

4.14. Filling

This object fills an area of one continuous colour with another, chosen in the Colour / Brush / Thickness window.

After choosing the Filling object at the Object Type dialog box, the following dialog box appears on the screen:

To add the Filling object:

1. Set the required colour using the Colour / Brush / Thickness window.
2. Place the mouse pointer on the screen at the point colour filling should begin and press the left mouse button.
3. Press OK to add the object or Cancel to discard it.

4.15. Mail box

This object is used for storing a certain value and implementing operations on this value. The sources for the Mail box values are:

- the abstract counters, which can have their values cleared, increased or decreased by one during any object call;
- the number of colours available to the current display driver;
- the preceding Input object.

The Mail box value is kept throughout execution of the whole collection, whereas an Input object value is erased after the page has finished being visualised. The Mail box object is necessary for analyzing

Input values from different pages.

As well as each Input object, the Mail box object has its own name, that is global for the whole collection, so several Mail box objects with the same name are referring to just one value.

Using the Mail box object

The name of the Mail box created in another page may be used in two objects:

- Analysis (for building the logical formula);
- Message (for displaying the stored - or counted - Mail box value).

Like the Input object, when using the Mail box object in the Analysis header, the type of its value is defined automatically.

When using the Mail box in the Message object, the text of the message is linked with the Mail box value, and this value is displayed at the end of the Message.

After pressing the Mail box button the New Mail box dialog window appears on the screen:

To add the Mail Box object:

1. Type the name of the new mail box into the Mail Box Name field or choose the previously-defined mail box from the List of Mail Boxes.

Note: If a Mail box is used several times, its name will be displayed in the list several times. It does not matter which copy is chosen.

2. Choose the required Mail box operation:
 - ***Clear Mail box*** - for clearing a counter;
 - ***Increase Counter*** - for increasing a counter;
 - ***Decrease Counter*** - for decreasing a counter;
 - ***Get colours number*** - for getting the number of the colours, supported by the video driver;
 - ***Save Input*** - for keeping the Input value.

In this case the name of the specific input must be chosen from the *List of Inputs* list.

3. Press Save to add the defined object or Cancel to discard it.

4.16. Animation

Animation is an important feature of the HM-Card system. Animation often makes material more useful and intuitive.

The objects that can be animated includes all Graphic objects and the Group object.

Different kinds of effects can be used with an animation:

- A group can be scaled during animation, in either by one dimension only or both. The scaling is defined as a percentage of the original.
- The animated object may be mirrored after its movement or rotation, in one axis or both.
- Animation can be carried out in a number of steps. Using this feature, the degree of "smoothness" of the animation is controlled.
- Sound may be added to the animation.
- The object can be Moved or Copied during animation, using the appropriate check box. "Move" means that the object will be moved without leaving images behind it. "Copy" moves but does not erase previous images from the screen, so there is a trail left behind the moving object.

There are two main types of animation:

- Simple position changing. The groups or primitive objects can be moved in any direction, either linearly or with a free-trace trajectory. When inserting a group, the Change position check box must be set 'on' if this kind of animation is going to be used for the group.

When changing position linearly, only the start and end positions of the group (or object) need to be set. The trajectory is plotted by the computer. With the free-trace movement, the trajectory points need to be set manually.

- The rotation of an object allows rotation of groups that have been added to the page with the Rotate check box set. When setting the rotation of the group, specify the rotation in degrees, with negative values meaning anti-clockwise rotation and positive, clockwise rotation.

To create Animation:

1. In the Navigation speedbar's combo box, if an object that can be animated is selected, there are three buttons available that control animation:
2. Click the Add Animation button in the Navigation speedbar to add an animation to the current object. If the animation created is the first for the current object, it is the only Animation control button available. The Animation dialog box appears on the screen:

To create a linear movement:

- a. Click the Linear or Free-trace radio button, depending on the kind of movement to be used. The Animation dialog box is changed and the following appears in the upper-right corner of the screen:

Set the start and the end position of the group's trajectory. This may be done either by typing the X and Y coordinate points into the corresponding boxes or by actual moving the group to its end position. In this case, the previous position of the group is taken as its start position.

To place the group at its end position:

Move the mouse pointer inside the box that bounds the group to be animated.

Click and drag the image of the group into the end position and release the mouse button.

For free-trace movement, define the coordinates of each point the group is moved to. To define these points, click at key movement points in the work area. A marker appears in each of these points. During the movement they are used as the upper-left corner position for the group.

After definition all of the position click the OK button to create the movement or the Cancel button to discard it.

- b. Click the OK button in the coordinates dialog box to set the new positions or the Cancel button to discard them.

To create Rotation make these steps:

- a. Set the degrees of rotation for the group using the scroll bar, or type a value into the rotation box.
- b. Set the method of rotation desired by clicking the corresponding radio button.

Creating the data for a group rotation may take some time and the progress is indicated in the bottom of the Animation dialog box as a percent.

The rest of the settings are identical for both Movement and Rotation.

3. The mirroring box controls the mirroring for the group. This is set

after its movement. Mirroring is possible is the X and Y axis.

4. To change the scaling of a group during its movement, type the new scaling percentage into the corresponding boxes. Note that the end position of the trajectory is fixed by the upper-left corner of the group, but the other corner will be adjusted according to the scale factor.
5. In the Synchronization box of the Animation dialog box, set the number of steps the movement is to be calculated in, and the delay after each step (in milliseconds). Type these values into the corresponding areas of the Synchronization boxes. The updating of the group after each step of movement and sound are defined using the corresponding check boxes.
6. Click the Save button in the Animation dialog box to add this part of the animation to the page. After which, other buttons appear at the bottom of the dialog box:
7. To continue the group's movement from the last point, click the Next button and define further parts of the animation (repeat steps 1-6). In order to save the final animation, click the Exit button.

Note: Use the "Test-execute" option within "View" menu to view the animations.

4.17. Navigational objects

The Navigational operations used by the HM-Card executor, can be inserted directly into HM-Card pages in the form of so-called navigational objects.

The Navigational objects provide the author with a means of automatic browsing a hypermedia database.

When HM-Card encounters a Navigational object, a corresponding Navigational operation ("Zoom_In", "Zoom_Out", "Next" or "Prior") is carried out automatically.