

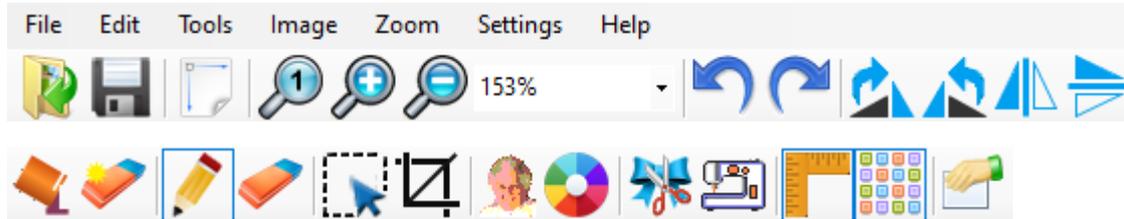
Data 7 Consultancy

ICE Toolbar & Tools Descriptions

Document Introduction

This documentation provides a comprehensive overview of each toolbar, tool tab, and associated tools within Data 7 ICE, as well as the corresponding menu strip.

This is the ICE app's main toolbar



Main Toolbar

Icon descriptions

Icon	Name	Description of Icon tool
	Open image	Loads an image into ICE to edit and convert to embroidery
	Save Image	Saves the image to disk in several formats
	Fit Image	Adjust the loaded image to fit the canvas window, maximizing its size for optimal display.
	Actual Size	Draws the image actual size
	Zoom in	Increases zoom factor of image by 0.1
	Zoom Out	Decreases zoom factor of image by 0.1
	Zoom Configurations	Select a predetermined zoom factor, with the additional option to enter a specific zoom factor manually.
	Undo	Reverses the previous image edit action performed by tools such as pens, fills, or pasting.
	Redo	Restores the previous image edit action involving pens, fills, pasting, and similar tools.
	Rotate CW	The loaded image is rotated 90 degrees clockwise.
	Rotate CCW	The loaded image is rotated 90 degrees counterclockwise.
	Mirror Vertically	The image is flipped vertically.
	Mirror Horizontally	The image is flipped horizontally
	Fill Tool	The Image Fill tool has been activated, enabling the filling of an image with a selected colour within a specified tolerance
	Erase Fill Tool	The erase fill tool erases the selected image colour based on a specified tolerance.

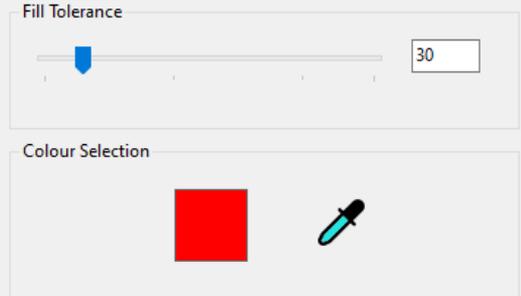
Data7 Consultancy

ICE Toolbar & Tools Descriptions

	Pen / Drawing Tool	Enables the drawing tools which includes brushes, pens, shapes, lines at chosen widths. This tool also supports text with placement on lines, arcs top and bottom, column thickening tool and a stroke tool which creates a border around the selected region.
	Eraser Tool	Erases parts of an image using the selected brush type and size
	Selection Tool	The tool enables the selection of image segments using various shapes, including ellipses, rectangles, squares, and circles. It also supports a lasso tool and a colour selection feature.
	Cropping Tool	Allows the cropping of an image but also canvas resizing when cropping outside of image bounds
	Image Utilities	This Image utility tool offers several features, including posterising, pixel cluster removal, detail and noise reduction, rounding, merging, and colour reduction.
	Colour Utilities	This tool features colours removal, merging, colour changing and, DE speckle tool
	Fill Pattern Editor	The fill pattern editor offers tools for creating and editing embroidery fill patterns, loading default fill patterns, trimming and validating patterns, as well as visualizing the final outcome along with an estimated stitch count per square centimetre.
	Embroidery Tool	This tool converts the chosen image regions to an embroidery design using the chosen stitch and fill pattern options.
	Show Ruler	Shows the ruler in CMs, MM, Inches or pixels
	Show Grid	Shows a grid in the form of lines or crosses
	Image Properties	Display certain image properties including, height and width in pixel, CMs and inches, image format, DPI etc,

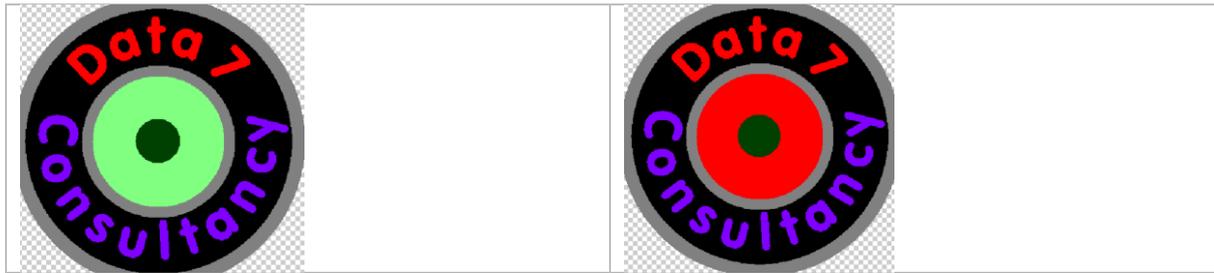
Tools Overview

Fill Tool

	Sets the pixel tolerance of which pixels to fill with selected colour
Before example	Choose fill colour
	After

Data7 Consultancy

ICE Toolbar & Tools Descriptions



Eraser Fill Tool

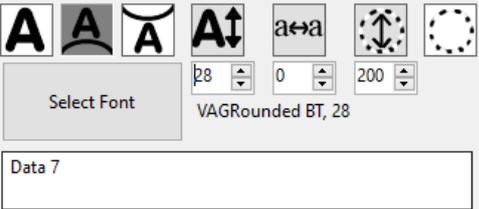
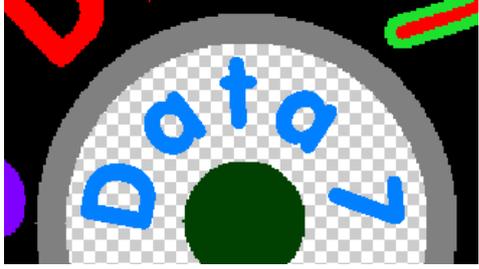
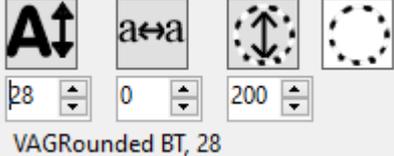
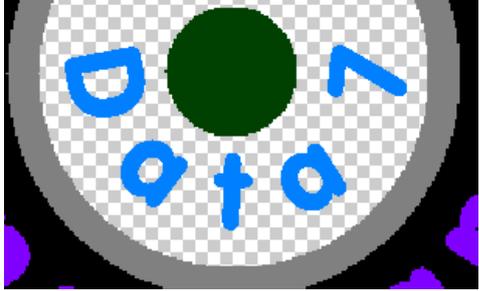
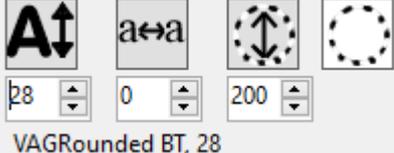
	<p>Sets the pixel tolerance of which pixels to erase</p>
<p>Before example</p>	<p>After</p>

Drawing Tool

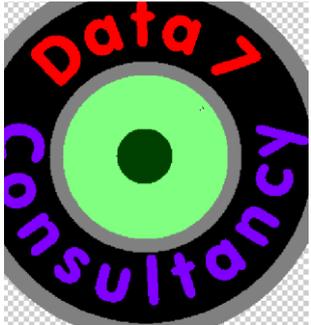
	<p>Brush selection tool for drawing on image. Includes square, circle and size of brush settings.</p>
	<p>The pen selection tool offers options such as shape outlines, solid fills, and adjustable line width settings.</p>
<p>Before</p> <p>After</p>	<p>The thicken column tool thickens any column of colour clicked by the left mouse button.</p>
<p>Before</p> <p>After</p>	<p>The stroke tool adds a border of the chosen thickness and colour around the clicked image region</p>

Data 7 Consultancy

ICE Toolbar & Tools Descriptions

<p>Font</p>  <p>Select Font VAGRounded BT, 28</p> <p>Data 7</p>	<p>The text tool allows you to add text on a line or arc. Use any font installed on your device and specify the size and colour.</p>
	<p>Text on a line</p> 
	<p>Text on top of an arc</p>  <p>You can change the arc radius using these tools:</p>  <p>VAGRounded BT, 28</p>
	<p>Text on the bottom of an arc</p>  <p>You can change the arc radius using these tools:</p>  <p>VAGRounded BT, 28</p>

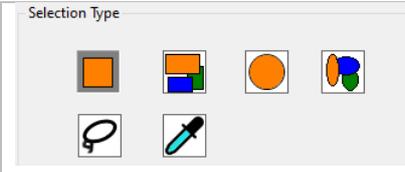
Eraser Tool

<p>Brush Selection</p>  <p>Brush Size 4</p>	<p>Simply removes the clicked areas of an image at the chosen size and brush shape.</p>
<p>Before</p> 	<p>After, using the square brush size 10</p> 

Data7 Consultancy

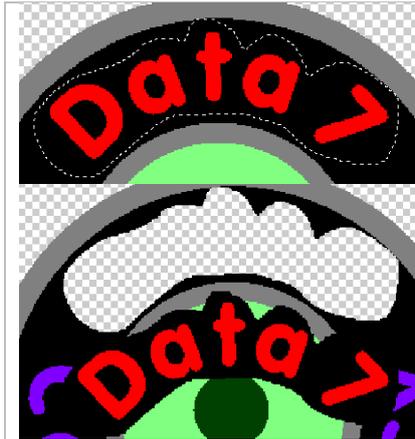
ICE Toolbar & Tools Descriptions

Selection Tool

	<p>Firstly, you can choose the selection type needed from squares, rectangles, circles or ellipses.</p> <p>There is also a choice of lasso and colour / region selection</p>
	<p>Here is an example of the rectangle selection.</p>
	<p>Once a selection has been made, you can use either the edit menu or keyboard shortcuts to cut (ctrl+x), paste (ctrl+v), copy (ctrl+c) etc.</p>
	<p>When pasting, you can change the object size, rotate it, flip vertically or horizontally and where the pasted object goes</p>
	<p>Cutting the selection</p>
	<p>Pasting the selection and choosing where to paste it</p>
	<p>Flipping the selection</p>
	<p>Changing the pasting object's size</p>
	<p>Rotating the pasting object etc.</p>

Data7 Consultancy

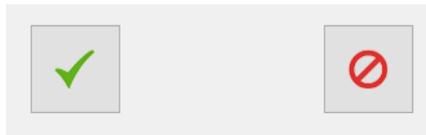
ICE Toolbar & Tools Descriptions



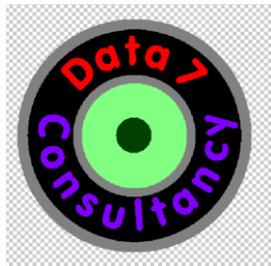
Here's a lasso example, first selecting using the mouse

And here, the selection has been cut and pasted below

Cropping Tool



Before



After



Using the mouse button, select the area to crop to, using the anchor bars to change the size if needed.

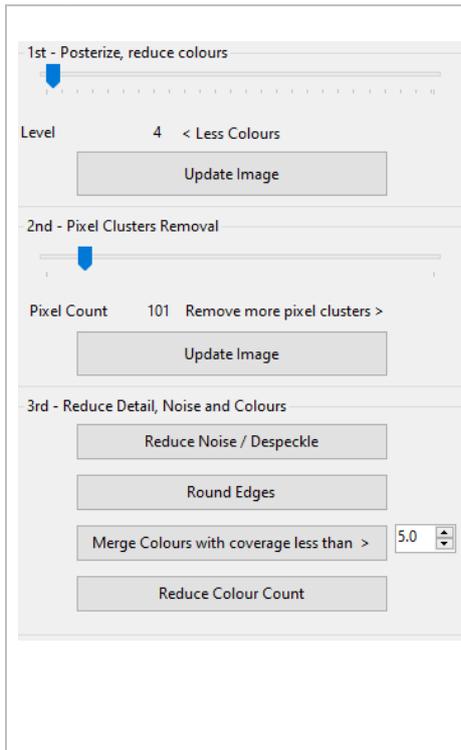
Click the green tick to accept or circle to cancel

This tool also supports image trimming where it will trim away any transparent pixels as show opposite.

Data7 Consultancy

ICE Toolbar & Tools Descriptions

Image Utilities



There are a variety of image tools available in ICE. To assist you in utilizing them effectively, we have arranged these tools in the sequence we recommend for optimal use.

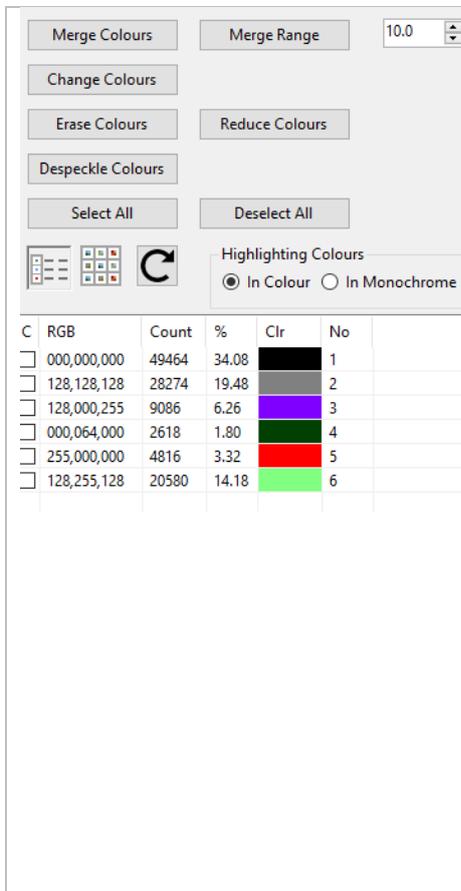
They include, posterise, pixel cluster removal, noise reduction, edge rounding, colour merging and colour reduction.

For more specific information and an example, please see the [“How to prepare an image to convert to embroidery design”](#).



Hey! We also have a video of the process for your convenience. Check it out: [Optimise and Prepare Your Images to Create Stunning Embroidery Designs](#)

Colour Utilities



This tool offers some useful tools for manipulated specific or groups of colours.

Merge colour merges the selected colour with the closest in the image.

Change the selected colour to another colour.

Erase the selected colour

DE speckle or denoise the selected colour

The Merge Range merges all the colours below the entered % coverage with their closest match enabling the reduction of colours.

You can also use the Reduce Colours option to specify the number of colours required

For additional information and an example, please see the [“How to prepare an image to convert to embroidery design”](#).

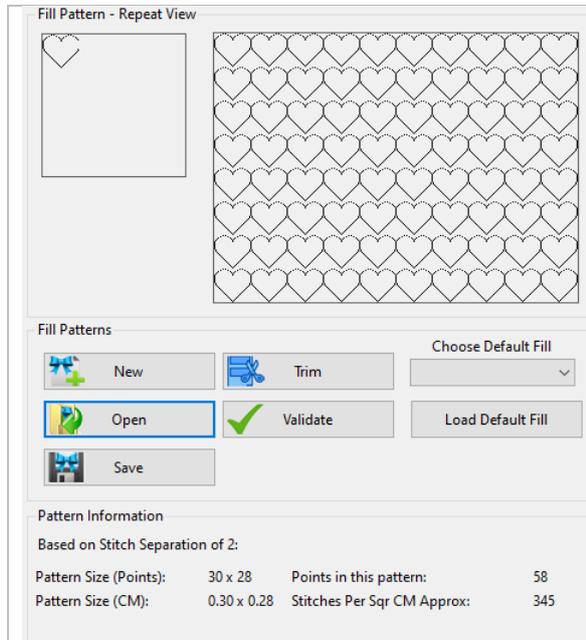
Data7 Consultancy

ICE Toolbar & Tools Descriptions



Hey! We also have a video of the process for your convenience. Check it out: [Optimise and Prepare Your Images to Create Stunning Embroidery Designs](#)

Fill Pattern Editor Tool



The fill pattern editor provides some useful tools to help and guide you through creating and editing your fill patterns.

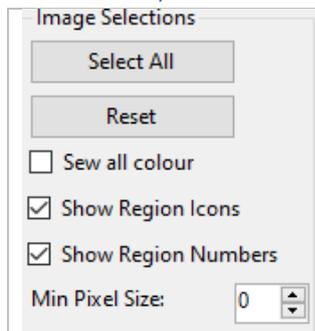
Here you can create new patterns, load default fills and load existing fill patterns.

The validate option checks for too many stitch points or stitch point close to each other.

Once any of the above is loaded, you can use the pen/drawing tools to edit you fill pattern, come back here to validate and save it.

There's also useful stitches per square CM information.

Embroidery Tool



Before we get to creating the embroidery design file we want, we have to choose which parts of the image we want to convert and in which order we want them to sew. We do this by simply clicking on the image parts we want in the order we want them.

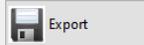
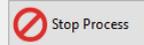
Use the "Sew all colour" option to select all regions of the same colour. You can reorder the regions after selected.

Chosen or clicked regions that contain less pixels than the "Min Pixel Size" setting will NOT be added. Adjust as needed.

You can toggle the regions icons and numbers to suit.

Data7 Consultancy

ICE Toolbar & Tools Descriptions

<p>Regions: 5</p> <table border="1"> <thead> <tr> <th>DataGrid</th> <th>Seq</th> <th>Den</th> <th>Ang</th> <th>Len</th> <th>UL</th> <th>FP</th> <th>OL</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>3</td> <td>45</td> <td>30</td> <td><input checked="" type="checkbox"/></td> <td>fill 30x10 HM</td> <td>2</td> <td>Fill</td> </tr> <tr> <td></td> <td>2</td> <td>3</td> <td>45</td> <td>30</td> <td><input checked="" type="checkbox"/></td> <td>fill 30x10 HM</td> <td>2</td> <td>Fill</td> </tr> <tr> <td></td> <td>3</td> <td>3</td> <td>45</td> <td>30</td> <td><input checked="" type="checkbox"/></td> <td>fill 30x10 HM</td> <td>2</td> <td>Fill</td> </tr> <tr> <td></td> <td>4</td> <td>3</td> <td>45</td> <td>30</td> <td><input checked="" type="checkbox"/></td> <td>fill 30x10 HM</td> <td>2</td> <td>Fill</td> </tr> <tr> <td></td> <td>5</td> <td>3</td> <td>45</td> <td>30</td> <td><input checked="" type="checkbox"/></td> <td>fill 30x10 HM</td> <td>2</td> <td>Fill</td> </tr> </tbody> </table>	DataGrid	Seq	Den	Ang	Len	UL	FP	OL	Type		1	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill		2	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill		3	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill		4	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill		5	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill	<p>Here all of the images red colour regions have just been added.</p>
DataGrid	Seq	Den	Ang	Len	UL	FP	OL	Type																																															
	1	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill																																															
	2	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill																																															
	3	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill																																															
	4	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill																																															
	5	3	45	30	<input checked="" type="checkbox"/>	fill 30x10 HM	2	Fill																																															
<p>Stitch Options</p> <p>Density: 3</p> <p>Length: 30</p> <p>Overlap: 2</p> <p>Angle: 45</p> <p><input checked="" type="checkbox"/> Underlay</p> <p><input checked="" type="radio"/> Fill</p> <p><input type="radio"/> Outline</p>	<p>Stitching options.</p> <p>Density or separation is the gap between the stitch rows. 3 = 3 points which is 0.3mm.</p> <p>Length is the stitch length of any stitches that are not the fill pattern.</p> <p>Overlay is the increased width of the filled region. 2 = 0.2mm</p> <p>Angle is the angle from horizontal, that the rows of fill stitches will sew. 0 means all stitch rows will be horizontal. 90 means that they will be vertical etc.</p> <p>When underlay is selected, each region is first sewn with a lower density underlay stitch which is 90 degrees perpendicular to the sewing angle of the fill stitch.</p> <p>Currently, ICE supports 2 types of stitching, Fill or seeding stitches with fill patterns or Outline where the regions outline is stitched.</p>																																																						
<p>Fill Pattern</p> <p></p> <p>Scale mm</p> <p>Scale: 1.0</p> <p>Sizes: 63.5 x</p>	<p>At the time of this document's publication, there are currently around 40 different included fill patterns.</p> <p>ICE supports having a different fill pattern per region, letter, colour etc or any combination in between</p>																																																						
<p> Sew</p> <p> Export</p> <p> Stop Process</p>	<p>Command buttons include:</p> <ol style="list-style-type: none"> 1. Sew – convert the selected regions to an embroidery design 2. Export the design to files 																																																						

Data7 Consultancy

ICE Toolbar & Tools Descriptions

	3. Stop process, also triggered by pressing the ESC key, stops the conversion process if needed.
--	--