SCANNING IN HEALTH ONE VERSION 6.1.1.1027   12/01/2010
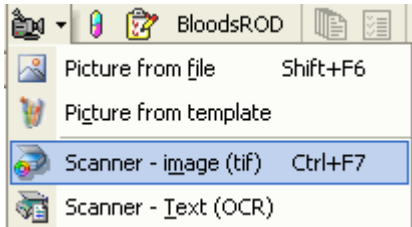
In this version of Health one we have made the scanning of reports into patient's files much easier. Below is a summary of all the scanning functions in Health one.

Scanning From Within a patient file

a) As before, we can scan an image into a transaction. This image is a true "photo" of the original
b) As before, We can scan a text document into a patient transaction. This document can be edited with any word processor eg Microsoft Word

With both of these options you should use your favorite scanning software and your favorite "OCR"software. There are many cheap image scanner software programs on the market.
"Irfanview" is a freeware program which is distributed with Health one.
OCR software is more expensive and examples include "Omnipage" and "ReadIris"
I have used "ReadIris" when testing the OCR function in Health one.
With the OCR option, Health one now expects the user to save BOTH an image (tif) file AND a text (rtf) file. Health one allows the user to easily copy some text from the text document to Health one items. Health one will normally save this text AND the original image in tif format.

Scanning From the Patient selector

We can now scan multiple pages of reports from many patients without opening each patient file. This is done by clicking the Tools menu in the main Health one toolbar
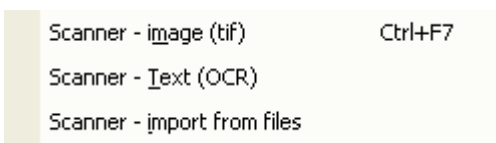

We have the three options above.

a) Scanner – image (tif) - scan multiple pages of reports to one **TIF** (image) file and then use Health one scanner interface to distribute each report to its correct patient file
b) Scanner – Text (OCR) - scan multiple pages of reports to one **RTF** (text) file and then use Health one scanner interface to distribute each report to its correct patient file
c) Scanner – import from file – Health one imports from pre existing tif/rtf files in specified location. These files might have been scanned outside Health one.

In order to scan efficiently there are certain prerequisites as follows:

1. Install a good image scanner as above – these are cheap/free
2. Install a good OCR software – may cost several hundred Euro – I recommend ReadIris 12
   If you use OCR software, this will normally allow you to scan the image file as well as the text file
3. The software used for both image and text scanning must be defined in Health one
   Tools/options/scanning. We have added some new options here.
   Here you can define here the path to the resulting tif/rtf files that will be imported by Health one

   Screenshot of Health one scanner options
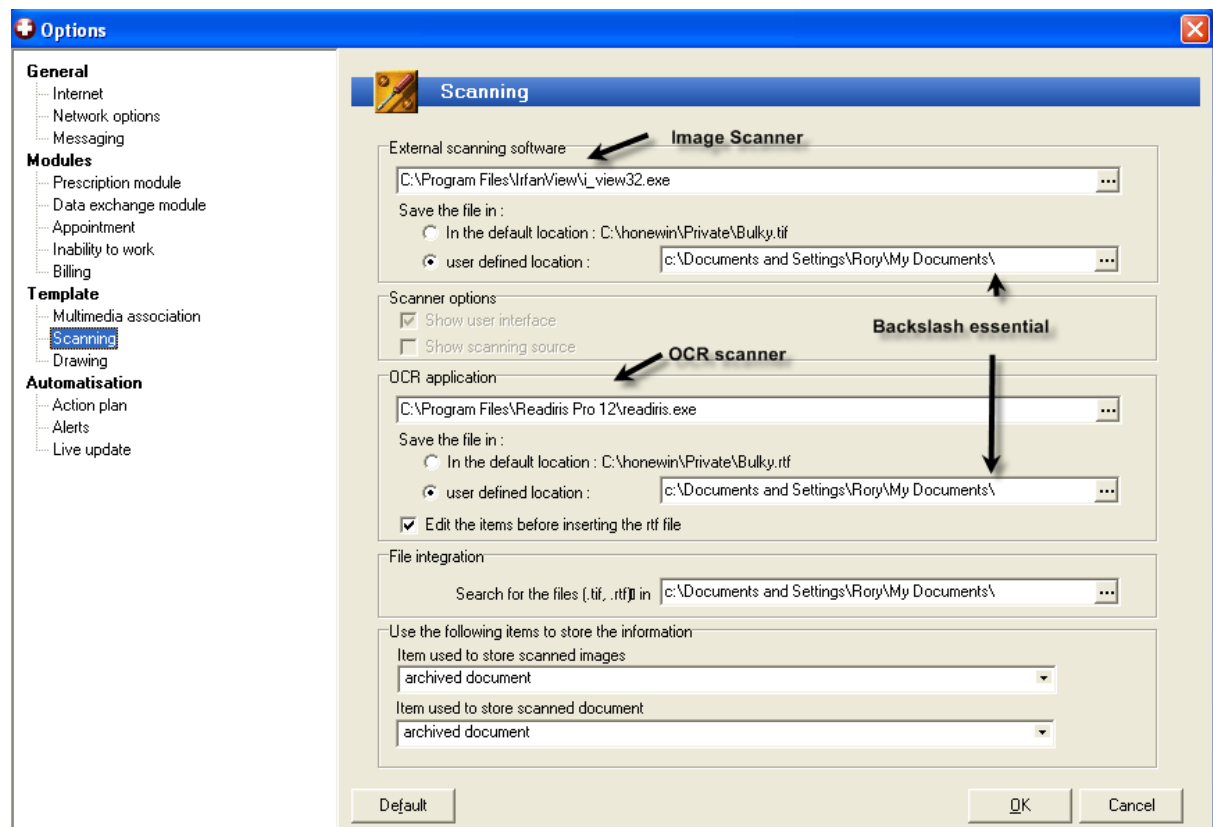
Note: The "External scanning software" and the "OCR application" can be the same software.
The files you save with the scanner **MUST** be named "**bulky.tif**" or "**bulky.rtf**"
Health one will look for these two files (bulky.tif and bulky.rtf) in the paths defined above. The default path is C:\Honewin\Private\ but the user can now change this path. Some scanning programs will automatically save the output files to a different location eg "My Document" as above. We can point Health one to this location.
**Note:** You must have a backslash at the end of the path where you want to save the files bulky.tif/bulky.rtf

"Edit the items before inserting the rtf file" - This option is ticked by default. It means that Health one will open its new scanner interface when you exit the scanner program. This interface allows you to assign text to Health one items and also allows you to assign one or multiple pages of a tif file to one or more patients.

Scanning from within the patient file

You can continue to scan either tif files or text (OCR) files from within the patients file

Create a new transaction called "experts report" – "Cardiology" – for example
Click on the camera and choose the option that suits you, either Image or text (OCR)
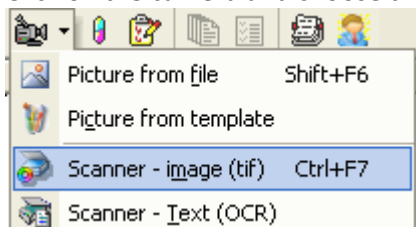
If you use the option "scanner –image (tif) then the scanning software defined in Tools/Options/scanning, will be opened by Health one - in this case irfanview
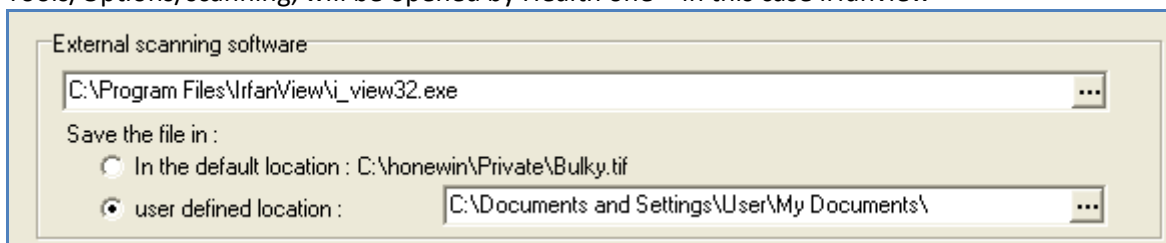

In the scanning software click on scan or in the case of our example Irfanview, you would click on file – batch scanning. You should save the resulting tif file in the directory specified in the tools/options/scanning window as above
NB. The resulting image file MUST be called Bulky.tif
When you close the scanning program the image file will be saved to the transaction as always.

If you decide to scan from within a patient file and use the option "Scanner – Text (OCR)", Health one will open the OCR software specified in tools/options/scanning
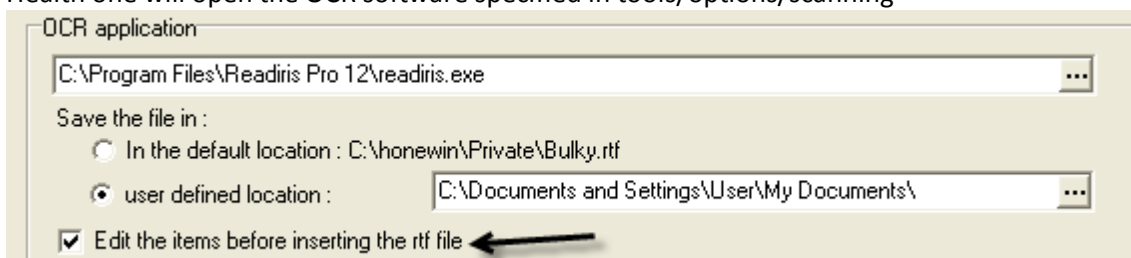
However, Health one has a new option here "edit the items before inserting the rtf file". If this is ticked, then after you save the file in the OCR software as **Bulky.rtf"** and exit the OCR software, Health one will open a new scanner window which allows you to copy some or all of the text from the document to Health one items in the current transaction.
If Health one also finds a tif file it will allow you to save both the text within Health one items AND the original tif file.

Scanning multiple pages of reports from several patients.

This is done from the patient selector.
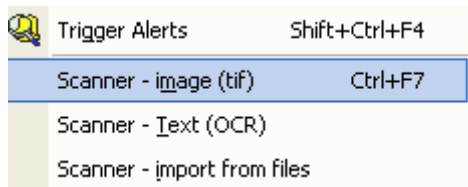
In this case Health one will open the relevant Image or OCR scanner software.
You should now scan the multiple pages/reports to a single tif file or a single rtf file. These files should be named **bulky.tif or bulky.rtf** and saved to the location defined in tools/options/scanning

Note: in most cases if you use OCR then you will use the same software for scanning/saving the image (tif) file and the text (OCR) file. Define these in Tools/options/scanning

Below are some screen shots of the Health one scanner interface which is triggered after you scan the multiple pages to one tif file and exit the scanner software

I clicked on the "add" button in the middle to add each page to be integrated to the same patient file

Ckick on "Validate patient" when finished

You can also scan multiple pages of reports from the patient selector as a single **text** file by using OCR software (which you have to buy). I have tested the function using "Readiris 12" OCR software
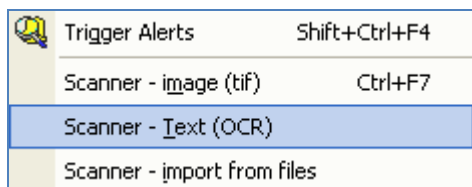
In this case Health one will open the scanner software defined in tools options/scanning "External scanning software" settings as for scanning images first, and later will open the OCR software. Of course the two may be the same.

Health one now expects you to save **both a multipage tif file and a multipage rtf file**.
Health one first opens the program defined as your scanning for images.
After you save the tif file and close the scanner program, Health one will open the OCR program defined in tools options so you can convert the tif file to text. However, if the software path is identical for both programs then Health one will only open the scanner program once. In this case you are expected to save both the tif file and the rtf file before leaving the scanner software.

When you have saved both these files to the specified location and then close the OCR software Health one takes over again with its scanner interface which now contains both the text file and the image (tif) file. You will see two tabs for displaying one or the other.

The screen below explains what each section of the window is used for.

Below we have two pages added to the tif file and several paragraphs entered to Health one items

Remember you must "validate patient" to send the information to the patient file

In this way each report can be sent to its correct patient as a tif file AND text can be seen in Health one items if so desired. This text can be searched.

OCR application [Bulky.rtf/Bulky.tif]

Text | Image

Feidhmeannacht na Selrbhise Si3.inte Health Service Executive
Paediatric Department, Kerry General Hospital, Tralee, Co. Kerry Tel: 066 7184153
Fax: 066 7184067

Ref: *FL/SB/393855*

19th November 2009
Dr. B. 0 Driscoll, Kenmare.
Re: Penny Cotter, East End, Tallagh, Co. Kerry. DOB: *08/10/2007*
Admitted: *03/02/2009*
Discharged: 05/02/2009
Dear Dr. Mary,

The above was admitted as a two year old with a seizure. Last night she felt cold, went to bed early. Today she felt unwell. Mother felt she was hot. At twelve o clock she became unresponsive, stiff then tonic clonic seizure, lasted a few seconds. She was fully recovered within 1 hr. She has a past history of Hydrocephalus, ventricularmegaly. On Lamictal 50mg bid. On physical examination she was apyrexial. Neurological examination was normal. We increased the Lamictal to 75mg bid and she was discharged and will be seen in the clinic in a month.
Yours sincerely,

Dr. F. Lowry, (MCRN - 00000)
FRCPCH (Lond),
CONSULTANT PAEDIATRICIAN.

☑ Add the rtf file in the transaction

Patient: **unknown**

Transaction name: expert's report
Transaction date: 09/12/2009
Speciality: paediatrics

	Item	Content

hospital nu...
date of exa...
hospital
diagnosis [...
report
treatment p...
colonoscopy
other(s)

On the left side of this screen you have 7 pages that have scanned.

You can view the text pages or the image (tif) file by clicking the appropriate tab.

Move from page to page using the arrow at the top

Select some text and click on any item in the middle of the screen and that text will be added to the Health one item. Click on the little man at the top to select the patient for this tif and text

On the right hand side you will define the transaction properties for each patient.
You can also tick the green arrow top right, to add one or more pages (tif) to be saved to the transaction.

Click on "validate patient" bottom right to finally send this report to the patient file. The screen will then move on the next page/report

✓ Validate patient | Close

OCR application [Bulky.rtf/Bulky.tif]

Text | Image

Feidhmeannacht na Selrbhise Si3.inte Health Service Executive

Paediatric Department, Kerry General Hospital, Tralee, Co. Kerry Tel: 066 7184153

Fax: 066 7184067

Ref: *FL/SB/393855*

19th November 2009

Dr. B. 0 Driscoll, Kenmare.

Re: Penny Cotter, east end, Tallaght, Co. Kerry DOB: *08/10/2007*

Admitted: *03/02/2009*

Discharged: 05/02/2009

Dear Dr. mary,

The above was admitted as a ten year old with a seizure. Last night she felt cold, went to bed early. Today she felt unwell. Mother felt she was hot. At twelve o clock she became unresponsive, stiff then tonic clonic seizure, lasted a few seconds. She was fully recovered within I hr. She has a past history of Hydrocephalus, ventricularmegaly. On Lamictal 50mg bid. On physical examination she was apyrexial. Neurological examination was normal. We increased the Lamictal to 75mg bid and she was discharged and will be seen in the clinic in a month.

Yours sincerely,

Dr. F. Lowry, (MCRN - 0000)

FRCPCH (Lond), FRCP (Irl), D.C.H.

(Lond), M.Sc (Paeds).

CONSULTANT PAEDIATRICIAN.

Add the file in the transaction

Patient: **COTTER PENNY**

Transaction name: expert's report

Transaction date: 09/12/2009

Specialty: paediatrics

Page 1

	Item	Content
	report	The above was admitted as a ten year old with a seizure. Last night she felt cold. I went to bed early. Today she felt unwell. Mother felt she was hot. At twelve 0 clock she became unresponsive, stiff then tonic clonic seizure, lasted a few seconds. She was fully recovered within I hr. She has a past history of Hydrocephalus, ventricularmegaly. On Lamictal 50mg bid. On physical examination she was apyrexial. Neurological examination was normal. We increased the Lamictal to 75mg bid and she was discharged and will be seen in the clinic in a

Buttons: hospital nu... / date of exa... / hospital / diagnosis [... / report / treatment p... / colonoscopy / other(s)
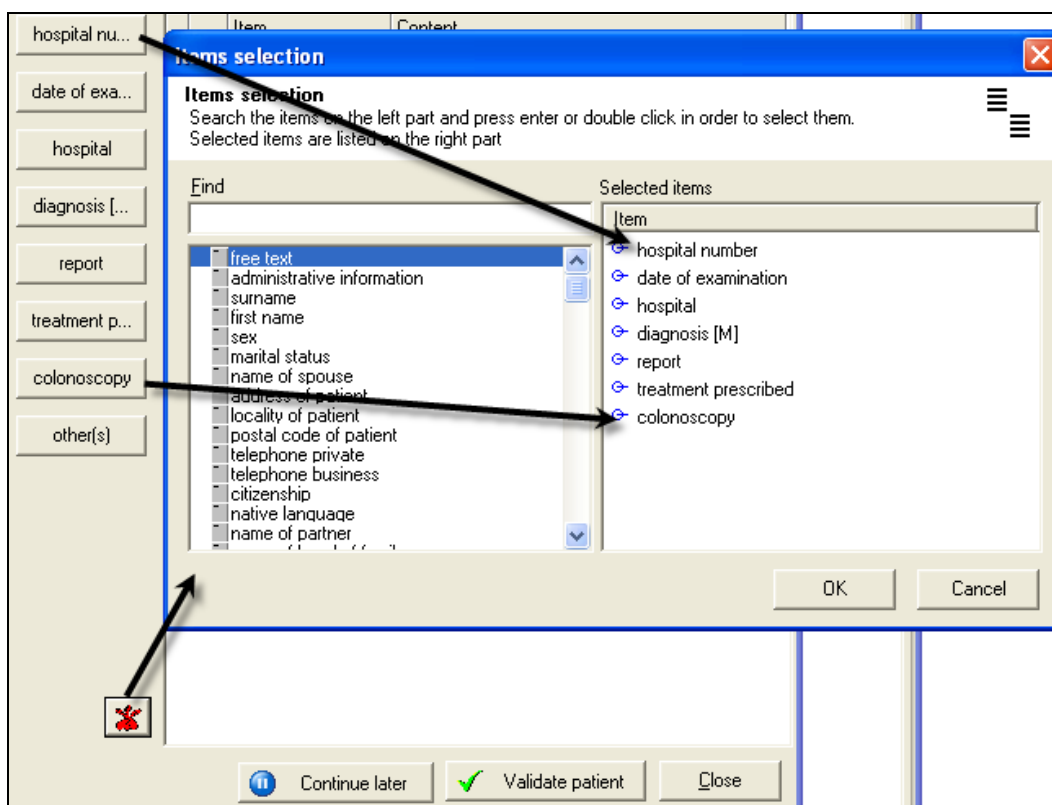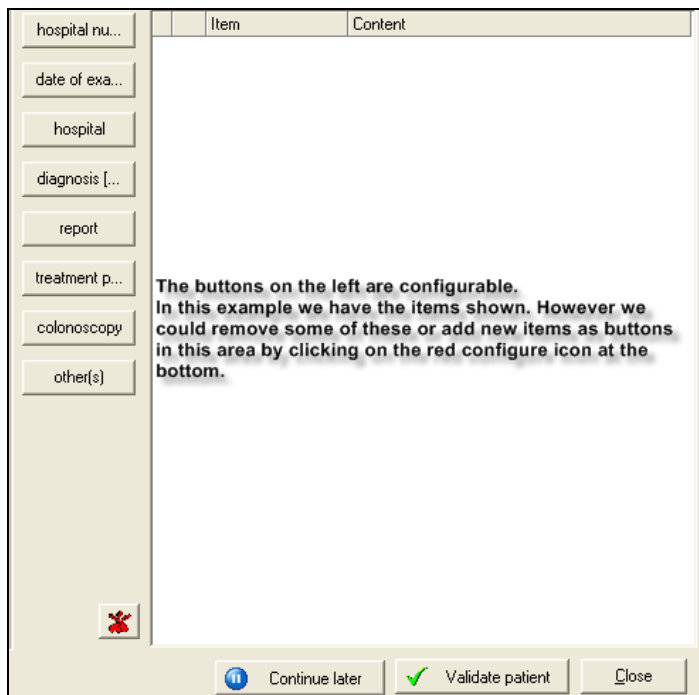
Here we have added the text to the Health one item "report".

We have also assigned this reprot to a patient Top right

We have defined the transaction name specialty etc - top right

The image page (tif) has been added.

Now all we have to do is click on Validate bottom right and move to the next report

✓ Validate patient   Close

Configuration of health one scanner interface

Above you can see the window that opens up when we click on the red configure icon
The seven Health one icons that are available by default can be seen in the list on the right hand side of this window.
We can add or delete any Health one item to or from the list.
Not only that, we can also call any other item we wish by clicking on the "others button. This would be used for items that we wish to use now and again but we don't need in the default list.
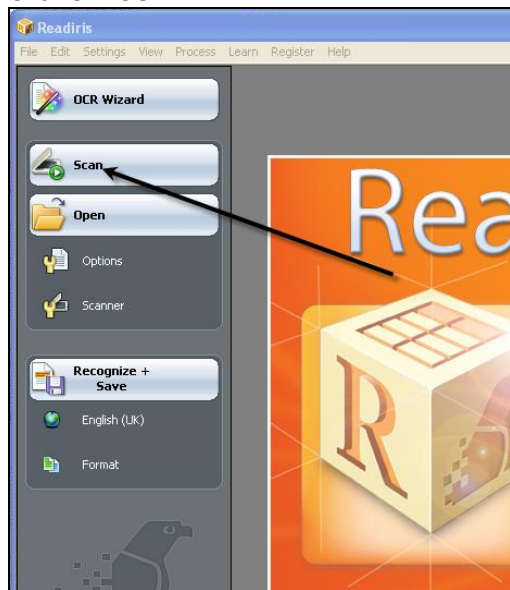
How to scan multiple pages using the OCR software "ReadIris12"

1. Place all the pages of reports on the "automatic document feed" (ADF) of your scanner
2. In Health one click on the main menu item **Tools** and then click on the menu item "Scanner – Text (OCR).
   **NB: There is no need to open a patient file**

|	
Scanner – image (tif)	Ctrl+F7
Scanner – Text (OCR)	
Scanner – import from files	
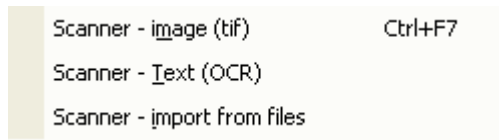
3. Click on **"SCAN"**

4. If the pages of reports do not start scanning now you may have an intermediate screen visible. If this happens click on "SCAN" on this screen. The scanning process should now start and all pages should be scanned and visible in the Scanner program
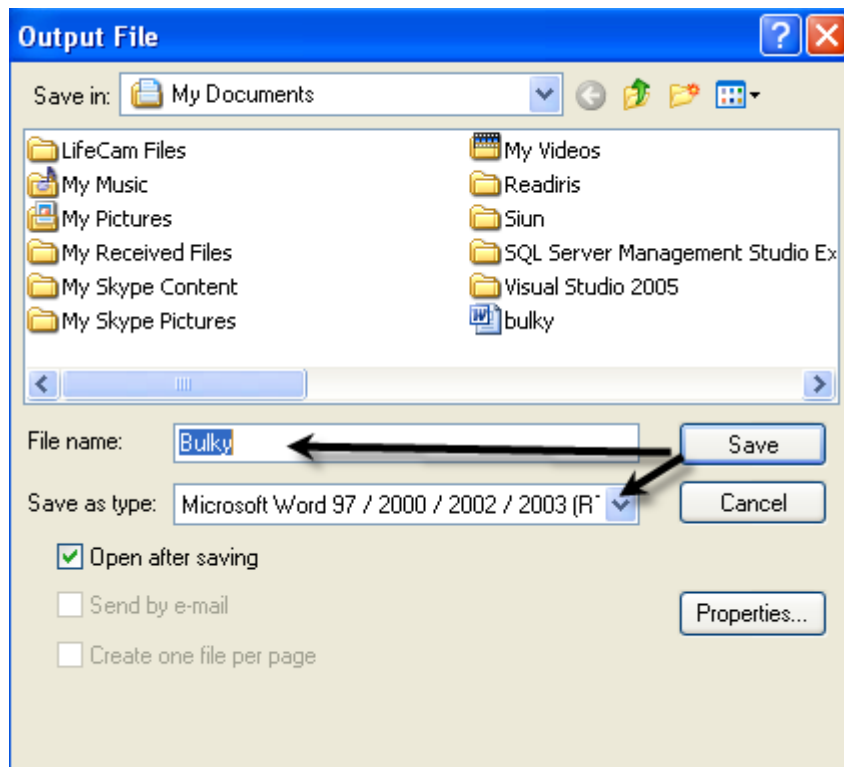5. Click on the menu item **File/Save all pages as image**
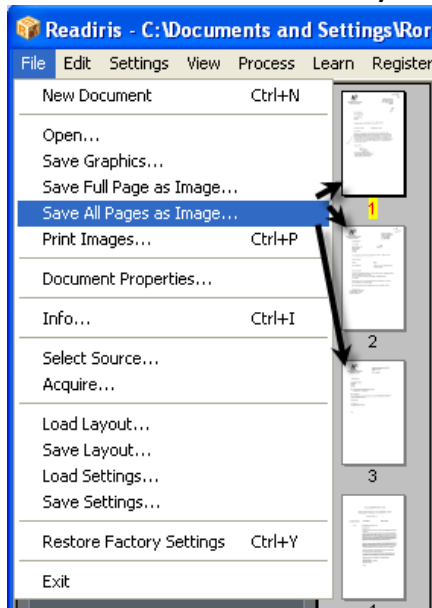
6. The following screen appears
   Type in the name of the image file. It **must be named "Bulky.tif"**
   Enter the file name and click on "save"
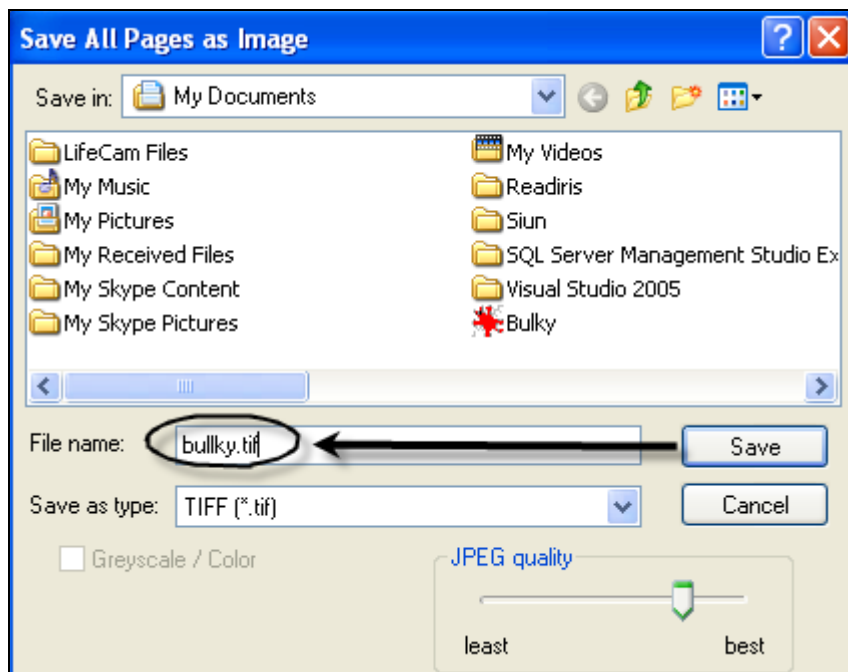
7. Now Click on **"Recognise and save"** as below
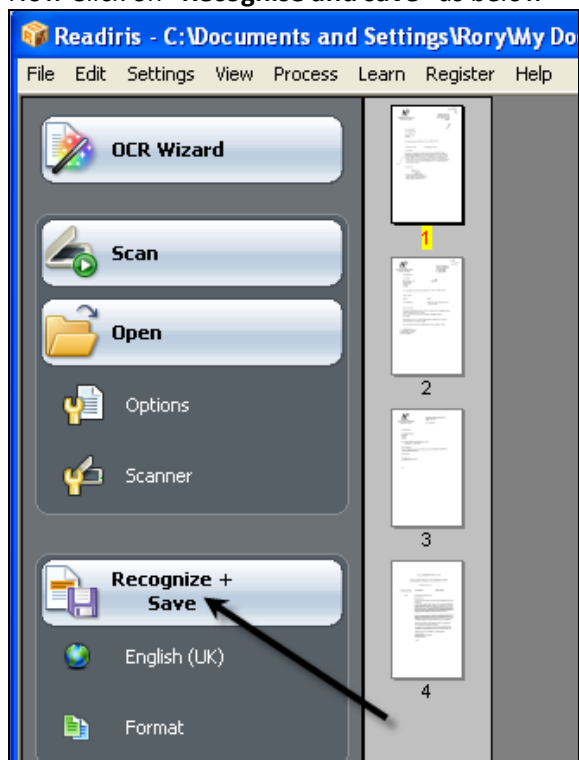
This will save all the pages as one **TEXT FILE**. This file will be saved as an **RTF** document

Save this file as **"Bulky.RTF"**. In the example above there is no need to add the extension "RTF" because the line |save as type" is set to Microsoft word (RTF)

8. Close the scanner software.
   Now we have saved two files to a specific location. These files have been called **"Bulky.tif" and "Bulky.rtf"**.
9. We are now back in Health one and we have the Health one scanner software opened automatically.

On the left we have two tabs this time. One for the OCR converted text, and one for the image (tif) file.

Note that we can simply highlight the patient name and click on the little man at the top to get a drop down where we can search by "firstname Name" for example in this case.

We define the transaction properties, name, specialty etc on the right.

We should click on the "add page" if we want the associated image for theis page/pages, to be saved to the patient file as a tif file.

Remember you must "validate patient" to send the information to the patient file

The Health one Scanning interface

- The screen below opens after the user has scanned multiple pages of reports and saved these pages as two separate files; "Bulky.tif" and "Bulky.rtf".
- The files are saved to a location defined in Health one tools/Options/Scanning
- The tif file is a single file containing an exact copy image of each page scanned
- The rtf file is a single text file containing each page converted to editable text. The resulting text document is NOT an exact replica of the original but an attempt by the OCR software to recognise the text in the image. The result is only as good as the OCR software
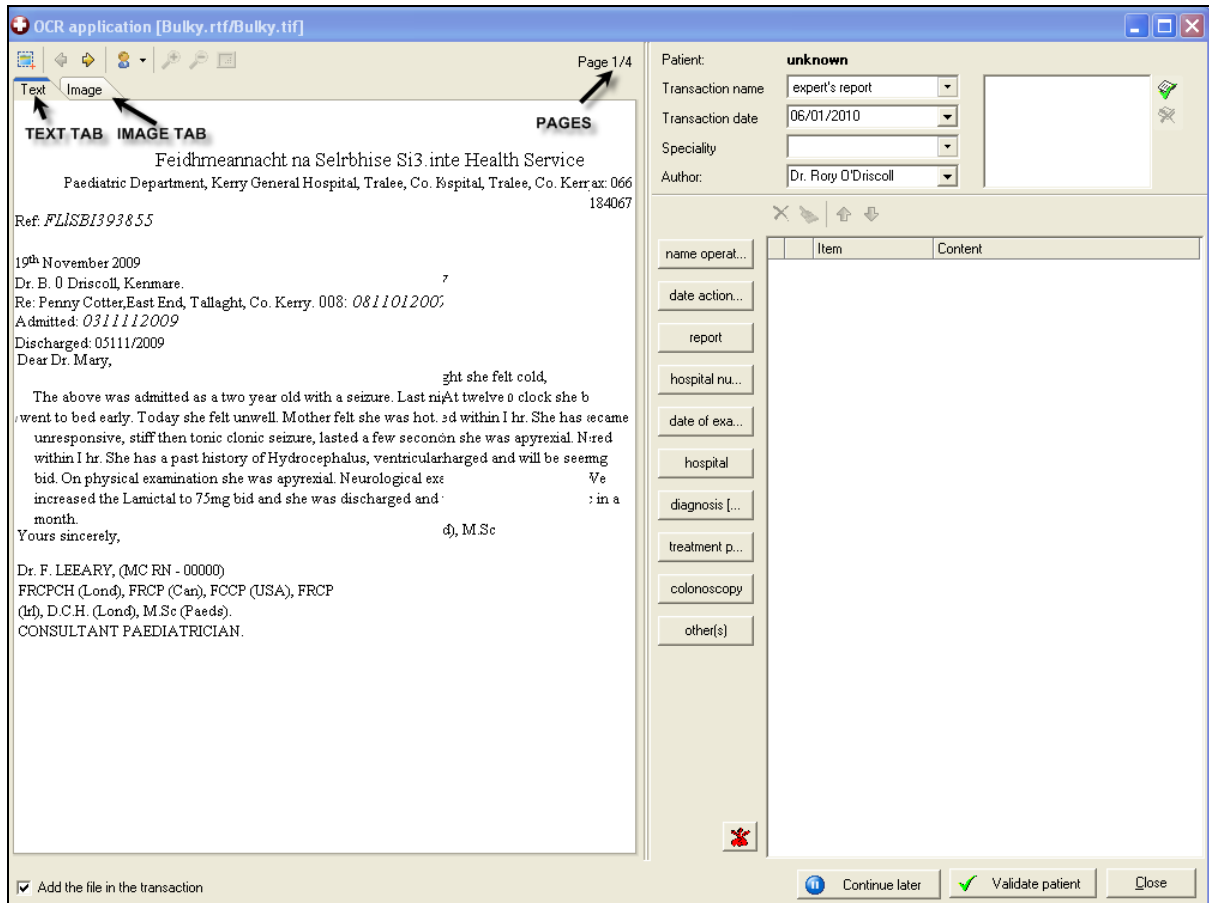
The left hand side of this screen contains the pages of the text file and tif file – Document Screen
The right hand side of this screen is devoted to the patient that will be assigned each page/pages/report – Patient screen

The Document screen – Left hand side of the screen above.

There are two tabs here, the "text" tab and the "image" tab. Each page will have a corresponding text page and image page.
The page number and total number of pages is displayed on the top right of this section. This is very important because it lets you know at any time during the integration, which page you are now dealing with.

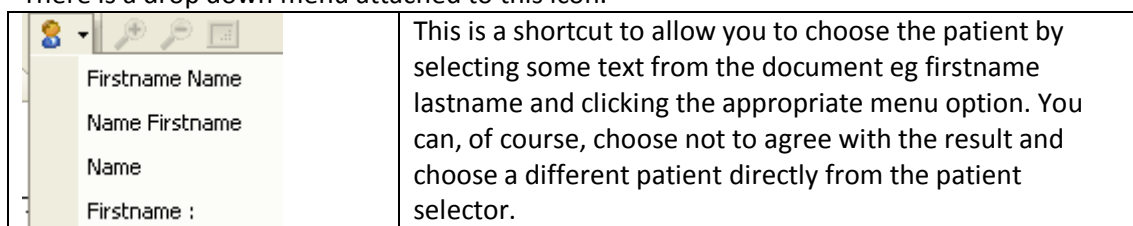The screen below displays the toolbar at the top of the document screen

a) Select all the text in the document displayed. You can select any part of the text by using the mouse to drag the cursor across some text or use the keyboard to select some text (Shift and arrow keys)
b) The left and right arrow key buttons at the top allow you to move between pages. Note that each text page has an associated image page so that when you click the right arrow, both text and image are moved to the next page.
c) The little man. Click here to select the patient that is related to the page that is displayed
There is a drop down menu attached to this icon.

	This is a shortcut to allow you to choose the patient by selecting some text from the document eg firstname lastname and clicking the appropriate menu option. You can, of course, choose not to agree with the result and choose a different patient directly from the patient selector.

d) The next three icons are the zoom icons and relate only to the image page. Although the image page can't be altered you can have a closer look at the content by zooming in.

e) The page indicator on the right of the document screen is critical. This shows what page you are dealing with. You should keep a close watch on this as you proceed through the pages

The Patient screen – right hand side of the Health one scanning window

The transaction properties section:

Patient:	**unknown**
Transaction name	expert's report
Transaction date	06/01/2010
Speciality	
Author:	Dr. Rory O'Driscoll

This section allows the user to define the patient – selected from the patient icon on the document section
The transaction name – usually "experts report"
The transaction date – Some users take current date, others use the date the report was written
Specialty – eg "internal medicine" or "gynaecology", "radiology" etc.

Text from the document on the left is selected and copied to an Health one item and stored in this section.

Having selected some text from the text document, click on one of the Health one items here and the item and its text will be inserted to the patient file afte validating the details.

You can configure the list of items named here by clicking on the red configuration icon here

The left hand side of the patient section contains several buttons. As described in the screen shot above these buttons are used to copy text from the document into the item in the transaction. You can select not only the listed items but also choose any other item you like by clicking on the "others" button

You can even configure the list of commonly used buttons in this section by clicking on the red orchid, configure button.
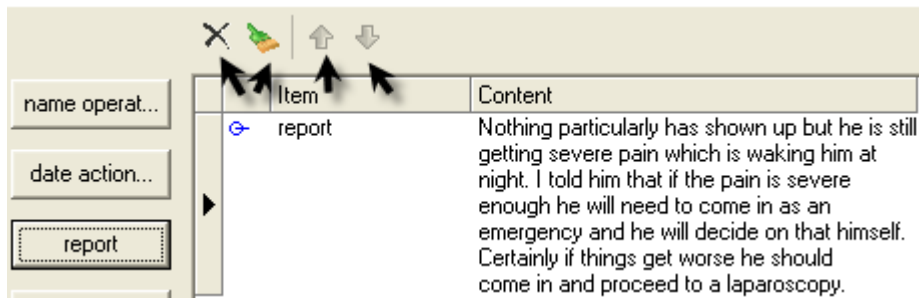
Once you have copied any suitable text to the items on the right, you can use the icons above to manipulate the various items (you can't edit the items in this screen)

    a) First icon lets you delete the currently selected item (indicated by the black arrow)

    b) Use the second icon (paint brush) to "clear all items" ie delete everything and start again

    c) Use the arrows to move an item up or down in the list

The final section of the patient screen is related to the image file. Normally if you copy some text to an item the corresponding image page is automatically inserted to this section. The pages in this section will be saved as a single tif file in the transaction
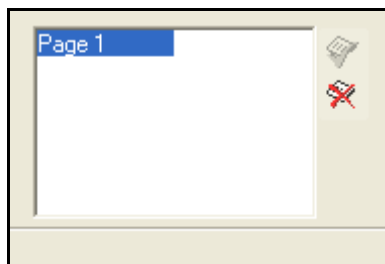
Note: If a report has several pages, you can copy text from each page and the corresponding image page will be added to the single tif file. However, it may be that you have some pages that you do not want to copy text from. In this case the image page is not automatically added and you should manually add this page or pages by clicking the tick icon in the screen above.

Scanning in Health one – Muliple pages for many patients – Technical summary

From the patient selector (no patient file open) click on Tools/scanXXX. There are three scanning options at the bottom of the list.
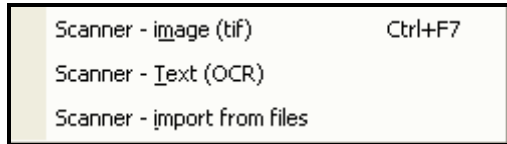
When you click on any of these options, Health one will immediately look in the directory specified in the tools/options/scanning section for the following files

Bulky.tif	If you have clicked the first menu item "Scanner – image (tif)
Bulky.RTF AND Bulky.tif	If you have clicked the second option
Bulky.RTF AND Bulky.tif	If you have clicked the Third option
Bulky~tif and Bulky~.rtf	If you have clicked the first **or second** option. This is a special situation. See below for details

If you chose either of the first two options, Health one will **delete the two files Bulky.tif and Bulky.rtf** if it finds them.
Then Health one will open the scanner program specified also in tools/options/scanning

If Health one finds either or both of the files "Bulky~tif" or "Bulky~rtf", it will assume that you have interrupted the process of integration in a previous scanning session ie you have clicked "continue later" in the Health one scanning interface. Health one will then ask you if you want to resume the process of integration. If you say yes it will open the scanning interface with the tif.rtf files loaded so you can finish the job. If you say no, Health one will delete the two files "Bulky~tif" and "Bulky~rtf" and open the scanning program specified in tools/options/scanning ie it will assume you want to start from scratch.