10

Working with Pictures

This chapter describes how to import pictures into frames, and then manipulate them in various ways.

The handling of large and/or high resolution pictures or complicated vector files is mentioned separately in the second part of this chapter starting with an introduction to this aspect of picture handling.

10.1 Importing Pictures

To import a picture, drag the picture file into a frame. You may import standard Windows bitmap (.bmp), JPEG, RISC OS Sprite and Draw files, plus other popular formats detailed in the **Ovation Pro** release notes. If you try and load an unrecognised picture format, the file will be interpreted as a text file and you will be asked to confirm whether you wish to proceed loading it *(see 3.3)*.

A warning is given if there is insufficient memory to load the picture.

The frame may be any shape, but must be completely empty or already contain a picture (in which case the old picture is overwritten). You cannot import a picture into a frame that already contains text unless all the text is deleted first, otherwise the picture is embedded in the text (see later).

The imported picture is centred and scaled to fit inside the frame but keeping its original aspect ratio i.e. its original shape. If the frame is rectangular, the entire picture will be visible *(figs. 10.1 and 10.2)*, otherwise the edges of the picture are cropped to suit the shape of the frame *(figs.10.3 and 10.4)*.

Menu⇨File⇨Import…

As an alternative to drag and drop you can use this menu entry to open a standard Windows open file window and select the picture file you want.

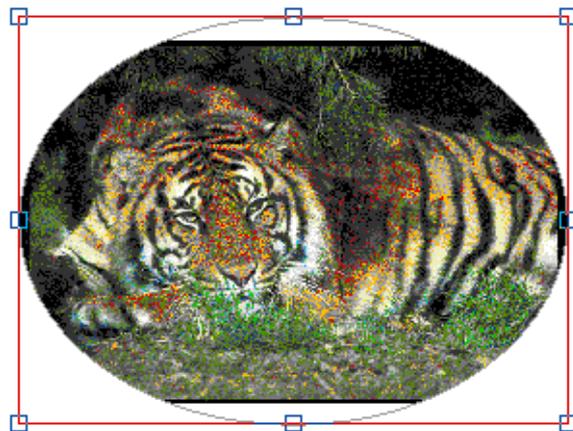*Fig. 10.1 - Fit to frame with aspect lock.*

Fig. 10.3 - Fit picture in elliptical frame.
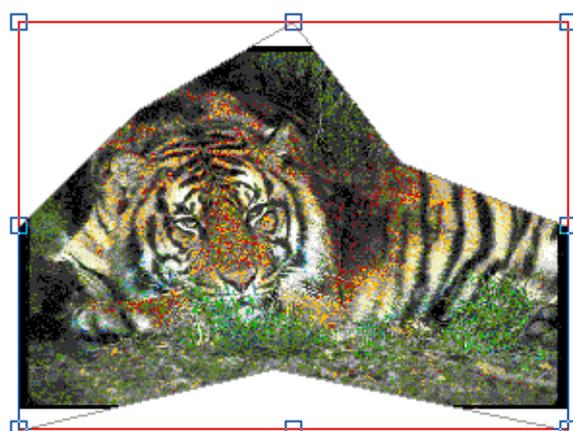

Fig. 10.2 - Fit to frame with aspect lock.

Fig. 10.4 - Fit picture in irregular frame.

Importing at a Specified Scale

If you hold down Ctrl when importing a picture, the picture is imported at the scale specified in **Choices** *(see 14.7)*. By default this is 100% i.e. the original picture size.

Embedding a Picture

If you drag a picture into a text frame which is not empty, the picture is imported into an automatically generated picture frame which is embedded into the text at the pointer position.

The picture is imported at its original scale, but scaled down to fit if necessary.

Saving Pictures

If there is an active picture frame, the **Save picture** option becomes available on the **File** menu. This allows you to save the picture in the frame to disc, or to another application. The picture is saved in the same format that it was loaded in.

10.2 Selecting Pictures

If a picture hasn't been selected, operations such as move, rotate, cut, copy etc. apply to the selected frame and its contents. If the picture has been selected, these operations apply to the picture only; the frame remains unchanged.

Choose the Select tool on the toolbox and left double-click on a picture to select it. A three-pronged resize tool is displayed over the centre of the picture confirming that it is selected *(fig. 10.5)*.

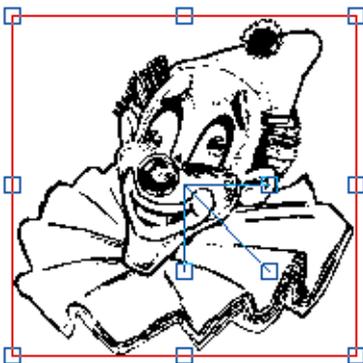Right click over a selected picture to deselect it.

Fig. 10.5 - A selected picture.

10.3 Moving Pictures

To move a picture within a frame, ensure that the Select tool is active then double-click over the picture to select it. Now left click and hold over the picture (not over a handle) and when the Hand tool appears *(fig. 10.6)* you can move the picture.

You can constrain movement to the vertical or horizontal direction by holding down Shift before dragging and keeping it held down while moving the picture.

You can position the picture within the frame precisely using the info palette or the **Modify picture** dialogue box *(see 10.7).*   **F6**

Using the Info Palette

You may use the info palette *(fig. 10.7)* to position the picture in the selected frame (in this case the picture does not need to be selected). **X** and **Y** are the offsets from the top left corner of the frame to the top left corner of the picture, and can be modified to change the position of the picture. Press Return afterwards to update the document.

Alternatively, click on the up and down buttons to move the picture in the appropriate direction.

Note that the **X** and **Y** fields towards the left side of the info palette refer to the picture frame, whereas **X** and **Y** towards the right edge refer to the picture itself.

Fig. 10.6 - Use the hand tool to drag the picture to a new position.

| Picture frame | X | 9mm | W | 49.95mm | Scale | 90 | | X | 0mm | | A | 0 | |
| 1.132 | Y | 187.57mm | H | 49.67mm | Aspect | 100 | | Y | 0mm | | | Fit | Ctr |

Fig. 10.7 - The info palette gives the position of the current picture. You can reposition it by changing the X and Y values. The info seen here reflects details of Fig. 10.6

10.4 Resizing Pictures

Menu⇨Picture⇨Modify picture…   F6

To resize a picture, ensure that the Select tool is active then double-click over the picture to select it *(fig. 10.8)*. To resize the picture, drag the handle at the end of the diagonal line on the resize gadget. If **Aspect lock** is selected on the **Modify picture** dialogue box, the picture shape will be retained.
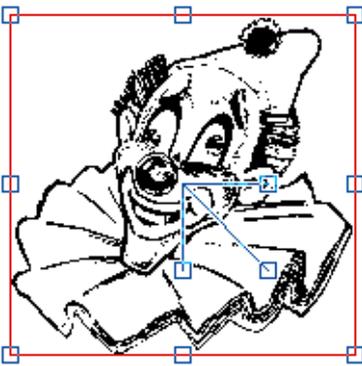
To resize the picture in the horizontal direction only, drag the handle at the end of the horizontal line. To resize the picture in the vertical direction only, drag the handle at the end of the vertical line.

You can resize the picture precisely by using the info palette or the **Modify picture** dialogue box *(see 10.7)*.

Using the Info Palette

You may use the info palette *(fig. 10.9)* to resize the picture in the selected frame (in this case the picture does not need to be selected).

Scale is the scale of the current picture as a percentage of its original size. You can enter a new value or click on the up and down icons to change the scale one percent at a time. Changing this value affects scaling in both X and Y direction, so the picture shape is not changed.

Aspect is the ratio of the horizontal scale of the picture to the vertical. You can enter a new value or click on the up and down icons to change the aspect one percent at a time. A value of 100% means that the picture is displayed in its original shape. To stretch a picture sideways increase this value, and to squash a picture sideways decrease this value. For example, to make a picture twice as wide as its original, set Aspect to 200%.

Resizing Frame & Picture

If you resize a picture frame by dragging its handle using the right mouse button, the picture is resized too. With **Aspect lock** set the picture will be resized to fit the height of the frame. Otherwise the picture will follow the size of the frame.

Fit

This option scales the picture so that it fits the frame. If the **Aspect lock** option on the **Modify picture** dialogue box is selected, the picture shape will remain unchanged. If **Aspect lock** is not selected, the picture may be stretched to fit the frame exactly. Ctrl+J can be used as a short cut.

Ctr

This option will centre the picture without changing its scale. It is especially useful if due to rescaling the picture has moved out of sight. Ctrl+E can be ued as a short cut.

Fig. 10.8 - Double click on the picture to select it instead of the frame.
Drag the handles to scale the picture.

*Fig. 10.9 - The info palette allows the scale and aspect ratio of the picture in the selected frame to be altered. The **Fit** option, fits the picture to the frame..*

10.5 Rotating Pictures

Whenever a picture frame is active, A on the info palette *(fig. 10.9)* shows the angle of rotation for the picture. The angle is in degrees and is measured anti-clockwise. You may enter a new value and press Return or click on the up and down icons to increase or decrease the angle by one degree or by ten degrees while holding down Shift. The picture is rotated about the centre of the frame.

To set an exact angle use the Angle dialogue box on the **Modify picture** menu

>   **Menu⇨Picture⇨Modify picture…   F6**

Using the Rotate Tool

Ensure that the Select tool is active then double-click over the picture to select it. Now choose the Rotate tool *(fig. 10.10)* then left click and drag on any part of the picture until it is at the required angle *(fig. 10.11)*.

The centre of rotation for the picture is indicated by a small crosshair, which can be dragged to a new position if required.

Using the Info Palette

When a picture is selected and the Rotate tool chosen, the options on the info palette *(fig. 10.12)* apply to the rotation of the picture instead of the object.

A is the angle of rotation of the picture. The angle of rotation is in degrees and is measured anti-clockwise. You may type in a new value followed by Return to rotate the picture to the desired angle. Alternatively click on the up and down icons to increase or decrease the angle by one degree.

Clicking on the 3 x 3 grid will position the crosshair at the same relative position on the frame containing the picture. The 9 points relate to the centre, the fours corners and the centres of the four sides.

If **Crosshair** is selected, the picture is rotated about the crosshair, otherwise it is rotated about its centre.

> Rotating is not possible when a picture has been locked.
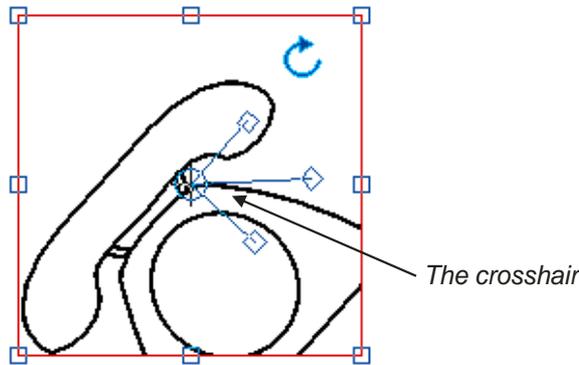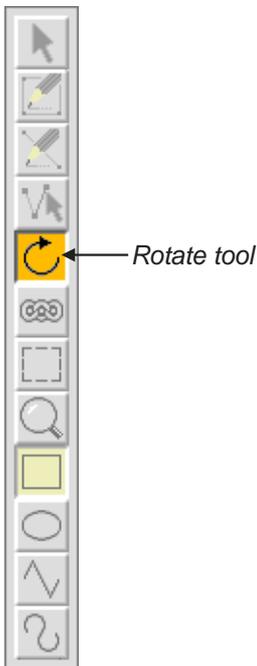

Fig. 10.11 - When a picture is selected you may use the rotate tool to rotate the picture about the centre of rotation indicated by the crosshair.

Fig. 10.10 - The Rotate tool.

Fig. 10.12 - When a picture is selected and the Rotate tool chosen, the info palette provides options concerned with rotating the picture.

10.6 Cropping Pictures

The Crop tool *(fig. 10.13)* allows you to crop or cut off unwanted edges of a picture leaving the part you do want filling the frame.

Position the pointer at the top left corner of the rectangle you want to retain and drag to the bottom right corner *(fig. 10.14)*. When you release the mouse button the part of the picture you have chosen is 'fitted' into the frame *(fig. 10.15)* as follows:

- If **Aspect lock** on the **Modify picture** dialogue box is selected *(see 10.7)*, the picture is scaled to fit the frame without changing shape.

- If **Aspect lock** is not selected, the picture is scaled to fit the frame precisely, changing its shape is necessary.

You can't crop a picture if it has been locked.

Cropping can actually be done by dragging from any corner to the opposite diagonal corner. When using the Crop tool, you must start within the picture frame. You can eventually drag beyond the picture frame, resulting in a scaling down of the cropped picture.
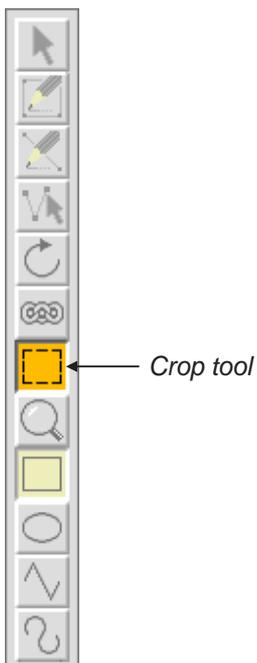
It is important to remember that the Crop tool only results in a changed view within the picture frame. But the original picture is not changed in any way, as can be seen by resizing the picture frame.

This also means that by selecting the picture (by double clicking on it) one can move the picture to reposition it within the frame.

The Crop Info palette gives information while cropping a picture frame. It does not allow you to set dimensions.

To reset, select the picture using the Select tool and then click Fit on the Picture Info palette.
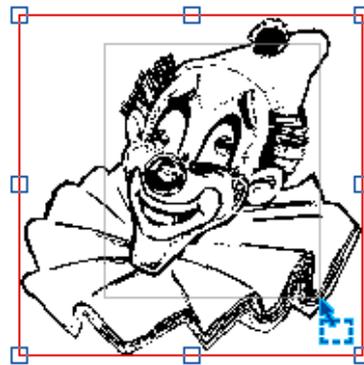
Fig. 10.14 - The complete picture.

Crop tool

Fig. 10.13 - The Crop tool.
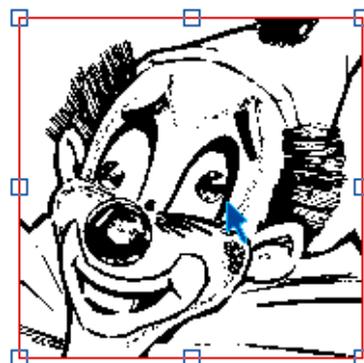
Fig. 10.15 - The cropped picture.

10.7 Modify Picture

Menu⇨Picture⇨Modify picture…   F6

The **Modify picture** dialogue box *(fig. 10.16 & fig. 10.17)* is available from the main menu when a picture frame is active.

It can also be displayed by triple-clicking over a picture.

Scale

This is the scale of the current picture as a percentage of its original size. You can enter a new value or click on the up and down icons to change the scale one percent at a time. Changing this value affects scaling in both X and Y direction, so the picture shape is not changed.

Aspect

This is the horizontal scaling of the picture. You can enter a new value or click on the up and down icons to change the aspect one percent at a time. A value of 100% means that the picture is displayed at its original shape. To stretch a picture sideways increase this value, and to squash a picture sideways decrease this value. For example, to make a picture twice as wide as its original, set **Aspect** to 200%.

Angle

This is the angle of rotation of the picture in the frame. You can enter a new value or click on the up and down icons to change the angle one degree at a time. The angle is specified in degrees, and a positive angle is applied anti-clockwise.

Tile

This allows the picture in a frame to be repeated on a rectangular grid. The **X** and **Y** distance icons are the separation between copies in the frame of reference of the original picture. So for example if the distance is 10mm and the scale the picture is rendered at is 50% the distance you see will be 5mm *(fig.10.18)*.

Perfect joins between copies of pictures may not be possible. If you get slivers of frame background showing through, try a small negative value for the distances.
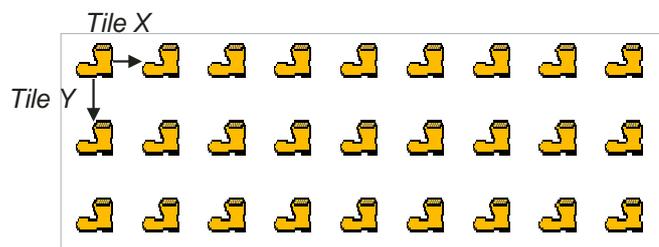

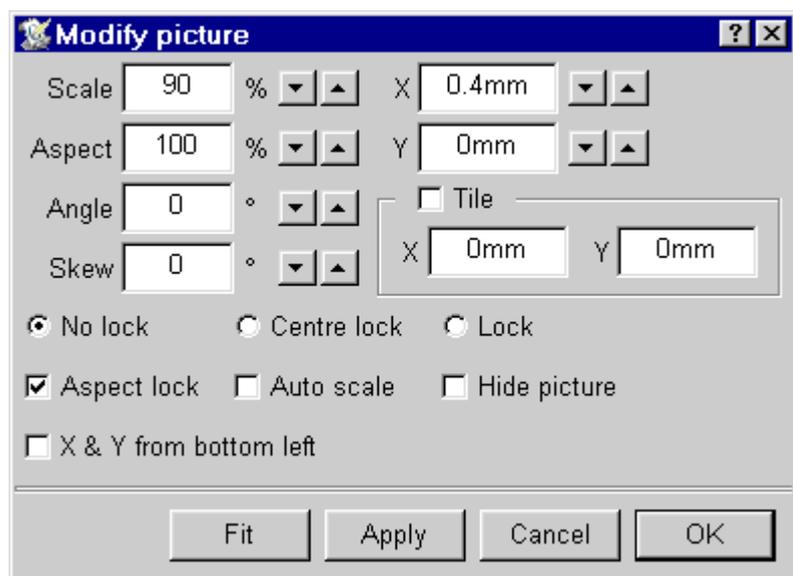*Fig, 10.18 - A tiled bitmap image, size 34x17 pixels with settings: **Scale** 50%, **Aspect** 100%, Tile **X**=5mm **Y**=7mm*

Fig. 10.17 - The Modify picture box provides options for altering the properties of pictures.. Values as used for fig. 10.18.

*Fig. 10.16 - The **Picture** menu.*

X, Y

These show the offsets from the top left corner of the frame to the top left corner of the picture. You can enter a new value or click on the up and down icons.

X and Y from bottom left

When this is selected the **X** and **Y** coordinates will show the offset of the origin of the pictures internal space from the bottom left corner of the picture frame.

Skew

This is the angle of skew for the picture. You can enter a new value or click on the up and down icons to change the angle of skew one degree at a time. A positive value skews the picture to the right *(fig. 10.19)* and a negative value, to the left (fig. 10.19). The angle is specified in degrees and must be within the range -80° to 80°.

No Lock

No lock is the default setting and allows the picture to be moved, resized or rotated from the dialogue box, info palette or by dragging.

Centre Lock

If **Centre lock** is selected, the picture is locked to the centre of the frame. The X and Y values cannot be changed, nor can the picture be moved from the info palette or by dragging.

Lock

This option locks the picture so that it cannot be moved, resized or rotated from the info palette or by dragging.

Aspect Lock

If Aspect lock is selected, the Auto scale, Fit and crop options will scale the picture to fit the frame retaining its original shape. If Aspect lock is not selected, the Auto scale, Fit and crop options will stretch the picture to fit the frame precisely.

The diagonal scale gadget is also affected by this option.

Auto scale

If Auto scale is selected, then re-sizing a picture frame with Select causes the picture to be re-sized too. This normally only happens if you re-size a picture frame with the right mouse button.

Hide picture

If Hide picture is selected, the picture in the frame is hidden and replaced by a cross. this may be useful if the picture is slow to redraw.
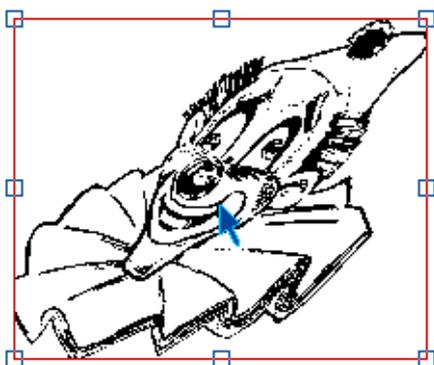

Fig. 10.19 - Picture skewed 25°

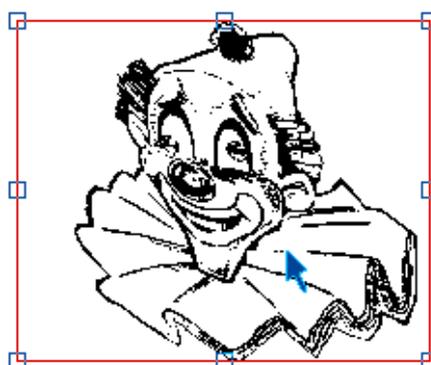
Fig. 10.20 - Picture skewed -25°

10.8 Options on the Edit Menu

Menu⇨Edit⇨

The **Edit** menu *(fig. 10.21)* contains a number of operations that you can apply to a selected picture. If you do not have a selected picture, the operations on this menu will apply to the frame.

To select a picture double-click on it so that the resize gadget is displayed *(fig. 10.22)*. Right click to deselect a picture.

Cut picture   Ctrl+X

Cut deletes the selected picture and places it on the clipboard. The previous contents of the clipboard are overwritten by this operation.

Copy picture   Ctrl+C

Copy copies the selected picture onto the clipboard. The previous contents of the clipboard are overwritten by this operation.

Paste picture   Ctrl+V

Paste inserts the picture that is on the clipboard, into the active picture frame. A picture can be pasted into any *Ovation Pro* document, not just the one from which it was cut or copied. After pasting, the clipboard contents remain unchanged. This option is only available if the clipboard contains a picture and there is a picture frame or empty frame active.

Delete picture   Ctrl+K

This option deletes the selected picture.

Select all   Ctrl+A

When one object has been selected **Select all** results in all frames on the present page being selected.

Clear   Ctrl+Z

Clear deselects the selected picture(s).

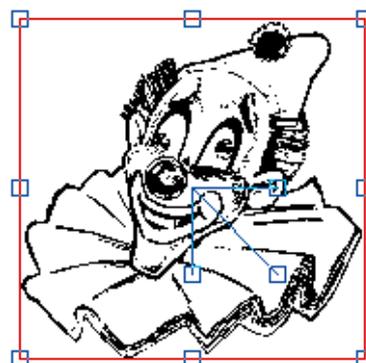Fig. 10.21 - The **Edit** menu.

Fig. 10.22 - A selected picture.

Drag & Drop

Instead of using **Cut**, **Copy** and **Paste** to move or copy a picture via the clipboard, you can use the drag and drop facility to do this directly.

To use drag and drop, first select the picture you wish to move or copy. Now press Alt and left click over the picture so that the drag and drop tool is displayed. Then drag until the pointer is over the required frame and release the mouse button to insert the picture. The destination frame must be empty or contain a picture (in which case the original picture is overwritten).

If you drag and drop within the same document, the picture is *moved*; if you drag and drop to another document, the picture is *copied*.

If you hold down Shift Alt while dragging, the above operations are transposed. So, if you drag and drop within the same document, the picture is *copied*; if you drag and drop to another document, the picture is *moved*.

If you start a drag operation and wish to cancel it, press Esc.

Pictures and memory use

If you copy a picture or picture frame within the same document using 'drag and drop', the resulting copy is simply a pointer (or reference) to the original and uses no extra memory. However, if you 'drag and drop' to another document, an entirely separate copy is made in the destination document.

The same is true when pictures or picture frames are copied using **Copy** and **Paste** via the clipboard. However, since the clipboard is treated as a separate document, a separate copy is kept on the clipboard until it is overwritten by another object. For example, if you import a 100K picture, copy it to the clipboard and then paste it back 6 times, only 200K or RAM will be used (100K in the document and 100K on the clipboard). When another object is copied to the clipboard, causing the picture to be overwritten, the resulting RAM used will be only 100K.

10.9 Object Linking & Embedding (OLE)

Windows OLE, sometimes known as COM or
Active X is not currently supported. See the
Ovation Pro release notes for news of
developments.

Large Picture Support

Ovation Pro provides some facilities for handling large pictures. These are *referenced pictures* and *proxy pictures*.

Normally pictures are embedded in Ovation Pro documents. So for example a document containing five 20Mb pictures will be at least 100Mb in size. A referenced picture on the other hand is not embedded in a document. Instead the document contains the filename/path of the picture (the reference) and the picture is stored on disc separate from the document.

Typically **referenced pictures** will be used by those producing documents including high resolution pictures for professional printing. By keeping the pictures separate from the document it becomes easier to modify because it uses less memory. In addition referenced pictures are only loaded when needed, this is a simple form of virtual memory.

There are a couple of other situations in which referenced pictures are useful. Firstly if you have a large number of documents which contain the same picture. The classic example is a logo used on a letterhead. By making this a referenced picture there can be a substantial overall saving in disc space.

The other possibility opened by referenced pictures is mail merging where the pictures in the merged documents change depending on the data used. Traditional mail merge allows you to personalise documents by inserting someone's name and address, now you can also include their picture.

A **proxy picture** is a small fast to render picture which is used in place of a large or slow to render picture whilst the document is edited. The standard use of proxy pictures is in conjunction with large referenced pictures. The referenced picture is only ever loaded into memory when the document is printed, the rest of the time the proxy is used. Another less common use is for pictures that are slow to render e.g. complex vector pictures.

On the following pages you can find information on:
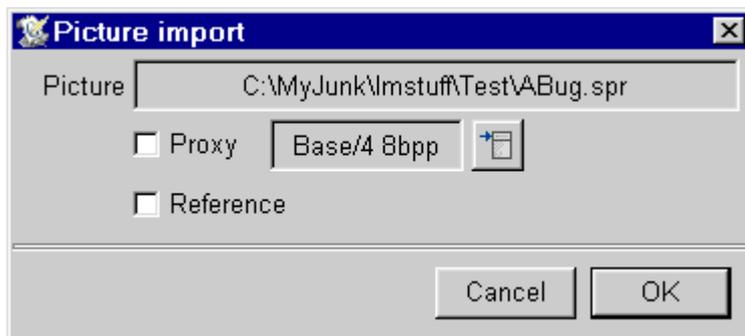
10.10 Importing Pictures

If Shift is held down when a picture is drag and dropped into a frame, a new dialogue box will appear *(fig.10.23)*.
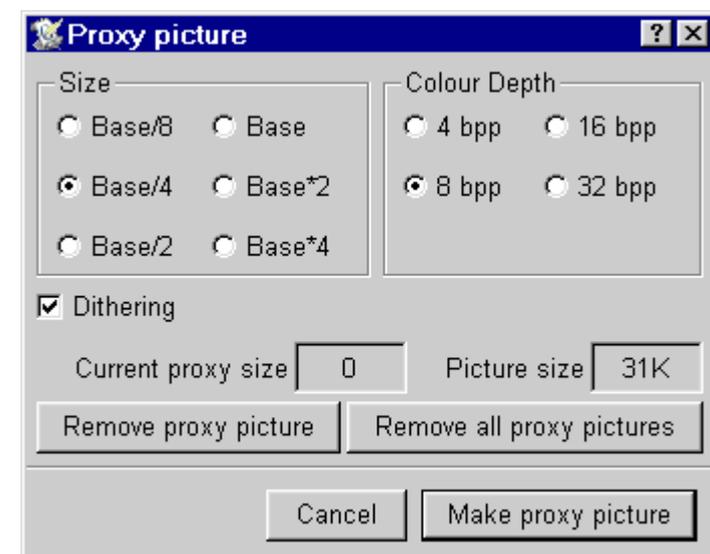
Proxy

The two buttons **Proxy** and **Reference** control if the imported picture will have a proxy generated for it and if it will be referenced. A referenced picture must exist on disc, you can't drag the picture from another application. The menu icon to the far right of the **Proxy** button allows you to open another window to set the parameters for the proxy image *(fig.10.24)*.

Proxy image, size

The buttons on the left control the *size* of the proxy. If for example the source picture is 2 inches square, then selecting base/2 will generate a proxy picture 1 inch square. Assuming the same resolution the proxy picture would have (1/2) * (1/2) i.e. (1/4) the number of pixels.

Proxy image, colour depth

The group of buttons on the right set the *colour depth* for the proxy. Normally you will use scaling and colour depth so that the proxy picture is smaller than the original picture, i.e. it is scaled down and has a lower colour depth.

Dithering

The **Dithering** button controls if dithering will be used when making the proxy picture in low colour depths.

Once a picture is imported it is still possible to control the Proxy and Reference aspects from two new entries which appear on the **Picture** menu, accessible from the main menu when a picture frame is selected *(fig. 22.25)*.

Menu⇨Picture⇨........

Fig, 10.23 - This window appears when a picture is dragged and dropped into a frame if the Shift key is held down.

*Fig, 10.24 - The window to set the **Proxy** parameters.*

*Fig, 10.25 - The **Picture** menu*

Reference…

Menu➪Picture➪Reference…

Selecting **Reference…** will open the dialogue box showing the location of the referenced picture (*fig. 10.26*)

The top icon shows the **Path** to the current picture and can be edited to change the picture pointed to. You can drop a file into this icon to set up a path or click on the button to the right to browse for a file. The **Reference Picture** button will set the path, loading the picture if necessary. This is also a way of replacing a picture with a referenced one.

The **Embed picture in document** and **Embed all pictures in document** buttons load the current referenced picture or all referenced pictures in the document - effectively these buttons scrap the references. You might use them if you wanted to prepare the document for passing on to someone else and the pictures are not too large.

The paths are subject to the usual *Ovation Pro* macro expansion. So text in *{ braces }* will be expanded. A common example is

        {filedir}\picture.bmp

This expands to a file called 'picture.bmp' in the directory containing the document. The point is that as long as the picture is in the same directory as the document this reference will work, so you can move the document and picture without having to change the references. The form common in HTML files also works

        .\picture.bmp

Collect referenced pictures allows you to create a directory, into which all the referenced pictures in the document will be copied from their current locations. This a way of gathering all the pictures for a document in one place before sending the document and pictures for printing. When the Picture Reference box is first opened the path shown is in position independent form - which means it makes use of the *{filedir}* macro (just described). If you simply click on **Collect referenced pictures**, this sort of path will be used for the collected pictures. So you can subsequently move the document and its pictures around - e.g. from disc to disc. Alternatively if you drag and drop a folder in to the icon or browse for a folder, the absolute path of the destination directory will be used.

In general the collection option allows you to change all the reference paths in a document, providing they are valid to start with. For example you might change all the references from absolute to position independent.
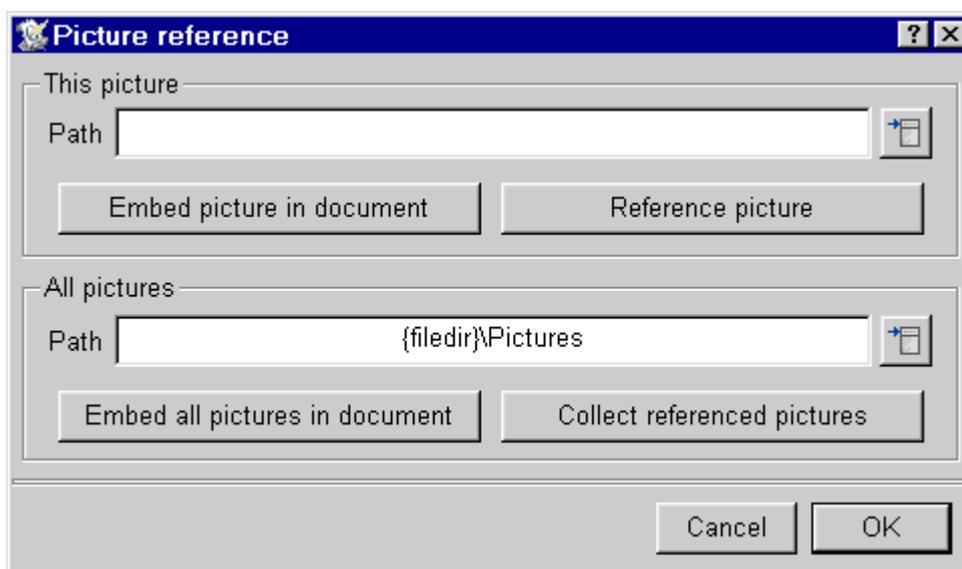
Fig, 10.26 - Picture reference window
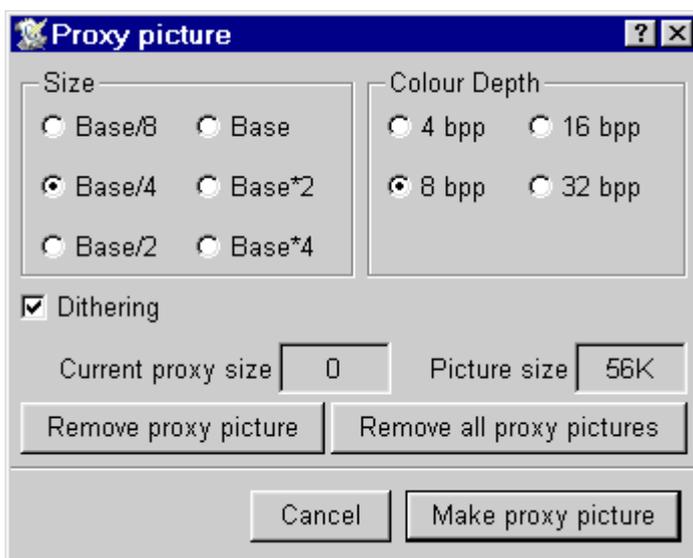
Proxy…

>   **Menu⇨Picture⇨Proxy…**

Selecting **Proxy…** will open a dialogue box allowing the proxy picture to be controlled *(fig. 10.27)*.

The top section is the usual way of selecting the size of a proxy picture. The two icons underneath this display the size of the picture and the current proxy picture (if there is one). **Make proxy picture** will create a new proxy picture using the chosen settings. **Remove proxy picture** removes the proxy, and finally **Remove all proxy pictures** removes all proxy pictures from the current document.

There is a button on the main menu **View⇨Options** window *(fig. 10.28)*.

>   **Menu⇨View⇨Options⇨......Ctrl+Shift+O**

When **Use proxies** is ticked proxy pictures will be used for on screen display in the current window. You'd probably untick this if you wanted to check if the document displayed correctly with the real pictures, prior to printing it.

Fig, 10.27 - The **Proxy** window
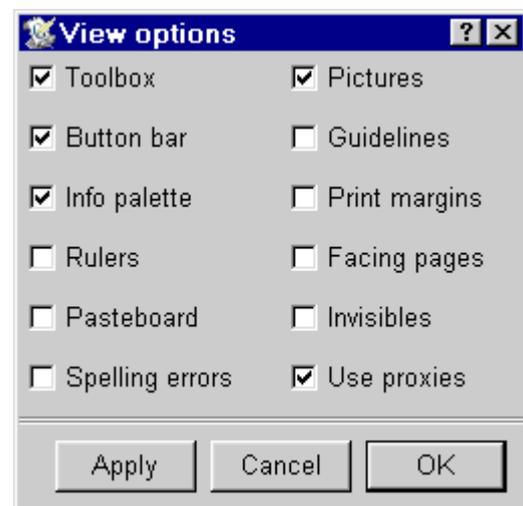
Fig, 10.28 - The **View Options** window

10.11 Setting Picture Choices

Menu⇨Misc⇨Choices⇨Picture⇨

Some large picture handling options can be set in the Picture Choices window (fig. 10.29).

The **Picture cache** is an area of memory which is used for holding referenced pictures whilst they are needed e.g. when printing. This memory is shared between all documents.

You can use **Picture choices** to set the maximum size for the cache. Note that an attempt will be made to load any picture, no matter how big. Typically the picture cache maximum size controls how many pictures will be held in memory at any one time. As the picture cache becomes full, pictures will be removed from it to make space for new pictures.

Below this choice, there are two features which work in a similar way. **Reference if over** allows you to tell *Ovation Pro* to automatically reference a picture on loading if it is over a given size.

Proxy if over automatically creates a proxy picture if the original is over a given size. Note that this assumes the raw file size is a reliable indication of the size of the picture. Usually it will be, but for example you might want to create

proxies for vector files of quite modest size. You can also set the default parameters for creating proxy picture by clicking on the menu icon to the far right of **Proxy if over**.
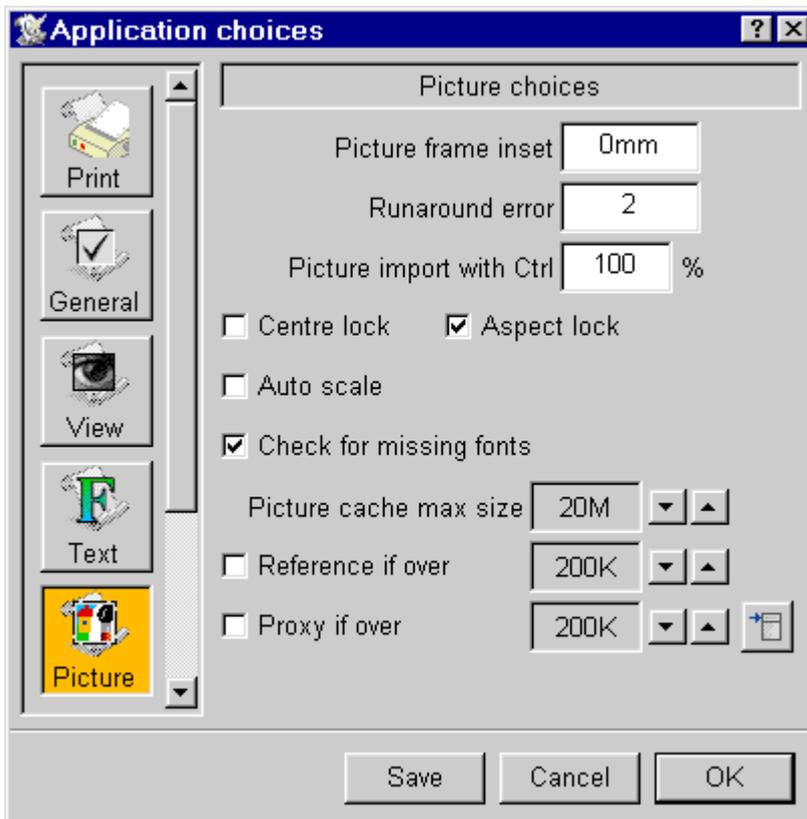

*Fig. 10.29 - The **Picture Choices** window*

10.12 Referenced Pictures and Mail Merge

Normally mail merge is a way of customising documents with text. Typically you may have a comma separated value (CSV) file from a database with the names and addresses of the people you want to send a standard letter to *(see 12.5)*. Referenced pictures allow the possibility of adding pictures to documents under the control of a CSV file. So not only can you address your letter to Mr. Jones, you can also include his picture in it. Some possible applications;

(1) Producing identity cards. Given a standard card layout and a database of names and pictures.

(2) Producing catalogue sheets of clip art. A simple program will produce a list of all the picture files in a given directory as a CSV file. You can then have a document which displays a number of these pictures on each page.

To set up for mail merge, load a referenced picture. Typically you're going to need a picture to display as a default when not mail merging. Select the picture box and open the **Reference…** window.

Menu⇨Picture⇨Reference…

The correct sort of text to enter is as follows;

```
{macv=field(1); if(macv=="")
macv="C:\Pictures\picture.bmp";}
```

Roughly translated the path for the picture is taken from the first field in the current CSV file record (i.e. field(1)), if that is the null string (which is the value when there is no mail merging going on) then the path is the given string (C:\ etc.), a good choice for this latter is the path to the original referenced picture.

All the tricks you can use with mail merge fields are also possible with the contents of the reference path. For example you could add code to scan the contents of a directory for pictures. Or supply a picture depending on the contents of other fields e.g. a smiley picture for those with more than £0 in their account and a frown for those with less than £0.

To create a document for displaying sheets of clip art.

(a) Create a page design with a number of frames.

(b) Hold down shift and load a picture from disc into each frame, selecting the reference button. The picture should be some sort of 'default'. Also notice that you have to do this once for each frame, you can't just copy the picture and you can't copy the frame with the picture in it. This is so that you get a separate picture within *Ovation Pro* in each frame.

(c) Now for each picture on the page except the last one, open the **Reference…** window

Menu⇨Picture⇨Reference…

and change the path to something like:

```
{macv=field(1); if(macv=="")
macv="C:\Pictures\graphic.emf"; else
nextrecord()}
```

This says see what the first field in the mail merge CSV file is, if it is null then use the default name, otherwise use the field as the reference for the picture and then move to the next record in the CSV file.

The last picture on the page should have a reference path like;

```
{macv=field(1); if(macv=="")
macv="C:\Pictures\graphic.emf";}
```

(d) Create a CSV file of your pictures. One easy way to do this is using the ListDir application. This can be found in the Extras.ListDir directory.

(e) Mail merge in the normal way.

For general information on mailmerging *see 12.5*.

10.13 Snags, Hints and Tips

1. If you use large picture features the resulting *Ovation Pro* document may not work with older versions of *Ovation Pro*.

2. There is considerable scope for ending up with a referenced picture where the reference points at a non-existent file. Typically this will generate an error when redrawing the page. The problem then is how to get at the window that will let you change the reference path for the picture. What you need to do is use the main menu and open the View options window and deselect 'Pictures'. You can then safely expand the window and change the reference.

3. If you save a document as DDL or a Stylesheet then when it is reloaded the file name is lost. This precludes the use of relative paths.

4. If a referenced picture has a document relative path and you copy it to another document the path will be converted to an absolute one.

5. The paths to referenced pictures are stored in documents. These paths have different forms on different operating systems. An effort has been made to make the Windows version of *Ovation Pro* able to understand RISC OS paths. Unless different machines are sharing files on a common file system, usually only document relative paths will be transferable between computers.

6. Pictures loaded via filters, that is pictures in file formats which *Ovation Pro* does not support directly for example .gif can be referenced in the Windows version of *Ovation Pro* however note that this is not the case for the RISC OS version.

7. Often you may have a document where many picture frames contain the same picture. Obviously it would be wasteful if the document contained one copy of the picture for each frame, *Ovation Pro* makes every effort to only have one copy of the picture in the document.

Notes: