C h a p t e r   4

4.1. Colour

Colour defines background, foreground and text-background colours for the collection (for more details see **Setting the parameters for the visible objects** in section 3.1).

4.2.   Vector Graphic

The HM-Card Editor supports the use of vector graphics. A sequence of graphic primitives (such as line, circle, ellipse, rectangle, etc) can be displayed. Each of the primitives is created as a separate object. The following pictures shows some of the details:

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Graphic primitives have the following common parameters:

- Colour.   The colour may be set for the graphic object when it is being created.

- Thickness.   Thickness specifies the width (in pixels) of the lines forming the primitive. The default is a line with a thickness of one pixel..

- Line Style.   The style of the line forming the primitive can be choosen from the several styles available:

Using different styles with line thickness greater than one pixel may lead to unexpected result (for some graphic objects).

- Filling Style.   The Filling Style can be set for objects that have an

enclosed space, such as the circle, polygon, etc. A filled ellipse might look like this:

The filling style can be chosen from teh several styles available:

The description of each graphic object is given below.

Selecting the graphics object button brings up the Graphics speedbar:

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It is possible to proceed with the definition of a graphic item by clicking one the corresponding icons or return to either the Object Type list buttons, by clicking the Return button µ §, or to the Main Menu list buttons by clicking the Navigation Button µ §. The graphic objects available from the Graphic list buttons are described below.

- Line

Use this object to draw lines of a selected colour, thickness and style.

After clicking the Line icon, the Save/Cancel dialog box appears:

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To draw a line:

1. Select the colour, style and thickness of the line in the Colour / Brush / Thickness dialog box that appears after clicking the foreground colour button. The Demo field of the dialog box shows an example of how *you*r line will look like.

2. Move the mouse pointer into the drawing area. Press the left mouse button to anchor the end of the line, and drag the line to the end

point. The position of the mouse and line is continually updated. When the appearance of the line is satisfactory, release the mouse button to fix the end of the line. The line object can be drawn continuously, so another segment can be drawn starting from the end of the last segment.

3. After positioning the line or lines on the screen, add it to the collection by clicking the Save button or discard it by clicking the Cancel button.

- Rectangle

This object draws rectangles of a selected colour, thickness and boundary. Adding different fill styles is also possible, along with the possibility of drawing solid rectangles.

After clicking the Rectangle icon, the Save/Cancel dialog box appears on the screen:

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To draw a rectangle:

1. Click the foreground colour button and select the colour, style, and other attributes of the rectangle in the Colour / Brush / Thickness dialog box. The Demo field in the dialog box will show an example of the appearance of the rectangle.

Note   Using different styles is not recommended for rectangles with a thickness greater than one, with 0 and 1 gap values (The "gap" value defines the appearance of the boundary, if specified).

2. Rectangles with a line thickness (number of lines) greater than one pixel can have different gaps set between the lines defining the rectangle. The thickness may be either positive or negative, and defines the direction in which the lines are drawn (outside or inside),

as explained in **Setting the parameters for the visible objects**.

3. Move the mouse pointer into the drawing area and click it at the position of the rectangle's corner. Drag the pointer to choose the position for the opposite corner of the rectangle and release the mouse button.

4. After defining the rectangle on the screen, save the changes by clicking the Save button or discard them by clicking the Cancel button.

- Circle

Use this object to draw circles of a selected colour and thickness.

After clicking the Circle icon the Save/Cancel dialog box appears on the screen:

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To draw a circle:

1. Select the colour, and other attributes for the circle in the Colour / Brush / Thickness dialog box that appears after clicking the foreground colour button. The Demo field of the dialog box also shows an example of the appearance of the circle.

   Note   Different style settings do not effect circles with a thickness setting of greater than one pixel.

2. Move the mouse pointer to the starting point for the circle, click and drag the pointer. A flexible circle stretches, following the mouse pointer. Release the mouse button to fix it on the screen.

3. After positioning the circle on the screen, save the changes by clicking the Save button or discard them by clicking the Cancel button.

__Note:__ To draw a set of similar small circles, use the Marker object (see below).

- Arc

This option is used to draw arcs of a selected colour and thickness. Different style settings are also possible.

After clicking the Arc icon the Save/Cancel dialog box appears on the screen:

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To draw an arc:

1. Select the colour, and other attributes of the arc in the Colour / Brush / Thickness dialog box that appears after the foreground colour button is pressed. The Demo field of the dialog box shows the appearance of the arc.

2. Move the mouse pointer into the drawing area and mark two points defining the start and end points of the arc.

3. Click the mouse between these two points to define the curve of the arc and drag the mouse to generate the desired appearance.

4. Choose the Save option to add the arc to the collection or the Cancel to discard it.

- Vector

The Vector object draws vectors as lines with an arrow at one of the ends, with a selected colour and thickness. Usually Vector objects are used as marking arrows in a collection.

After choosing the Vector option, the New Vector dialog box appears on the screen:

To draw a vector:

1. Select the colour of the vector in the Colour / Brush / Thickness dialog box, which appears after clicking on the foreground colour button. The Demo field of the dialog box shows an example of the appearance of the vector.

2. Adjust the vector's head (length) and wing (width) size. An empty or filled head may be specified.

3. Move the mouse pointer to the starting point of the vector and press the mouse button. Drag the mouse to the end point of the vector. Hold down the Shift key to constrain the vector to the horizontal, vertical or diagonal directions. Release the mouse button to set the vector's end.

Note: The head of the vector is placed at the first point specified.

- Sector

Use the Sector object to draw sectors of circles of a selected colour and thickness.

After choosing the Sector option the Save/Cancel dialog box appears on the screen:

To draw a sector:

1. Select the colour, style and other attributes of the sector in the Colour / Brush / Thickness dialog box via the foreground colour button. As usual, the Demo field shows an example of the object's apperance.

2. Move the mouse pointer into the editer area and mark two points that will be the start and end of the circle sector.

3. Move the pointer between the marked points and press the mouse button. Drag the mouse to choose the size and position of the sector. Release the mouse button to set the sector in the desired position.

4. Click the Save button to add the Sector or or the Cancel button to discard it.

- Segment

The Segment object is used for drawing segments of a circle, with the usual attributes.

Segments are drawn in the same way as arc and sector.

- Polygon

Use Polygon object to draw polygonal closed areas, with normal line attributes and any of the filling styles available.

After choosing the Polygon object the Save/Cancel dialog box appears on the screen:

To draw a polygon:

1. Select colour and other attributes of the polygon in the Colour /
    Brush / Thickness dialog box. The Demo field of the dialog box
    displays the usual preview.

2. All other steps for drawing a polygon are the same as those for the
    line, but the system connects the end point of the last line with the
    first point of the initial line, so that a closed area is created.

- Spline

This option is used to draw splines of a selected colour and thickness.

After clicking the Spline icon the Save/Cancel dialog box appears on the screen:

To draw a spline:

1. Select colour and other attributes of the polygon in the Colour / Brush / Thickness dialog box. The Demo field of the dialog box displays the usual preview.

2. Move the mouse pointer into the editing area and mark several (more than 4) spline control points.

3. After clicking the Save button the system draws a spline curve through the specified control points.

4. Click the Cancel button to abort spline curve creation.

Note: Thick splines with a width greater than 3 may be drawn slowly.

- Marker

This object allows the inclution of varied markers into a collection. The Marker objects are used to draw sets similar graphic items, such as small circles (bullets) or ellipses.

After clicking the Marker icon the New Marker dialog box appears on the screen:

To set the markers:

1. Select the colour of the markers using the Colour / Brush / Thickness dialog box, using the Demo field for a preview.

2. In the dialog box select the type of the marker to be used by clicking the corresponding radiobutton.

3. Using the scroll bars to adjust the vertical and horizontal size of the marker, viewing it in the example window of the dialog box.

4. Move the mouse pointer into the editing area and click at each point where a marker is to be drawn.

5. After clicking the Save button the system places the markers into the collection.

6. Click the Cancel button to discard the markers.

- Ellipse

This object draws ellipses of a selected colour and thickness.

After clicking an Ellipse icon the Save/Cancel dialog box appears on the screen:

To draw an ellipse:

1. Select colour and other attributes of the ellipse using the Colour / Brush / Thickness dialog box. The Demo field of the dialog box shows the usual preview. Note that the style settings affect only an ellipse with a line thickness of one pixel.

3. Move the mouse pointer into the editing area and click the mouse at the start anchor point of the ellipse. Drag the mouse pointer to define the size and appearance of the new ellipse.

4. When the ellipse is correctly positioned, release the mouse button.

5. Click the Save button to add the ellipse to the collection or Cancel button to discard changes.