
AutoScanNT Advance USER GUIDE



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Introduction

AutoscanNT Advance is a complete image storage and retrieval system for distributed networks using file level operation.

There are two main components: AutoScanNT (the image storage program) and CReq (image retrieval).

This document is concerned with the day-to-day operation of AutoScanNT. For more detailed information regarding AutoScanNT refer to the AutoScanNT Administrators Reference.

Routine scanning

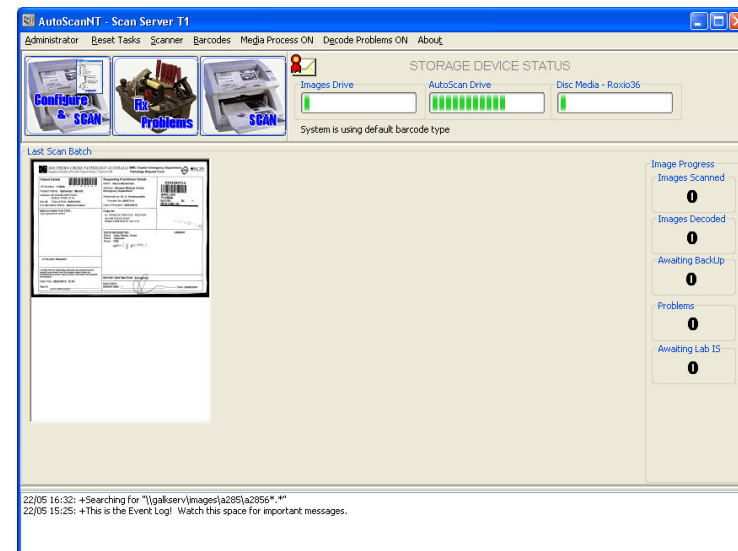
AutoscanNT makes the task of scanning the barcoded documents as simple as possible.

All that is required is to load the scanner with documents, and then click "SCAN"

Because the Autoscan Administrator has already configured the settings, in most cases, AutoscanNT does everything for you:

- Initiate communications with the scanner
- scan the documents
- automatically decode the barcodes
- Crop and resize images to minimise storage requirements
- file the images under the barcode number(s)
- store a permanent copy onto DVD.

AutoscanNT starts with the main screen displayed below. This provides the user with methods for routine scanning of documents.



If for some reason a barcode fails or there is a paper feeding problem, Autoscan provides simple methods for correcting problems at the end of the scanning process.

Menu Bar

The menu bar is located just below the Title Bar. It allows you to access other features of AutoScanNT.

Administrator	Starts the Administrator window. General users of AutoScanNT should not need to access this screen
Reset Tasks	Restarts background tasks. There are a number of background tasks such as file conversion, and CD-backup. On occasion it may be necessary to restart these processes due to a failed scan or other operation.
Scanner	Allows the user to select an alternate scanner, Configure & scan, and to review the most recent scan job.
Barcodes	Allows the user to select an alternate barcode configuration from the saved list.
Media Process ON/OFF	Turns on and off the background media writing process.
Decode Problems ON/OFF	Turns on and off extra barcode recognition features in Problem solver.
About	Reports information about the current version of AutoscanNT.

Event Log

This window is located at the bottom of the screen. Watch this log carefully because any problems that occur with the system will appear here. The barcode decode messages are also shown in this window. Note: Most recent events are located at the top of the list.

Configure & Scan Button

This will start the scanning procedure by opening the TWAIN interface for your scanner. The interface is generally scanner specific but most of these interfaces will allow you to select the resolution, size, document source (ie from the document feeder or flat-bed) and the colour mode. Note that the default configuration for AutoScanNT is 220dpi scanning with 1-bit (line art) images.

Fix problems button

This will start the "Fix Problems interface." This interface will allow you to examine and manually enter information about scanned images that fail

barcode decoding. This button will not function if there are no problems to fix. See the Fixing problems section for more information.

Scan button

This will start scanning documents with the same settings as the previous scan. The last scanner settings will be shown in the "Current Scanner Settings" panel beside the Image Thumbnail.

Image thumbnail

Located on the "Current Scanner Settings" panel, the thumbnail shows the last image scanned. Use this thumbnail to ensure that the scanned document is the right size.

Image Progress Panel

This panel consists of five counters which let you see the progress of images through the system. This panel helps you identify any bottlenecks which may indicate problems.

Images Scanned

The number of images scanned but not yet barcode checked.

Images Decoded

The number of images decoded but not converted into compressed format.

Awaiting Backup

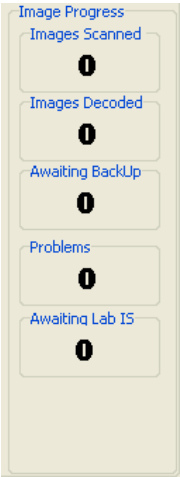
The number of images which are waiting to be written to the backup device

Problems

The number of scanned images which did not decode properly. Note, this window turns red when there are problems to fix. See "Fixing Problems" Section for more details

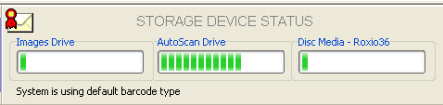
Awaiting Lab IS

Shows number of images waiting to be transmitted to the (laboratory) information system. This feature can be disabled where external data is not being sent to a external source.



Storage Device Status Panel

This panel indicates the storage space in the system.



Images Drive

This indicates the amount of disk space left on the hard disk drive where AutoScanNT stores the Viewable images (ie the drive used by CReq). This drive will slowly fill over the course of a year or two. Old images can be removed periodically by the Network Administrator as space is required.

AutoScan Drive

This indicates the amount of disk space left on the hard disk drive where AutoScanNT resides. Backup copies of all scanned images are stored temporarily on this drive in case a disc needs to be rebuilt. This indicator should remain relatively static over the course of time as the archiving process should ensure that the old images are removed when they are no longer needed.

Media Disc

This indicates the amount of space left on the CD or DVD. AutoScanNT will issue a warning (in the event log) when the disk gets close to being full.

Signing Icon

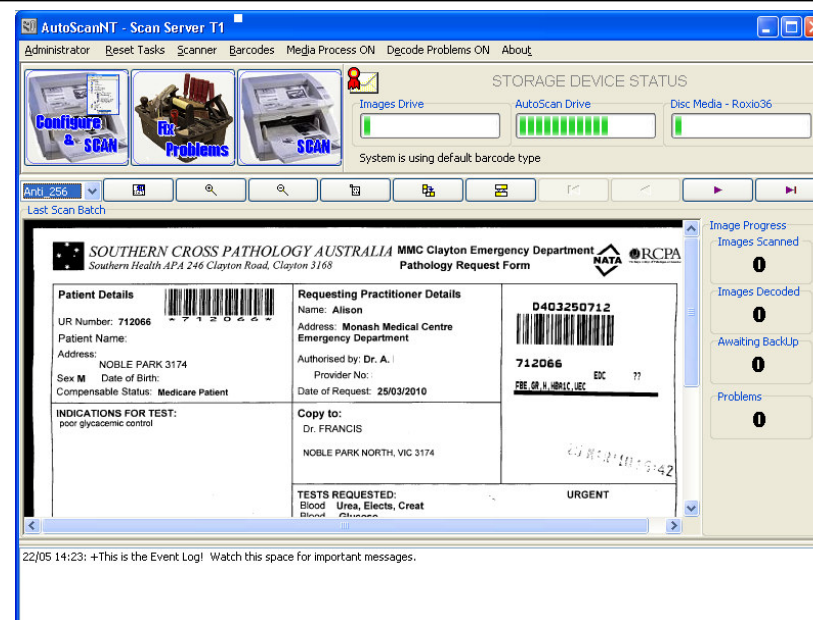
When storing media to Medicare standard, you must use Digital signing with your Medicare signing Certificate. If a certificate is installed, the Signing Icon will be shown just above the Image Drive

Main Screen Review Mode

This mode is used to review the last scanned batch. The images displayed are the image "as scanned." Before intelligent orientation and cropping have been applied. The purpose of this mode is to allow the user to re-check the batch for completeness and image quality.

To activate review mode just click on the **image thumbnail** or select **Scanner** from the menu then click "review last batch" (Ctrl R).

In Review Mode, the Main screen is redisplayed as shown.



Scanned Image

The scanned images will be displayed at their maximum size inside the Last Scan Batch panel.

Image Toolbar

The Image Toolbar allows the user to manipulate the image in a number of ways. The purpose of each button is shown on the next page



Image Toolbar Buttons

Image Enhancement Level		Sets the level of image enhancement. (None, no enhancement, Anti_256 best)
Magnifier		Magnifies a small section of the image adjacent to the pointer Returns pointer to normal (magnifier off)
Zoom	 	Enlarges displayed image. Shrinks displayed image.
Reset Zoom		Restores image size to 100% of screen size.
Rotate 90 °		Rotates image clock wise ¼ turn.
Flip		Turns the image upside down.
First image		Shows the first image in the scanned batch.
Previous Image		Shows the previous image in the scanned batch.
Next		Shows the next image in the scanned batch.
Last		Shows the last image in the scanned batch.

Fixing Problems

Where there is an barcode failure or AutoScanNT can't decide on the correct name for an image, the image is flagged as a "problem."

To activate the Problems window, click on the Fix Problems button or click on the red region of the "Problems" indicator on the Progress Panel.

The screenshot shows the AutoScanNT - Scan Server T1 application window. At the top, there's a menu bar with options: Administrator, Reset Tasks, Scanner, Barcodes, Media Process ON, Decode Problems ON, and About. Below the menu bar, there's a toolbar with buttons for DELETE, SKIP, and EXIT. A message box in the top right corner states "No acceptable barcodes found." with an "Accept" button. The main area displays a pathology request form from Southern Cross Pathology Australia, MMC Clayton Emergency Department. The form includes patient details (UR Number: 712066, Patient Name: NOBLE PARK 3174, Sex: M, Date of Birth: 20/03/2010), requesting practitioner details (Name, Address, Emer), and test requests (Blood, Urea, Elects, Creat, Glucose, FBE, HbA1c (if possible)). The form is dated 25/03/2010 16:35 and has a report destination of Emergency.

The first Problem is shown and as you fix each image, the next is automatically displayed.

Problem image window/Problem description window.

This window will display the images which AutoScanNT tagged as “problems”. Located in the top right of the screen, the problem description window will tell you the nature of the problem with the displayed image.

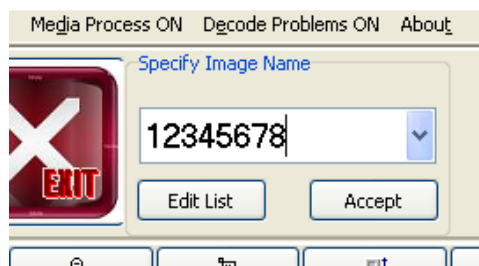
Image may become “problems” for a number of reasons including:

No barcode found	Most commonly, this is because there is no barcode in the image. Less often it may be that there is a barcode but AutoScanNT failed to decode it. You can generally name these images manually using the “name image” window. Under normal circumstances
Multiple Barcodes	Images that contain more than one valid barcode them will be flagged as problems. The reasons why this may In many cases, this is the result of the scanner feeding two documents at once. Less often, it is because there ARE two barcodes on the image. You should delete these images and re-scan them. (see “Delete Button in this section)

There are other problem types that may be occasionally encountered. See the Administrators guide for more details.

Specify Image Name box

You may manually name an image using this window. Type the barcode number into this window and AutoScanNT will then deal with the image in the normal way. AutoScanNT will not accept a number which has more or fewer digits than your normal barcode numbers.



When there are multiple barcodes, a drop-down list of barcode numbers will appear in the list. The user can select any one of these barcode numbers OR select ALL to create a separate copy of the image for each barcode number. This is particularly useful if there is a reason to associate the image with more than one reference number.

Image names do not have to be numbers. The user is able to use the over-ride character (!) to enter a text image name.



For example, the user may want to store copies of the Materials Safety Data sheets in the system. To do this simply scan the document as normal. When AutoScanNT tags the image as a problem, you can then type (for example) **IMSDS XYLENE** into the Name Image Window and AutoScanNT will store this image under that name. You can now view the image with CReq by typing “MSDS”

Delete button

This will permanently discard the shown image (it will need to be rescanned in order to be added to the system)

Exit button

This closes the Fix Problem window and goes back to the Main AutoScanNT screen.

Skip button

This button allows you to skip to the next problem image. The image will reappear after all other problems have fixed, deleted or skipped.

Problem image toolbar

The Image toolbar allows the user to navigate, enhance and manipulate the image before assigning a file name. It is essentially the same as the review mode image toolbar except that changes made to the image will be reflected in the stored image.

Image Enhancement Level		Sets the level of image enhancement. (None, no enhancement, Anti_256 best)
Magnifier		Magnifies a small section of the image adjacent to the pointer Returns pointer to normal (magnifier off)
Zoom	 	Enlarges displayed image. Shrinks displayed image.
Reset Zoom		Restores image size to 100% of screen size.
Best Fit		Shows the entire image in the view window
Rotate 90 °		Rotates image clock wise ¼ turn.
Flip		Turns the image upside down.
De-skew		Straightens the displayed image
Remove Border		Removes unwanted white space from top and bottom of image.
First image		Shows the first image in the scanned batch.
Previous Image		Shows the previous image in the scanned batch.
Next		Shows the next image in the scanned batch.
Last		Shows the last image in the scanned batch.

Recommended Daily Operation

Starting Up

Power on Sequence

Turn on power to devices in the following sequence:

- Scanner
- Computer monitor
- (if necessary) the printer
- The computer

Log-on

AutoScanNT runs on the Microsoft Windows Vista and Windows 7 computers, usually in a Active Directory environment. Before using the computer you must Log-In to the system as a particular user. In the default configuration, the User "Image" has been registered with Windows Active Directory. You will need to find out the password for this user from your AutoScanNT Administrator or from your Network Administrator. If there are shared network devices connected to the Scanning computer, these should automatically reconnect at log-in - however you **may** be required to enter network share passwords. See you network administrator for these passwords.

Starting AutoScanNT

To start AutoScanNT, double click the *AutoScanNT* icon on the desktop or by selecting AutoScanNT from the Programs menu. It is strongly recommended that a daily maintenance tasks are performed before starting to Scan.

Daily Pre-check

Before scanning check the following:

- That AutoScanNT does not report any errors either in a message window or in the Event Log.
- That (in the Storage Device Status Panel) the CD loaded has a name (ie does not read "UNKNOWN")
- That the drives are not full (ie the status bars are not completely filled)
- Use swabs to clean the scanner head of the scanner
- Inspect the scanner for loose pieces of paper and foreign objects like Staples.

Scanning Forms

AutoScanNT has two scanning buttons: **Scan & Configure** and (simply) **Scan**.

The *Scan* button will scan documents with the same settings as the previous scanned image. **With a Canon DR scanner, you will use this button most of the time.**

The *Scan & configure* button will open the Scanner interface program allowing you to adjust brightness and other parameters such as document source (document feeder or flatbed if you have one), paper size and scanning mode. **With a Canon DR scanners, you should rarely have to use this option.** It may occasionally be necessary to adjust brightness for very faint documents or those printed on coloured paper.

Scanning Steps

For most scanners, place the paper into the document feeder tray face up.

- Click *Scan*
- The documents will be fed through the scanner
- Once the batch is complete, AutoScanNT will decode the barcodes from that batch.
- Images that fail barcode recognition will be flagged as *Problems*. Click the *Fix Problems* button to deal with these images (see Fixing Problems section)
- To scan another batch of the same type you can use the *Scan* button. This will simply start scanning images with the same settings (without going through the scanner interface program).
- To scan documents requiring altered settings (*MOST DO NOT*), use the *Scan & configure* button and make the appropriate changes in the scanner interface program.

As each scanner and scanner interface driver is different, you should use the *Scanning Quick Reference Sheet* applicable for you scanner. Contact the Autoscan Administrator for copies of the quick reference sheets.

Background Tasks

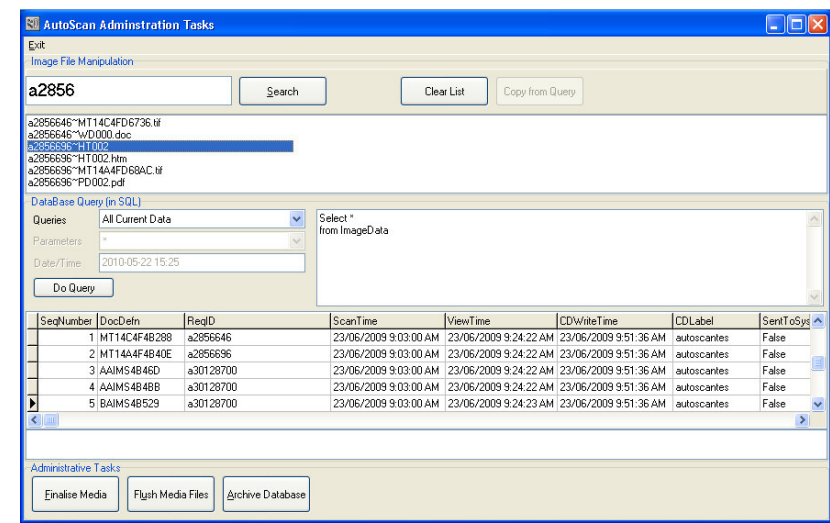
AutoScanNT will deal with most images without any user intervention. It will decode the barcode in the image, make the image viewable by CReq and store a backup copy of the image onto disc media.

At times, it is necessary for AutoScanNT to prevent you from scanning or fixing problems while it is busy. This is generally a very short time but may be longer if you scan large batches. You may notice that the *Scan* and *Scan More* buttons disappear and the mouse arrow turns into a small “CD” or “two pieces of paper” when this happens.

If you find that this problem is happening frequently, contact the Autoscan Administrator for assistance.

Administrator Window

The administrator window allows the AutoScanNT Administrator to manipulate the files in the AutoScanNT system and to view information contained in the AutoScanNT database.



Menu bar

Exit- Returns to the Main window.

Image File Manipulation window

When the request number or name of the image is entered into this window, AutoScanNT will search through the viewable images for files that match. When files are marched, they are listed in the Image File List.

Image File List

Files appearing in this list can be deleted or viewed.

To delete a file highlight the file or files from the list and click the right mouse button. Select either *Delete entire list* or *Delete Selected files* as appropriate. This operation will delete all the files associated this record including the files on the Media (if the files are on the current media). You may view

SQL Query Window

SQL ("Structured Query Language") is a language for viewing and changing data contained in relational databases. Any valid SQL query using the SELECT predicate can be used in this window to retrieve the required data in the database (SQL used is based on MS JET 3.5). Any dates which appear in the query must be surrounded by square brackets. Eg

```
select * from imagedata where scantime < [1/1/2010]
```

The following is the database structure:

TABLES

- IMAGEDATA
- IMAGEARCHIVE

These tables have identical structures as follows:

- SeqNumber *The Unique identifier for the record*
- DocDefn Unique identifier for the Image or Document
- ReqID Group Identifier (eg lab number)
- ZipName Archive Group Name
- ScanTime Time the image was scanned
- Viewtime Time the image was saved to the Image server
- CDWriteTime Time the image group was written to disc
- CDLabel Name of the Disc
- SentToSystem Has the reference been sent to the Lab system?
- ImageInfo Text about the image received from the Lab system
- Verified Level of verification during the finalise step
- BarcodeData Barcode information found in the image

Common queries and the database parameter list are available by right clicking anywhere in the SQL query window. Clicking the parameters will copy them into the SQL Query.

SQL Results Table

The result table for the current query.

Administrator Tool Bar

Finalise Media	Prepares the DISC for prior to changing (see Finalising media section)
Flush Media Files	Writes any unwritten ZIP groups to disc
Archive Database	Archives Database entries and deletes unnecessary Backup files usually performed after Changing media process

Troubleshooting

Almost all AutoscanNT issues arise from problems with DVD Media and Network Shares.

It is important to use high (Archive) quality DVD media with a High End Blu-Ray Disc writer and to Change media regularly.

Consult the Quick reference guides for managing DVD media.

Ensure that you log onto the Scanner terminal with a user suitable for accessing the network resources AND that your File shares (if used) are connected before starting Autoscan.

All other issues should be referred to the IT administrator.