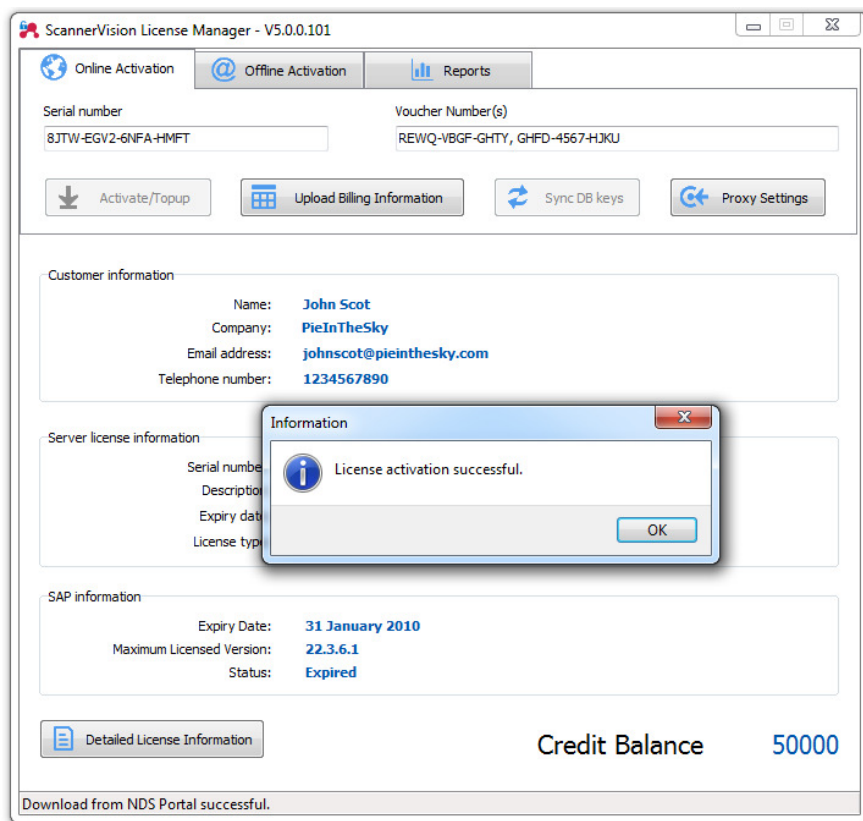
Per page billing credits do not relate to currency on a one to one basis. In other words, 1 credit does not necessarily equal 1 Euro/Dollar/Pound/Rand etc.

#### NOTE

Post-paid per page billing requires a permanent Internet connection and is therefore not available as an offline option.



Once the license has been activated you will see the following:



Notice the addition of the "Credit Balance" value in the lower right hand corner of the screen as well as the "Reports" tab that has appeared at the top of the screen. These items will appear only when you have a per page billing license.

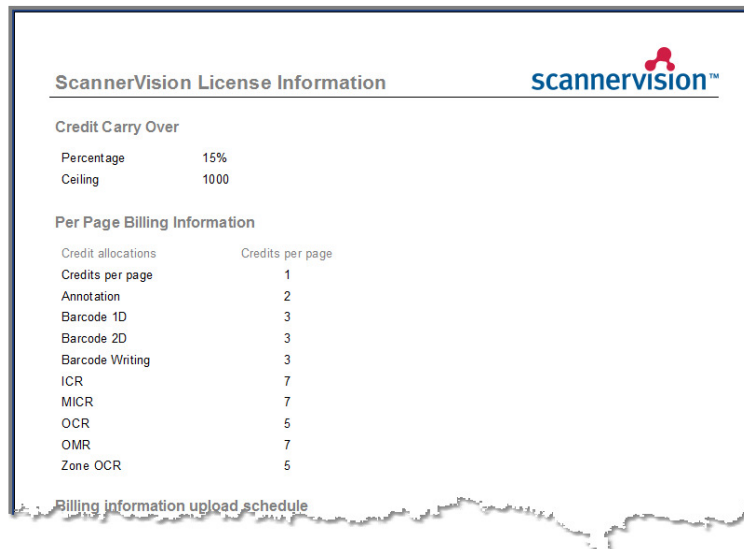
### Credit Balance

The credit balance value is your current credit balance at this moment in time. It is a real time value which means it is updated immediately when a document has passed through the system. So while the processing engine is running and processing documents, you will see this value changing continuously.

In the prepaid mode you have to have a large enough positive credit balance (which will appear in blue) before processing of a document will be allowed. In post-paid mode you can have a positive or negative credit balance.

## Document Cost Calculation

After you have successfully activated your per page billing license you should look at the specifics of your license by clicking the "Details License Information" button on the License Manager application. Navigate to the page of the license report that contains the per page billing information. It will look something like this:



ScannerVision License Information	
<b>Credit Carry Over</b>	
Percentage	15%
Ceiling	1000
<b>Per Page Billing Information</b>	
Credit allocations	Credits per page
Credits per page	1
Annotation	2
Barcode 1D	3
Barcode 2D	3
Barcode Writing	3
ICR	7
MICR	7
OCR	5
OMR	7
Zone OCR	5

## Credit Carry Over

If at the end of the month you have not used all your credits, a portion (or all) of your credits can be carried over to the following month. How much is carried over is calculated as follows:

- If only the ceiling value is specified (Percentage = 0%) all unused credits are carried over up to the ceiling level. So if your credit balance at the end of the month is 1500 credits and the ceiling value is 1000, then 1000 credits are carried over and you lose 500 credits. If your credit balance is 700 at the end of the month all 700 credits are carried over.
- If only the percentage value is specified (Ceiling = 0) then the specified percentage of unused credits are carried over with no upper limit. So if your credit balance at the end of the month is 15000 and the percentage value is 15% then 2250 credits are carried over ( $15000 \times 15\% = 2250$ ).
- If both values are specified the percentage of unused credits are carried over up to the ceiling limit. So if your credit balance at the end of the month is 15000 and the percentage value is 15% and the ceiling value is 1000 then 1000 credits are carried over ( $15000 \times 15\% = 2250$  which is greater than the ceiling of 1000).
- If both the percentage and ceiling values are 0 no credits are carried over.

\* Credits example only , may vary from country

### Per Page Billing Information

The cost (in credits) of processing a document through ScannerVision is dependent on the functions that were used when processing the document like OCR, barcode reading etc. and the number of pages in the document. The cost of using a function is specified next to the respective function on a cost per page basis. In the image above for example the cost of using OCR is 5 credits per page and Barcode 1D is 3 credits per page.

The "Credits per page" value is a rate that is applied for every page regardless of the functions used. So if you don't use any of the functions specified above and process a 15 page document the cost of that document would be 15 credits (1 credit per page x 15 pages = 15 credits).

#### Cost Calculations Example

Let's say you have enabled Barcode 1D, Zone OCR and ICR in you template and you are processing a 20 page document, the cost of the document would be as follows:

3 credits for barcode 1D x 20 pages	= 60 credits
5 credits for Zone OCR x 20 pages	= 100 credits
7 credits for ICR x 20 pages	= 140 credits
1 credit per page x 20 pages	= 20 credits
<b>Total</b>	<b>= 320 credits</b>

### Uploading of Billing Information

When you have a post-paid per page billing license your transaction data is uploaded to the ScannerVision license portal on a regular basis. You therefore need to ensure that you server is permanently connected to the Internet. If ScannerVision is not able to contact the license portal document processing will stop as described below.

Uploading of billing information is a function of the processing service and therefore will only happens while the processing service is running.

To view details of how often ScannerVision will upload billing information to the license portal click on the "Detailed License Information" button on the License Manager and scroll the page where you see something like this:

Billing information upload schedule

Day	Time	Enabled
Monday	20:00:00	Yes
Tuesday	20:00:00	Yes
Wednesday	21:00:00	Yes
Thursday	10:00:00	Yes
Friday	22:00:00	Yes
Saturday	22:22:22	Yes
Sunday	00:00:00	Yes

Interval

Not applicable

\*Portal upload failure grace period

01:00:00 (Hours:Minutes:Seconds)

\*Document processing will stop after this period if billing information can not be uploaded to the NDS Portal

## Billing information upload schedule

The upload schedule indicates how often billing information is uploaded to the ScannerVision licensing portal. If your license does not contain explicit scheduling information, billing data will be uploaded daily at 12 o'clock in the evening.

The schedule can be specified in terms of explicit week days and time of day or as an interval. If any of the days of the week are enabled, i.e. the value under the "Enabled" heading will be "Yes", then uploads will happen on those days at the specified local time as indicated under the "Time" heading. If no days are enabled, uploads will happen on a scheduled basis.

Billing information upload schedule

Day	Time	Enabled
Monday		No
Tuesday		No
Wednesday		No
Thursday		No
Friday		No
Saturday		No
Sunday		No

Interval

Every 06:00:00 (Hours:Minutes:Seconds)

\*Portal upload failure grace period

01:00:00 (Hours:Minutes:Seconds)

\*Document processing will stop after this period if billing information can not be uploaded to the NDS Portal

In the above image you will notice that all the days are disabled and "Interval" now has a value which indicates that uploads will happen every 6 hours.

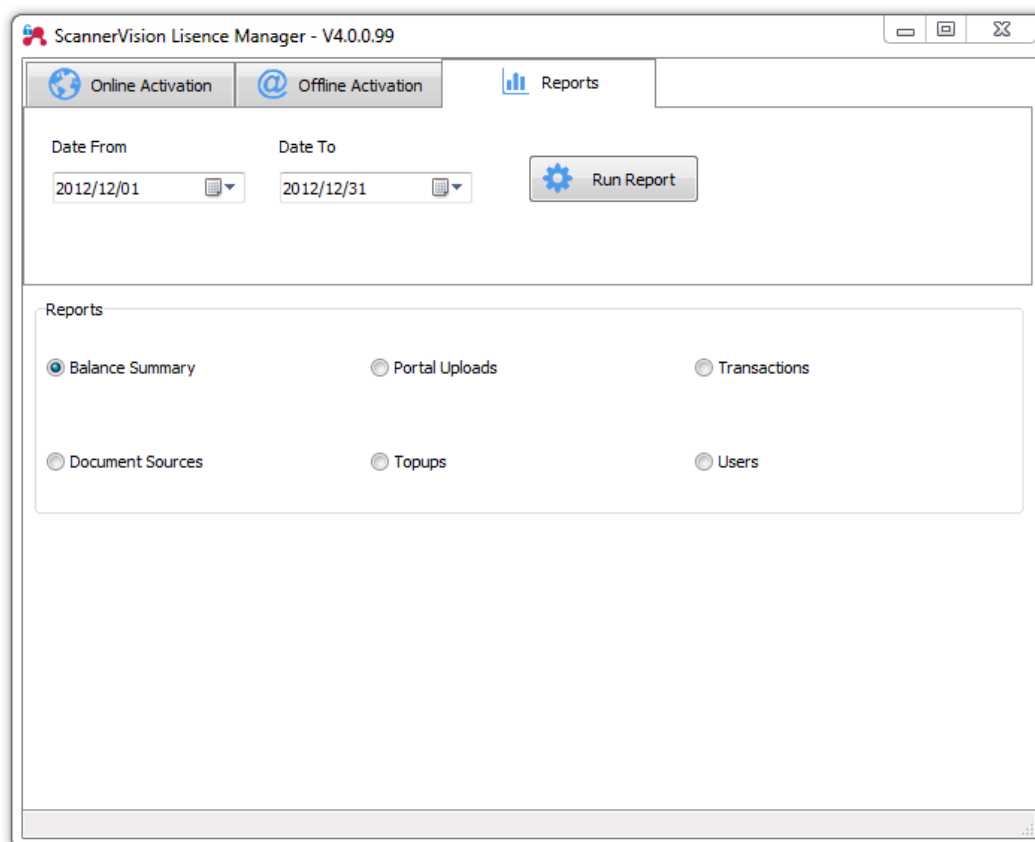
### Failure to upload

If for some reason ScannerVision is not able to upload billing information to the portal, it will enter a grace period which is specified in the license file. As per the images above the license allows for a grace period of 1 hour but it can be any value as dictated by the license.

During the grace period ScannerVision will continue to process documents while it retries to upload billing information to the portal every 5 minutes. If the grace period lapses without any successful upload processing will stop. If you restart processing ScannerVision will first try to upload the billing information and only if it was successful will it allow document processing to resume.

### Reports

You have 6 reports that you can run as shown below:



## To run a report

When you open the License Manager it defaults the dates over which report are run to the beginning and end of the current month. You can change the date range with the "Date From" and "Date To" date pickers. Select the report you want to run and press the "Run Report" button.

## Reports

Below is a description of what information each report offers for the reporting period:

**Balance Summary:** A summary of all credit top-ups (loading of vouchers), transactions and portal uploads.

**Portal Uploads:** A list of all portal uploads and the number of credits that have accrued since the last upload.

**Document Sources:** A list of document sources that produced documents for processing. In this report you will see all hot folders, ftp servers, clients etc. from where documents could enter the system. The report does not show which sources are configured but rather the ones from which documents arrived for processing.

**Top-ups:** A list of all vouchers that were loaded into ScannerVision showing when the voucher was loaded, the voucher number and the number of credits.

**Users:** A list of users that produced documents.

**Transactions:** Below is a screen shot of a transaction report:

ScannerVision Transactions									
Date from: 2012/12/01 12:00:00 AM					Date to: 2012/12/31 11:59:59 PM				
No.	Date & Time	Document source name	Document source address	Document source description	Pages	Credits			
26	2012/12/11 10:53:57 AM	H:\Hot Folder		HOTFOLDER	61	- 244			
27	2012/12/11 10:54:02 AM	H:\Hot Folder		HOTFOLDER	61	- 244			
Function	Credits	Enabled	Function	Credits	Enabled	Function	Credits	Enabled	
Annotation	2		Barcode Writing	3		ICR	7		
Barcode 1D	3	✓	OCR	5		MICR	7		
Barcode 2D	3		Zone OCR	5		OMR	7		
28	2012/12/11 10:54:07 AM	H:\Hot Folder		HOTFOLDER	61	- 244			
29	2012/12/11 10:54:12 AM	H:\Hot Folder		HOTFOLDER	61	- 244			
30	2012/12/11 10:54:32 AM	H:\Hot Folder		HOTFOLDER	1	- 4			
31	2012/12/11 10:54:37 AM	H:\Hot Folder		HOTFOLDER	1	- 9			
Function	Credits	Enabled	Function	Credits	Enabled	Function	Credits	Enabled	
Annotation	2		Barcode Writing	3		ICR	7		
Barcode 1D	3	✓	OCR	5	✓	MICR	7		
Barcode 2D	3		Zone OCR	5		OMR	7		
32	2012/12/11 10:55:39 AM	H:\Hot Folder		HOTFOLDER	1	- 9			
33	2012/12/11 10:55:44 AM	H:\Hot Folder		HOTFOLDER	1	- 9			

## ScannerVision V5 Quote Builder

With the transaction report you can see details of each document that was processed by ScannerVision. Details that are shown include the source of the document, the number of pages, the cost of the document and specifics of which functions were used during the processing of the document. The latter is not shown by default as you can see from document number 26 in the image above. Document number 27 on the other hand shows the details of the functions used. To see the details of a document just click on the line of the document you want to see and it will expand to reveal the details

## Using ScannerVision™ Overview

In order to get the best from any document capture and processing system a clear “document policy” should be in place before any software is installed. The complexity and depth of this policy will depend on the size of business. An electronic document policy could be as simple as “store invoices into this directory” to extremely complicated policies defining enterprise data storage, cross-referencing information stored in corporate databases.

ScannerVision™ has been designed in a flexible way so that it may be easily integrated into any environment and enforce and policies whilst insulating the user from the complexities, ensuring it's as simple as possible to operate.

## Document Workflow

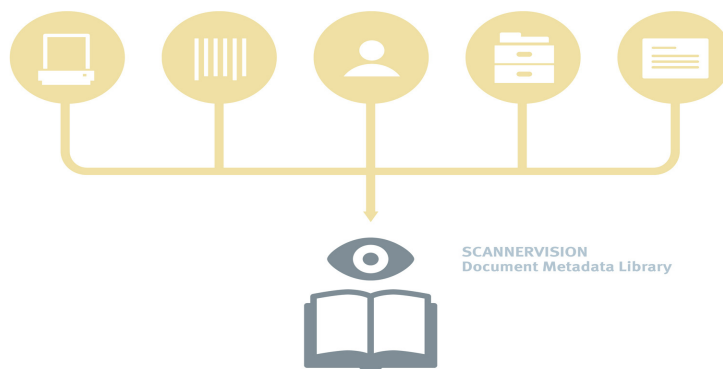
Document workflow *templates* are created at the ScannerVision™ Processing Engine console where they can be automatically deployed to all connected clients, once saved. Templates define the workflow, from capture to storage, and all of the processes in between. Once created, the administrator can decide on which devices and for which users the template is available: this ensures the user can see just the workflows which pertain to their job, or the area in which the multifunctional device is located (e.g. administration or finance).

The primary purpose of ScannerVision™ is to automate as many document processing tasks as possible, reducing human errors and improving efficiency.

## Metadata

The process of automation requires in-depth information to make decisions in the filing and routing of documents. This information, or metadata, can come from a variety of sources, such as:

- Date and time of processing and document name
- Name of authenticated user from Desktop or multifunctional client
- 1D or 2D barcodes on the document
- Lookups from databases and results of scripts
- The result of zonal or document OCR text, OMR, ICR and MICR
- Answers to user-prompted questions
- Etc.



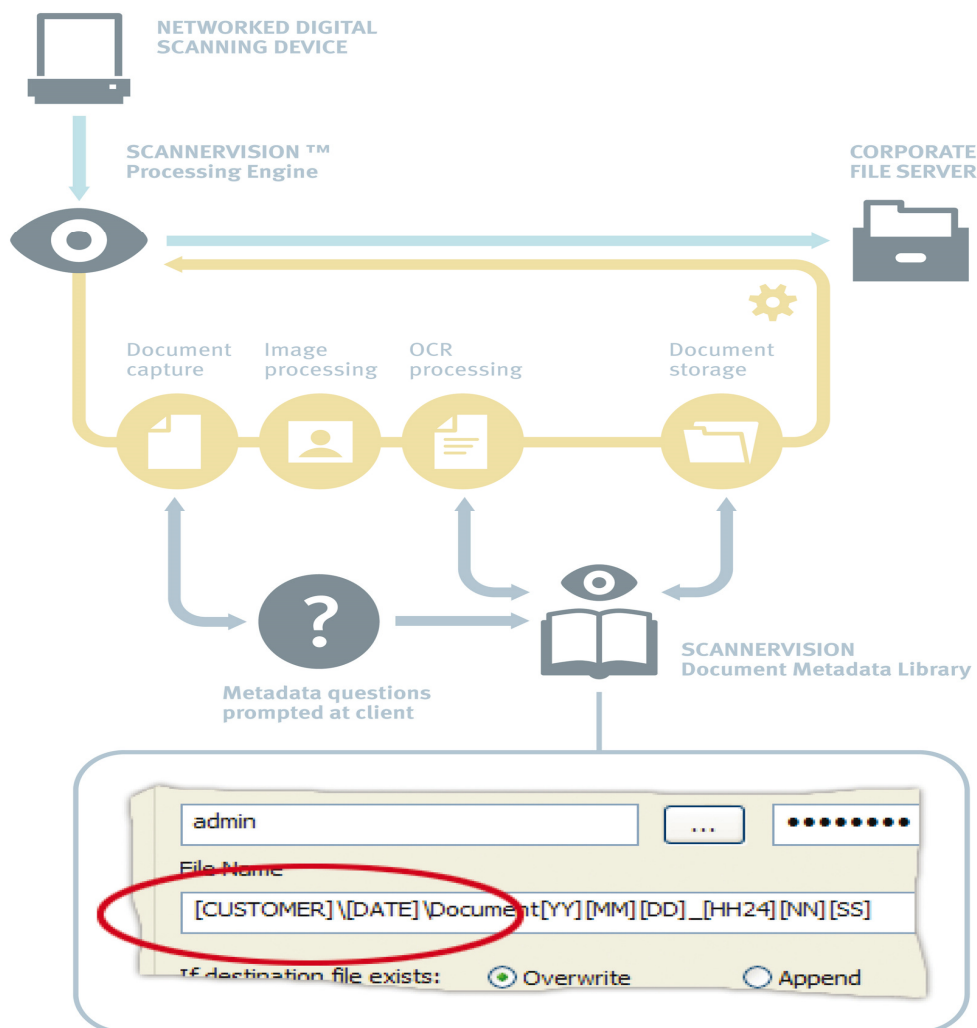
*The ScannerVision™ document metadata library is populated from many different sources*



When defining the metadata to extract, the administrator may tag this data so that it can be referenced later.

## A simple example

An administrator has created a workflow template for scanning customer invoices. The list of customers is automatically populated and updated from an existing enterprise database; the scanner operator simply has to make a selection from the list, for example "ABC Ltd". In the workflow template the administrator uses a tag (for example [CUSTOMER]) to reference this metadata.



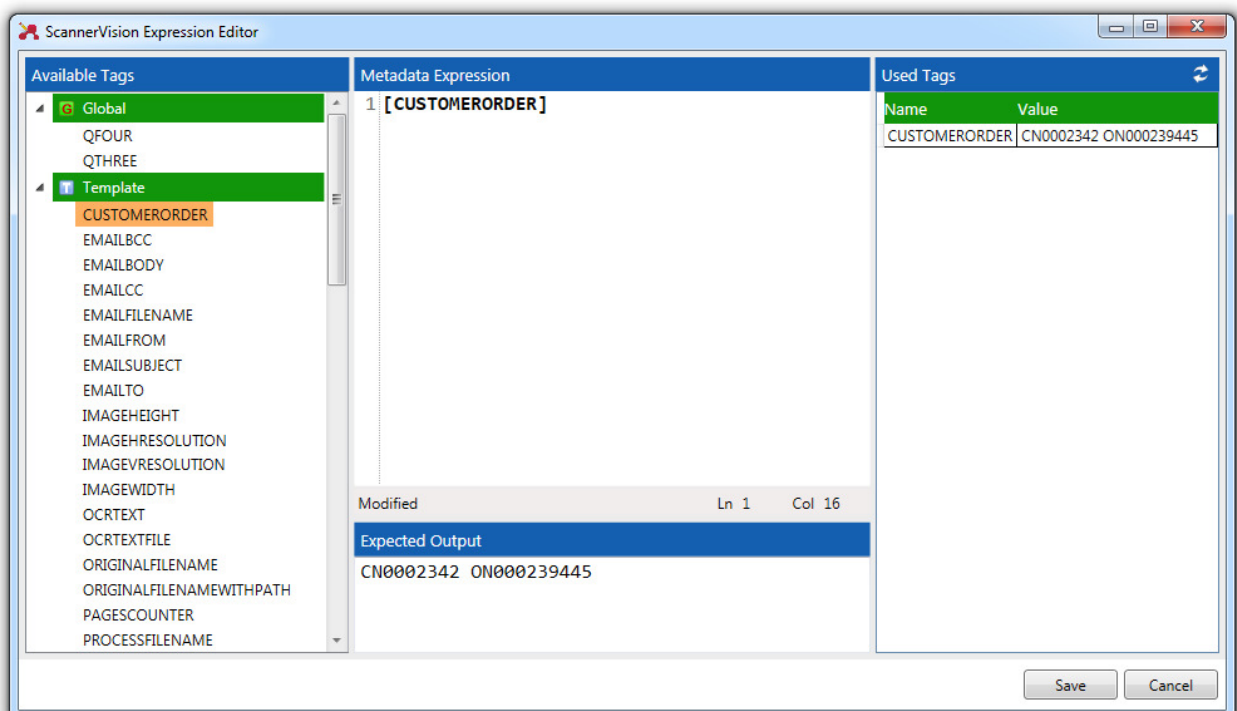
purposes.

Metadata is the cornerstone for accurately automating processing and filing tasks. With such a vast range of information extraction options, ScannerVision™ offers unparalleled potential for automation.

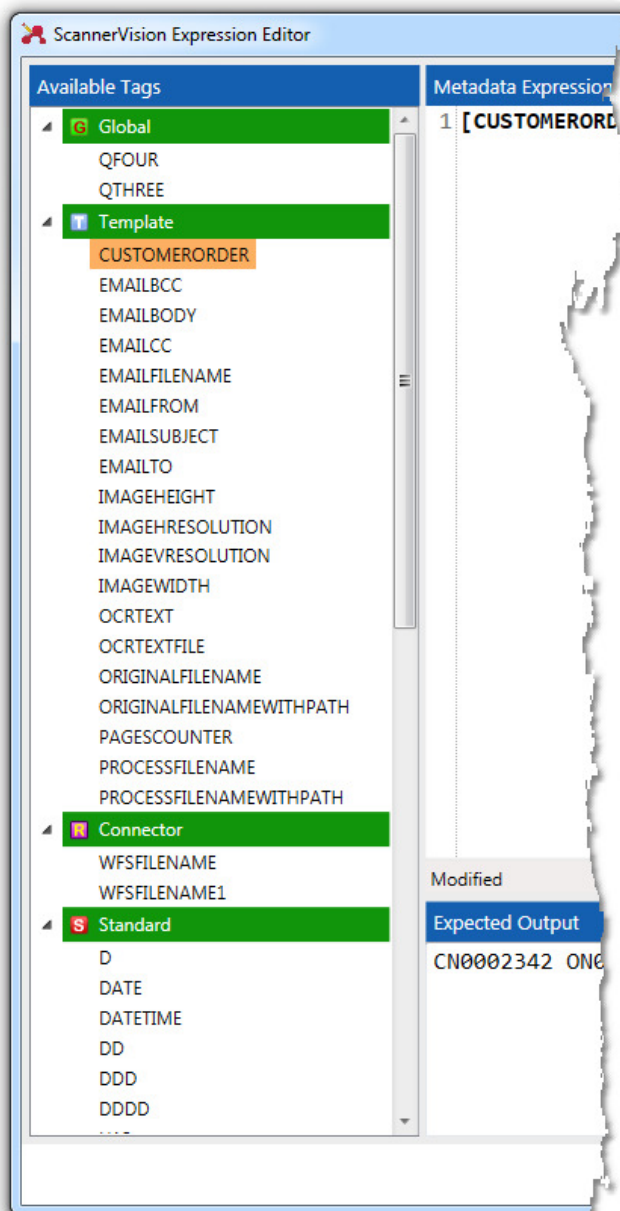
## Regular Expression Editor ( REE )

The ScannerVision Expression Editor shown below is a rich environment in which you can build the metadata expressions that you want to use in your template. It offers several aids that are there to help you to get the results you expect. One of these is the ability to see the output of your expression using sample data that you provide, in real time. You therefore don't have to wonder what the output of the expression would be or process a test document through the system to see the output of the expression. Provided that your sample data represents real-world data, what you see in the expression editor is what you can expect to see during run time.

18



The Expression Editor window is divided into two vertical sections with the right section being divided into three horizontal sections. These left vertical section is called "Available Tags" and the horizontal sections are called "Used Tags", "Metadata Expression" and "Expected Output" respectively. The sections can be re-sized by adjusting the splitter bars between them.



## Available Tags

The available tags section contains all the metadata tags that are available for you to use in your expression. The tags are presented in a tree view with the tags grouped into between one and four groups. The groups represent the different types of metadata that is available in ScannerVision namely "Global", "Template", "Connector" and "Standard". At a minimum you will get the Standard group since these tags are always available. The Global and Template groups are visible when global and/or template metadata has been configured respectively. The connector group will show up when the expression editor is opened from a connector setup screen, but only if the connector supports additional tags such as the Windows File System connector with its UNQUESUFFIX tags.

The groups in the tree view can be collapsed or expanded by clicking the triangle to the left of the group heading. To collapse or expand all groups simultaneously you can right click with your mouse over the tree view and select the desired option.

To insert a tag in your expression place the caret in the desired location of the "Metadata Expression" editor window and double click the tag you want to insert.

You can modify tags' sample data in the Used Tags grid. To reset the sample data to the original values, click the Reset Tag Sample Data button in the top right hand corner.

## Used Tags

When a valid expression is entered into the Metadata Expression editor window the Used Tags grid is updated with all the tags that are used in the expression. The grid shows the names of the tags as well as the sample data of each tag. You can edit the sample data in the grid by clicking in the relevant cell. To apply your changes click outside the grid or press Enter. The expression will be parsed using the sample data you entered and the output will appear in the Expected Output window.

## Used Tags

The metadata expression window is where you enter your expression. The editor offers syntax highlighting which colors the various sections of your expression to make it easier to read. Functions names are printed in bold, blue font; text is printed in a magenta color and its tag names are printed in bold, black font.

You have various options in the way you can enter expressions and you can use them in any combination you wish:

1. You can type the expression using the keyboard.
2. You can double click a tag in the Available Tags section to insert it at the current caret position.
3. You can use "Code Completion" by pressing Ctrl-Space while the caret is between the square brackets of a metadata tag or the round brackets of a function. A context menu will appear with either tag names or function names - depending on the context of the caret. You can then navigate through the menus using the cursor keys on your keyboard or using the mouse. To insert the selected item in the menu, press the Enter key or left click on it with your mouse. Existing values are replaced with the newly selected ones.
4. You can right click in the expression editor area with your mouse to show the context menu from where you can select the desired action. Depending on the context of the caret in the expression, certain menu options may be disabled.

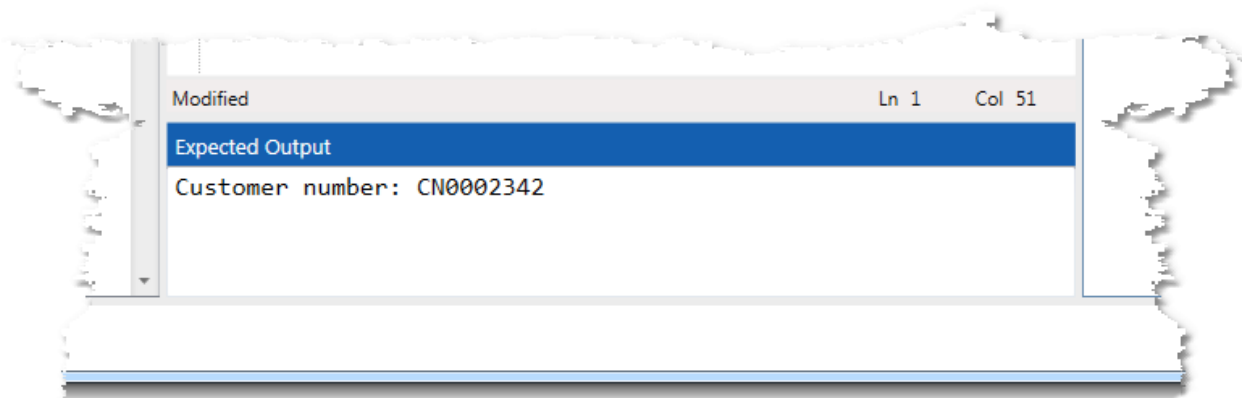
To use options 3 and 4 above, the caret in the editor has to be in the scope of either square brackets for metadata tags or round brackets for functions. If this is not the case, pressing Ctrl-Space will have no effect and the menu items in the right click context menu will be disabled. Tags or functions names that are not in the scope of their respective style of bracket are treated as plain text.

In the screen shot above there are three sections in the expression with peculiar highlighting:

1. Plain text. The plain text "Order number: " is printed in a magenta colored font. Text parameters of functions such as "match", "join" and "split" are also printed in a magenta colored font.
2. Metadata tag. The tag appears between opening and closing square brackets "[" and "]" and is printed in bold, black font.
3. Functions. The "split" and "take" functions appear between opening and closing round brackets "(" and ")" and are printed in bold, blue font.

At the bottom of the expression editor is a status bar with three sections which indicate the state of the editor window. The first section would contain the word "Modified" when the expression has been modified, "Error" when there is a syntax or parsing error in the expression or blank when there is no error in the expression and it has not been modified. To the right of the status bar are two sections that indicate the position of the caret in the editor. The "Ln" value indicates the current line number and the "Col" value indicates offset into the current line.

## Expected Output

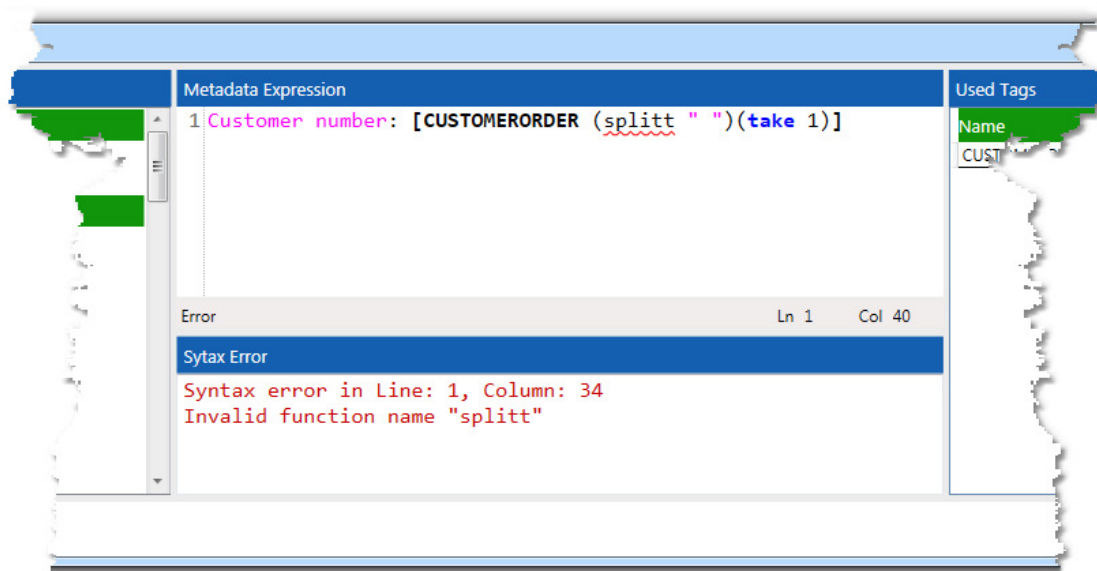


21

Whenever a change is made to the expression in the expression editor it is parsed. The parsing of the expression does several things:

1. It validates the syntax of the expression. If there are any errors in the expression the parsing will fail. When this happens the caption of the output window changes from "Expected Output" to "Syntax Error" and the output window will indicate what the error is.
2. If the expression does not contain any errors, the output of the expression - given the sample data - is shown in the output window.
3. If the expression does not contain any errors, the Used Tags grid is updated with the names (if any) of the tags used in the expression. You can then modify the sample data if you desire.

In the screen shot below you can see what the expression editor would look like when there is an error in the expression.



## Operation

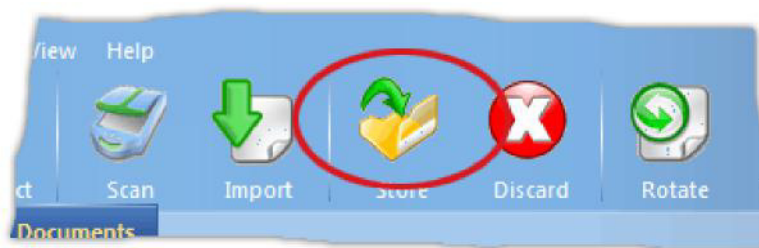
After the initial configuration at the Processing Engine console, most of the operation of the solution is done via one of the ScannerVision™ clients.

### Desktop Client

The Desktop client is a Windows application which connects to the ScannerVision™ Processing Engine and guides the operator through the document capture process. Documents may be acquired by scanning with an installed TWAIN driver, or by importing existing electronic files (e.g. files from a TIFF archive).

Users may browse the document after the acquisition and, if required, may answer any metadata questions defined in the template to complete the process. Some metadata questions can be flagged as requiring an answer before scanning can proceed, ensuring that files with missing information are a thing of the past.

22



*Pressing the Desktop client's **Store** button finalizes the capture process*

## Special Desktop Client Packs

### Desktop Client Boost Pack

The Boost version of the Desktop client incorporates advanced bi-tonal compression technology (ABC) inside the client. This has a positive impact on the performance of scanning 1-bit (monochrome) data over long distances as the scanned data is compressed up to 8 times more than standard PDF encryption. The upon reaching the destination Processing Engine the proprietary ABC format is automatically decrypted and converted into whichever format is specified in the workflow template.

### Desktop Client Automate Pack

The Automate edition of the Desktop client implements on-the-fly zone OCR into the scanning client. This is of particular use to scanning operators who are required to index large amounts of data using information on the document. With the Automate option the operator simply needs to select the required metadata question and draw a marquee around the area of the document which requires the information. Automate will perform rapid OCR on that document area and put the resulting data into the selected metadata question, negating the need for the operator to type in the data and thus removing the potential for errors and saving time.

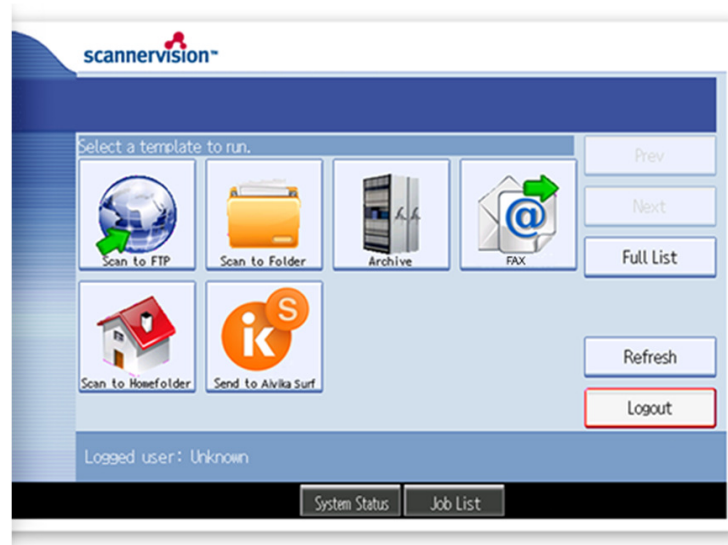
### Desktop Client Expert Pack

The Expert option combines the Boost and Automate options into one, fully-featured desktop client capable of scanning, indexing and transmitting large volumes of data, directly into document systems.

### Embedded Client

ScannerVision™ offers an embedded client for many of today's modern, multifunctional devices. These embedded clients offer an effortless way to access the power of ScannerVision™ in the office, using an interface very similar to that of the Desktop client.

Users are able to scan documents into complex workflows, simply by selecting a pre-made template and answering a few simple questions. Contact the ScannerVision™ marketing department for a list of currently supported multifunctional devices.



*The operating panel of a ScannerVision™ 5 enabled multifunctional device*

### Virtual Ink

ScannerVision™ also offers the Virtual Ink system as a method of submitting files into the workflow. By utilizing a digital pen and a unique microscopic pattern of dots, handwriting may be recorded simply and efficiently. Simply dock the pen in its cradle after writing, and you'll be presented with a crystal clear PDF or TIFF copy of the document.

ScannerVision™ VI uses a special printer driver which adds a unique pattern of micro-dots to the document as it is printed, and an image of the document is automatically stored on your computer for reference.

ScannerVision™ VI's special pattern of dots enables the digital pen to automatically sense its location and record handwriting in its memory. When the pen is docked in its cradle, the recorded ink is downloaded and matched with the image of the original document – instantly creating an exact copy of the handwritten document in your desired electronic format.

## Security

### Security and network overview

ScannerVision is a 2 tier client/server product. Clients fall into 2 categories namely Desktop Clients and MFP Clients (Multi-Functional Printers). Desktop Clients are GUI (Graphical User Interface) applications that are installed on users' desktop computers running the Windows operating system and MFP Clients are installed on MFP devices. Clients are used to capture scanned documents and document metadata and to submit the captured information to the server for processing.

The ScannerVision Server comprises of 3 components namely the ScannerVision Application, the Networking Service and the Processing Service. The ScannerVision Application is a Windows GUI application that is installed on the server machine on which the Networking and Processing services are installed. The latter are Windows services.

The ScannerVision Application is used to control the Networking and Processing services and to configure templates. Templates define the type of metadata (if any) that is collected at the clients as well the processing that is to be performed by the Processing service on the captured documents and metadata.

Clients communicate to the ScannerVision Server via the Networking service. All document processing is done by the Processing service. The communication protocol between clients and the Networking service is a lightweight, proprietary TCP based protocol that was developed specifically for ScannerVision.

The ScannerVision Processing service offers the ability to capture documents from network shares, FTP servers and Email boxes in addition to client capture. The Processing service can be configured to integrate to various document management systems (DMS) such as Microsoft SharePoint, Laserfiche, Unit4, AivikaOne and others. The integration is facilitated through ScannerVision connectors. ScannerVision ships with a limited set of connectors but an SDK (Software Development Kit) is available that allow third parties and/or customers to create their own connectors.

ScannerVision can also be configured to augment metadata through database lookups based on the metadata that was captured by the client or information lifted off the captured document with optical character recognition or the reading of barcodes.



### Internal Security Overview

ScannerVision collects and stores the following user/account information (if the respective function is configured):

1. SMTP account information to send notification and error reports to ScannerVision network administrators.
2. Pop3 account information to capture documents from email accounts.
3. FTP account information to capture documents from FTP servers.
4. ScannerVision user account information. ScannerVision users exist only in the context of ScannerVision itself and is used to control which users are allowed to make use of ScannerVision and to which templates they have access to.
5. The user name, email address and home directory of users that are imported from a Windows server, Active Directory or LDAP server. Passwords are not collected.
6. Account information to connect to the respective third party systems with the following connectors:
  - a. Email
  - b. Evernote
  - c. FTP
  - d. Google Docs
  - e. SharePoint and SharePoint 360
  - f. SQL
  - g. Objective
  - h. Unit 4 and Hyarchis
  - i. WebDav
  - j. Windows File System (network share credentials)

All the collected information mentioned above is stored on the server that is hosting ScannerVision. The information is stored in human readable text files. Access to these files are protected by the protection mechanisms offered by the Windows operating system and therefore only users who are allowed to see this information should have login privileges to the ScannerVision server.

## Operational Security Overview

ScannerVision does not collect, store and/or share any sensitive user information as part of its internal processes. All information that is captured, processed and stored by ScannerVision is controlled by administrators through templates including metadata collected by Clients and data lifted off the document through Ocr or the reading of barcodes. ScannerVision performs no action on this information other than what is dictated by the template.

ScannerVision provides a logging system for the sole benefit of administrators. The level of detail contained in the logs is controlled by the administrator and the information is not used by ScannerVision processes in any way.

## Licensing

ScannerVision offers two licensing models namely Unlimited and Pay Per Scan (PPS). When a ScannerVision license is activated certain information is collected from the server which is sent to the ScannerVision Licensing Portal. No personal or sensitive information is collected. The only information that is collected that is not entered by the administrator is a list of the MAC addresses of the network interfaces that are active on the server as well as the Windows operating system's product ID. This information is used to identify the hardware on which ScannerVision is installed. A ScannerVision license is locked to the particular hardware it was activated on and cannot be transferred to another server.

The PPS licensing model comprises of a prepaid and a post-paid model. Under the prepaid model credits are loaded onto the server through vouchers. Once the credits have run out ScannerVision stops the processing of documents. No information is uploaded to the Licensing Portal under this model. Under the post-paid model ScannerVision sends information about the documents that have passed through the system to the Licensing Portal on a regular basis. This information does not contain any personal or sensitive information. The data that is sent to the portal is shown below:

```
<?xml version="1.0" encoding="utf-8"?>
<scannervision ver="1">
  <replyversionnumber>1</replyversionnumber>
  <mainserialnumber>ASDW-WERT-DGHSDf-GMHTRE</mainserialnumber>
  <creditbalances>
    <creditbalance>
      <balanceid>{E335476C-89AE-40D1-A729-34A7987E03C1}</balanceid>
      <creditbalance>-1000</creditbalance>
      <datetime>2012-05-01T15:30:00+02:00</datetime>
    </creditbalance>
    <creditbalance>
      <balanceid>{19633A84-4452-455D-92FC-8C11CD145C71}</balanceid>
      <creditbalance>-2000</creditbalance>
      <datetime>2012-05-03T15:30:00+02:00</datetime>
    </creditbalance>
  </creditbalances>
</scannervision>
```

## Network Protocol

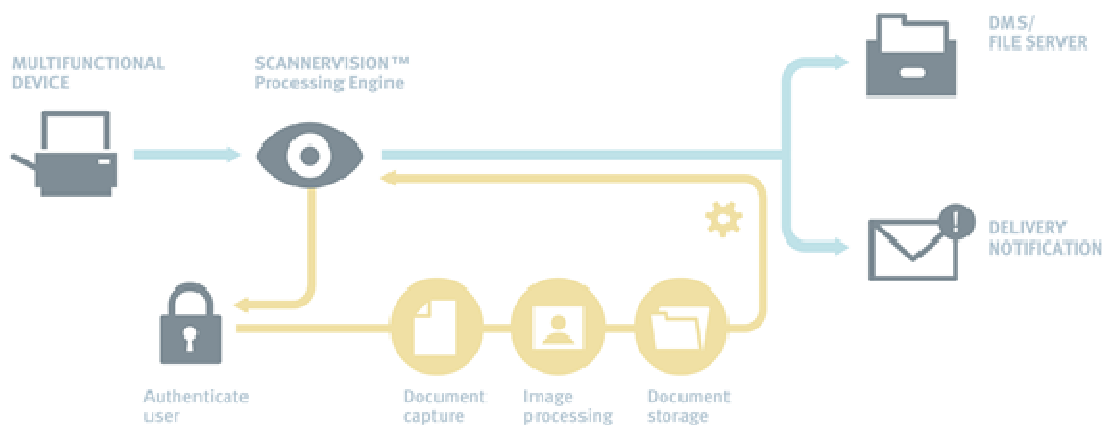
The protocol that is used by ScannerVision for communication between the server and clients is a lightweight, TCP based protocol that was designed for reliability, speed and minimal overhead. Communication can be secured by enabling encryption on either the server or the client side. If encryption is enabled on the server, communication to all clients is encrypted.

## User Authentication

ScannerVision™ has several methods to authenticate users to the system:

- Windows authentication retrieves user account information from the operating system.
- LDAP and Active Directory authentication methods use existing corporate address books to authorize users.
- Equitrac authentication queries an Equitrac server's user account information.
- ScannerVision™ authentication utilizes the Processing Engine's own user account list and is useful for small organizations that have none of the above.

Once authenticated, the user information is made available from the metadata library. This, in turn, can be used to generate automatic email notifications to alert users when a file is delivered to the destination. In addition, each user's actions are monitored and tracked so that billing for document capture time and volume becomes a possibility.



### *Automatic notification using authenticated user metadata*

Although authentication is beneficial in terms of security and activity tracking, it is optional; ScannerVision™ can be configured with without this option enabled, for standalone devices or small organizations.

## Encryption

### Communication

Network traffic can be automatically encrypted between ScannerVision™ clients and the Processing Engines, using Advanced Encryption Standard (AES-128).

The performance of the encryption process from the multifunctional device is dependent on the hardware available to the embedded client. Therefore this option is user-configurable should a user require greater speed during the scanning process.

## Extending ScannerVision™

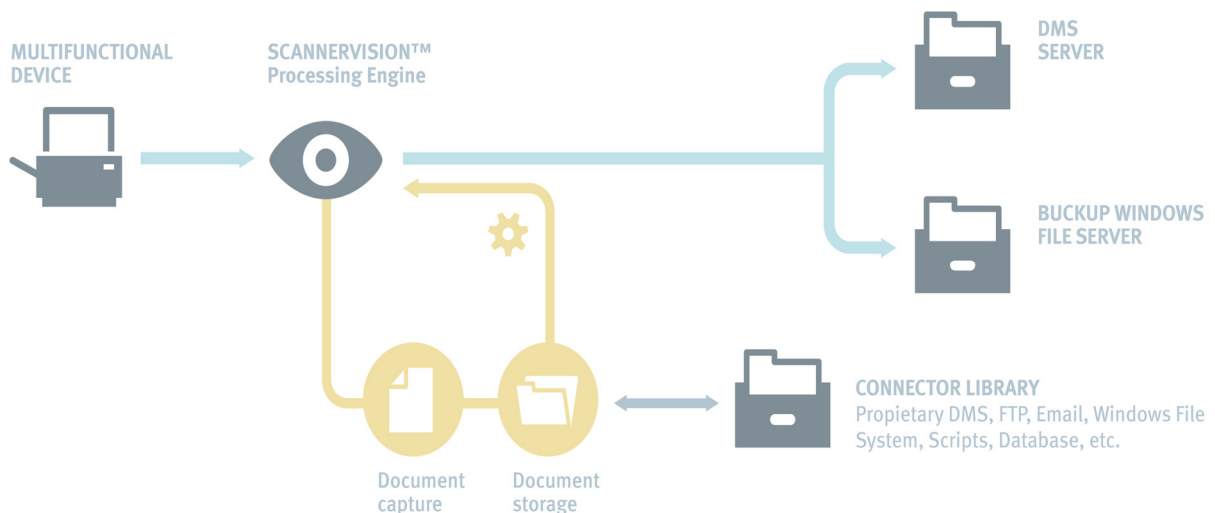
28

### Connectors

Connectors are used by ScannerVision™ to connect the Processing Engine to proprietary document management systems and file servers. Connectors have full access to the documents metadata library and may perform any file-based task, such as format translation, file transmission and document system communication.

Registered connectors are managed by the Document Storage module, where connectors' settings may be configured and managed. Each document workflow template may have multiple connectors configured, so that a workflow may have multiple destinations for the scanned document.

*Multiple document destinations are possible with the Connector library*



ScannerVision™ currently has many native connectors for various document management systems, databases and file systems. Please contact the marketing department for an up-to-date list of supported connectors.

### Scripting

Having entire control over the automation aspects of document filing is one feature that makes ScannerVision™ so powerful and such a benefit in the office environment.

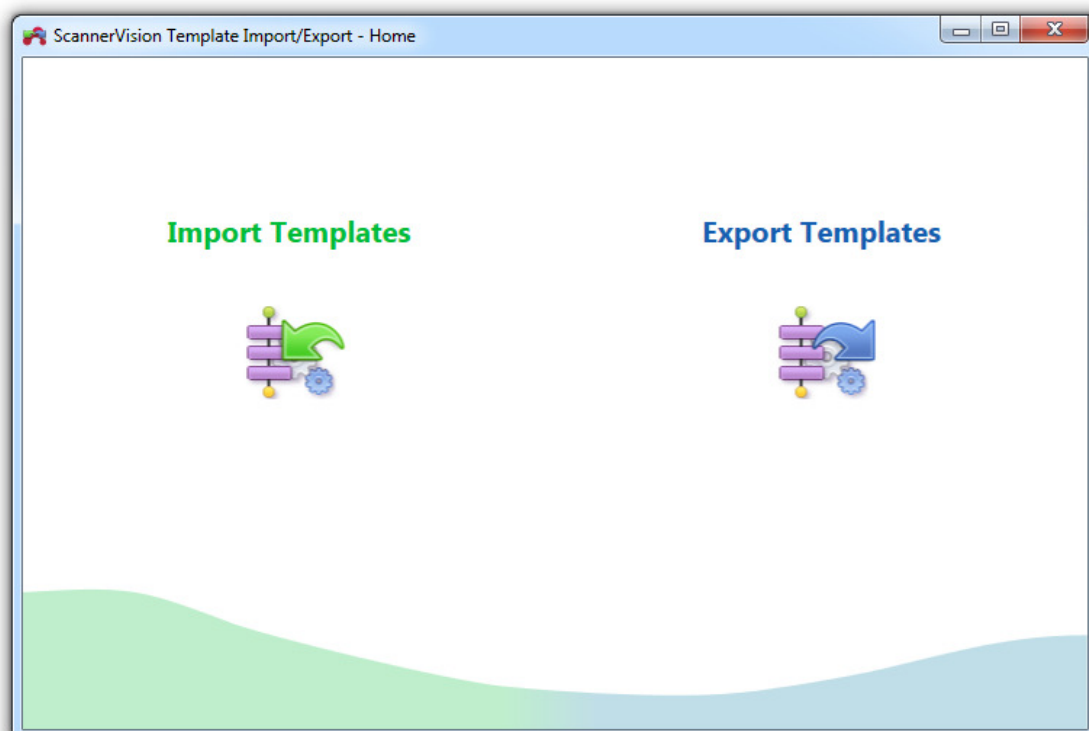
In order to enhance the automation capabilities, ScannerVision™ supports scripting, in JScript or VBScript, to enable the workflow to make dynamic decision as to where to file documents. These scripts have full access to a document's metadata library and, in turn, can connect to corporate database's or create on-demand file structures to ensure the documents are correctly filed according to the current environment.

This enables an administrator to configure a system to make decisions and file documents in a rapidly changing environment whilst still enjoying the benefits of total automation.

For more information and examples for advanced scripting, and extending ScannerVision™ with extra functionality, please contact the New Dynamic Software marketing department for a copy of the Solutions Cookbook.

### Template Export / Import tool

ScannerVision templates consists of several files and connectors may make use of external files such SQL or VB scripts etc. The ScannerVision Template Import/Export (IE) application makes the transfer of templates and their dependency files easy. All template and dependency files are packaged into a single template archive. The IE application also provides a command line mode so that it can be used for scheduled backups of templates. The home screen of the IE application is shown below:











### SINAPSIS SDK PROGRAM

ScannerVision™ Connectors are native Windows dynamic link libraries (DLL's) which are called during the storage phase of the document processing cycle. For developers wishing to understand how to create connectors for ScannerVision™ please contact the marketing department for information on how register for to the developer's kit and training.

#### Program Contents

Synapsis Development Program gives you full access to all the resources necessary to start to develop their own connectors to immediately. Once enrolled in the program your team will receive:

-  SDK ( Software Development Kit )
-  Direct line to ScannerVision developers
-  Example code
-  Acces to Sinapsis developer network forum
-  Quarterly updates with information on:
  -  'Trial' mode licenses installed
  -  Registry licenses
-  Quarterly profits from sales of the connectors developed.

#### Program Rules

The Sinapsis development program makes use of much of the resources available at ScannerVision as for example, the build system of license codes, the portal of distribution to customers, etc...Any connector developed in the Sinapsis program must meet some very simple guidelines in order to ensure the correct operation of the application and of course the level of customer satisfaction. Below are the main points:

##### Joining the program

Shall complete the form attached to this document and return it signed to [sinapsis@aivika.com](mailto:sinapsis@aivika.com)

The team of programmers at ScannerVision will only attend persons contained in the registration document.

The program will be renewed annually

The annual cost for being part of Sinapsis is 500€.

##### Publishing contents

Once the connector will be finished the source code must be shared to be revised by the ScannerVision development team.

The connector will be only published once the code will be approved by ScannerVision's team.

Once published the connector must be properly maintained, updating as necessary for its correct operation

##### Commercialization

The developer will establish the cost of the connector, with a maximum of 499€

The developer will get 70% of the total proceeds from sales (quarterly)

ScannerVision will be responsible for a first level of technical assistance on the potential incidences arising out of the use of the connector



