AGP User Guide

1 Starting a session

To being a new art generation session, begin by defining the image resolution for the final product. These can be defined within the Image Width and Image Height Boxes, within the Session Setup Tab, this is depicted in figure UG1.

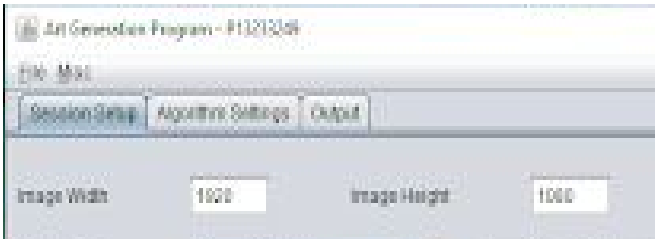

Figure UG1 - defining the resolution

Once these have been entered. Select a session type from the Combination box and click the begin session button, UG2.

A Manual session is a user guided image creation session. This means the user can decide which algorithms to apply and specify the specific parameters for the algorithm. The Automated Session generates an output image without the user deciding what algorithms to apply or what order to apply them in.

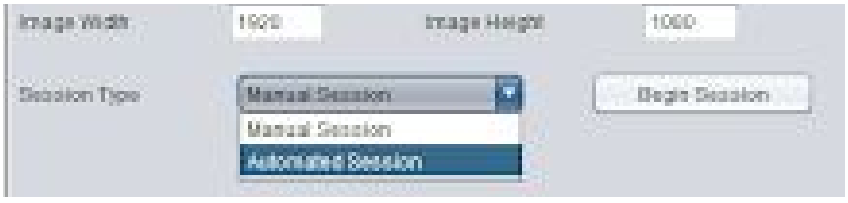

Figure UG2 - Selecting the session type

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2 Manual Session

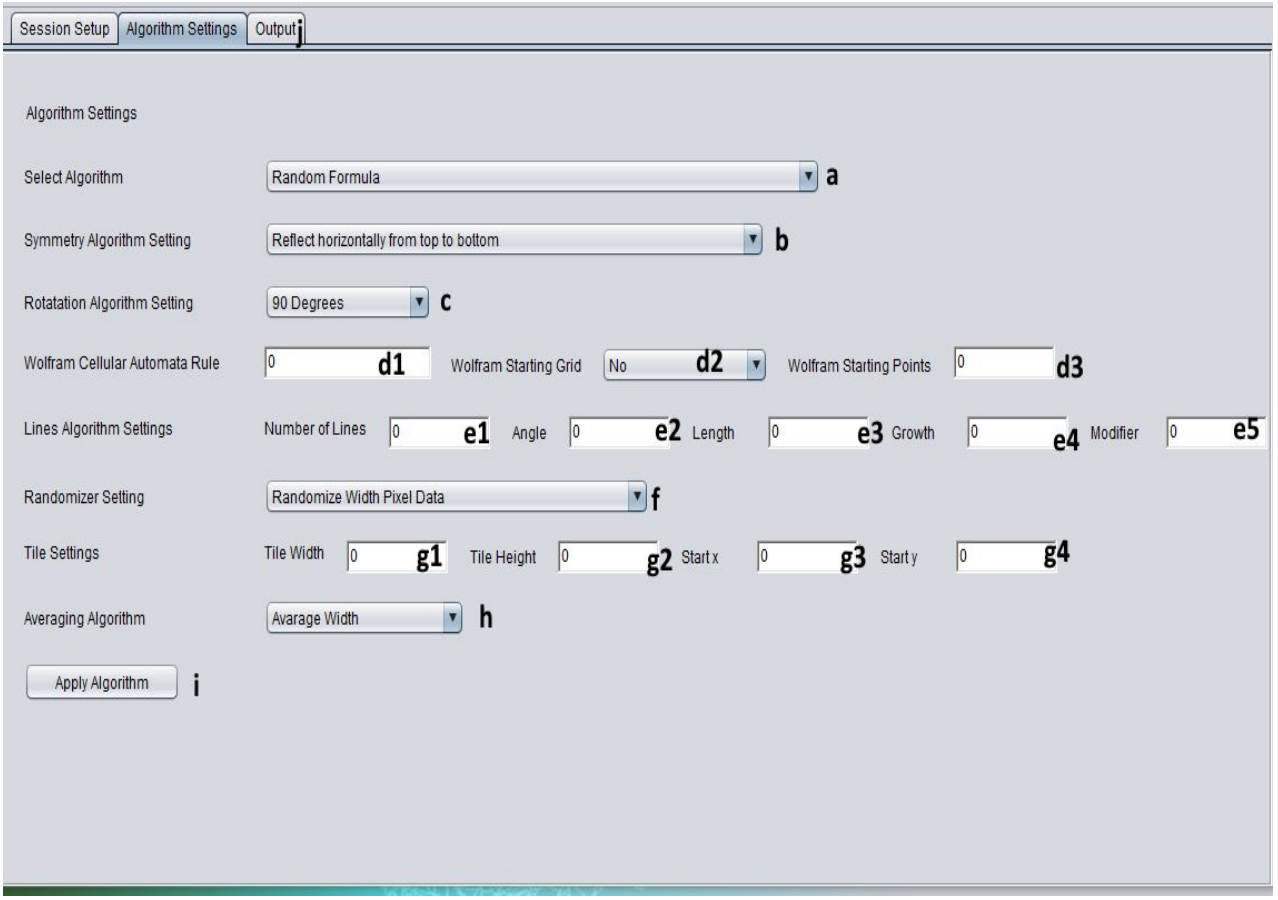

Figure UG3 - the algorithm tab

If the user selects the manual session and clicks the begin button, they will be taken to the Algorithm Settings tab. Within this tab they can decide which algorithms they would like to apply to the image. This can be done by first selecting an algorithm from the Select Algorithm Box. UG4

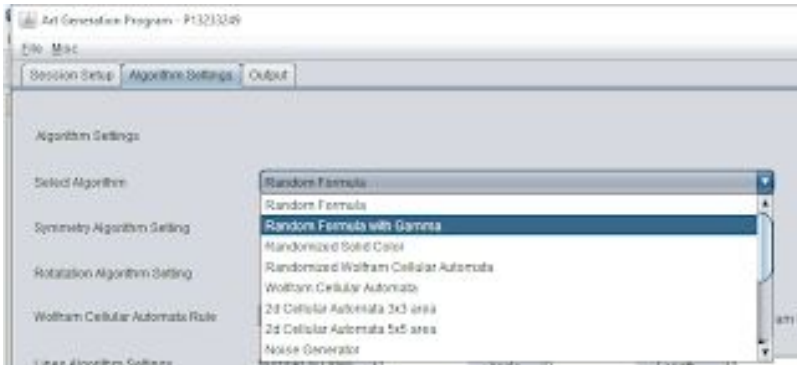

Figure UG4 - the algorithm selector

The next step is to select or enter the relevant parameters for the selected algorithm, UG3 elements a-h, Finally the user must click the apply algorithm Button in order to apply the algorithm to the Output Image, UG3 element i.

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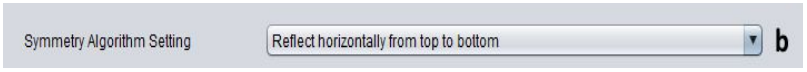
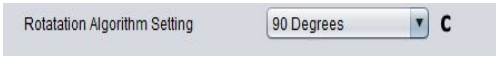
2 .1 Algorithm Parameters

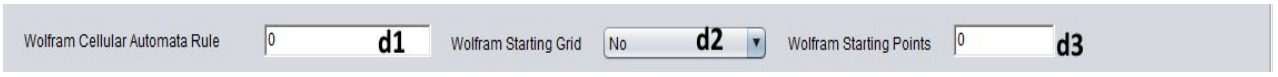
Combination box b in figure UG3, refers to the type of symmetry the system will apply. When the user selects “Apply Symmetry” from Box a, they then select the type of symmetry from box b. The type of symmetry defines which half or quarter of the image is reflected to the corresponding half or quater. For example selecting “reflect vertically from right to left”, will reflect the right half of the image across to the left half of the image.



Box c allows the user to define to what degree they would like to rotate, when the “Apply rotation” algorithm is selected..

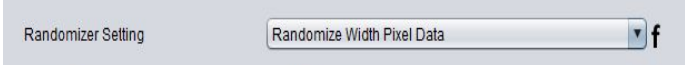


Elements d1, d2 and d3 are used when the user selects “Wolfram Cellular Automata” from box a. d1 defines the 1d cellular automata rule that will be applied, this can be any integer from 0 to 255. d2 defines if the user wants to define the starting grid, The no option means the implementation will start with two points, the yes option will start with a randomized grid and the custom start option will mean the system takes the integer value from d3 and creates that many starting points.



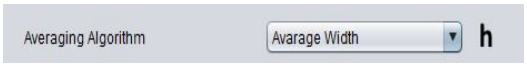
Elements e1 - e4 allow the user to define values which are used by the “ Line System”. e1 defines how many lines are drawn by the system. e2 defines the angle of the line. e3 defines the starting length of the first line whilst e4 defines how much the line grows. e5 takes a double value between 0 and 1.0. This value defines the starting point of the next line, in comparison to the current line.

Element f lets the user decide which style of pixel randomization they would like to apply to the existing image, when the “Randomizer” algorithm is selected.



Fields g1 - g4 are used when the user applies a “Tile System” algorithm. g1 and g2 are integer values that define the size of a tile, whilst g3 and g4 define the start location of the tile that will be replicated across the entire canvas.

When the “Averaging Function” is selected, the system applies the specific algorithm selected in box h.



Once a user has picked a algorithm and defined its parameters properly, they must click the apply algorithm button, which applies the algorithm to the output image.

The user can now look at the generated image and apply further algorithms.

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3 The Output

The output of the system is displayed within the output tab of the GUI. This image is the resulting image of either the automated or manual sessions.

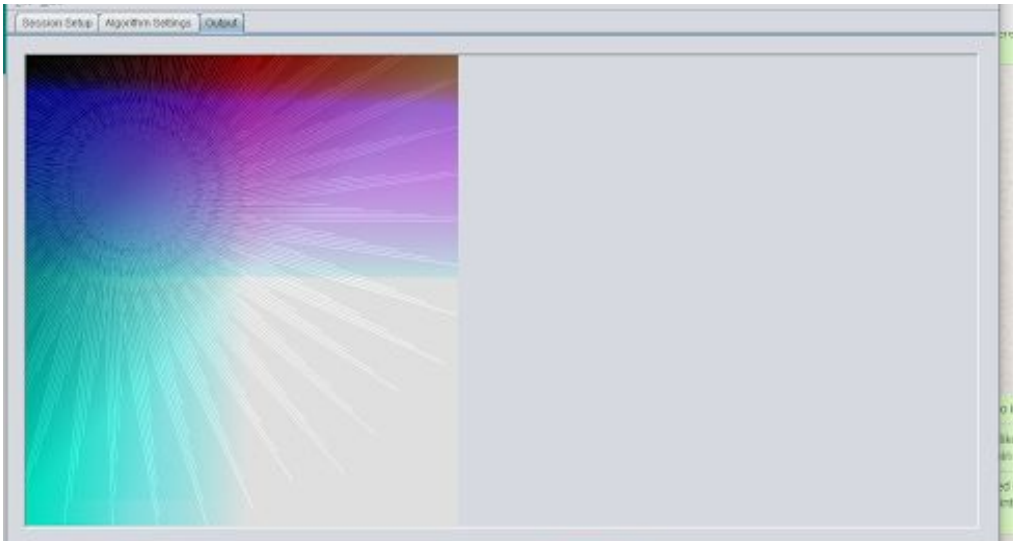

Figure UG5 - the output window

4 The Menu

The menu bar consists of two differing menus. The file menu and the misc menu.

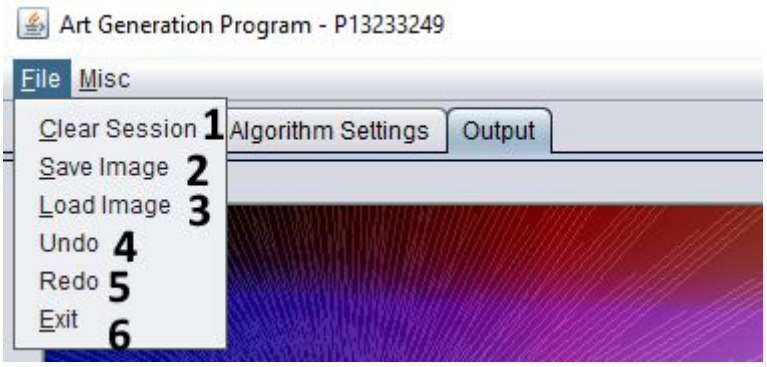

Figure UG7 - the file menu

Element 1 of the file menu clears the current session and creates a new one, this means the user can redefine the session type in the session setup.

Element 2 allows the user to save the output image to a user specified location. When this element is selected, a file dialog opens and the user is free to decide the name and location of the output.

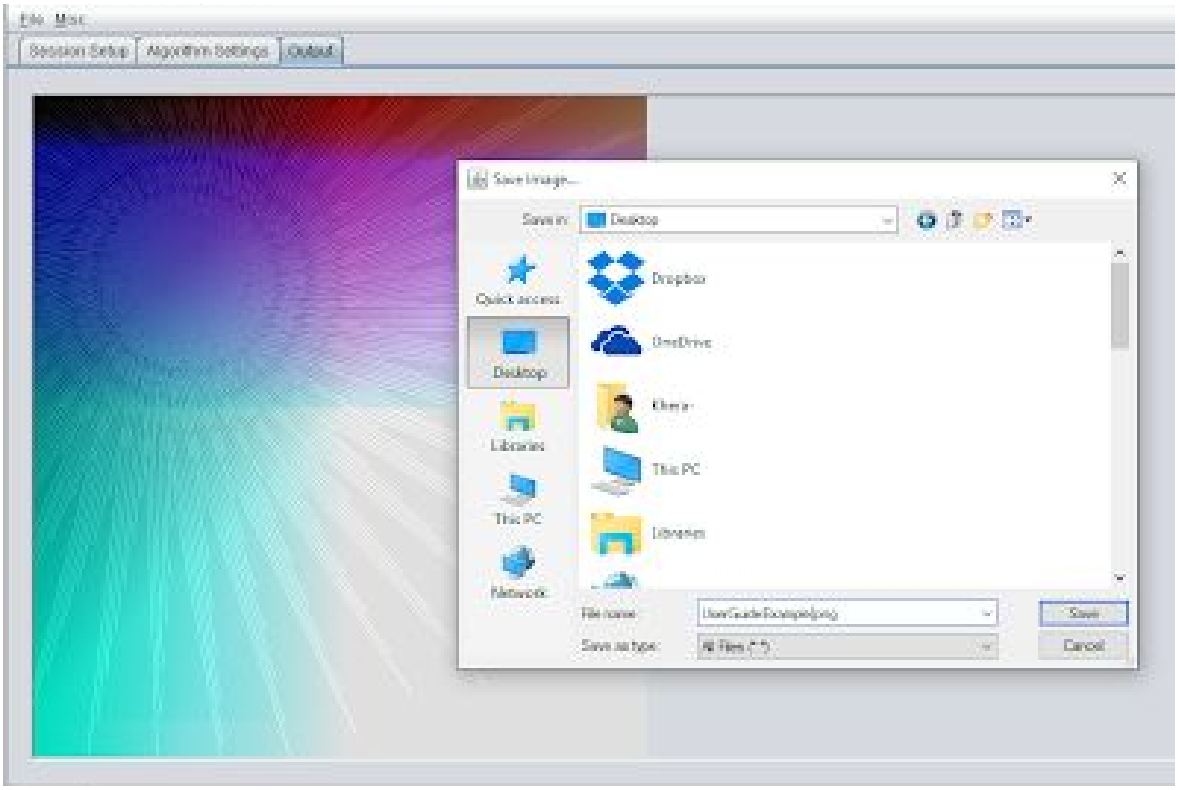

Figure UG7.1 - Saving

Element 3 allows the user to load an existing image into the program, this can be a previous sessions generated image or a image that was not created within the system.

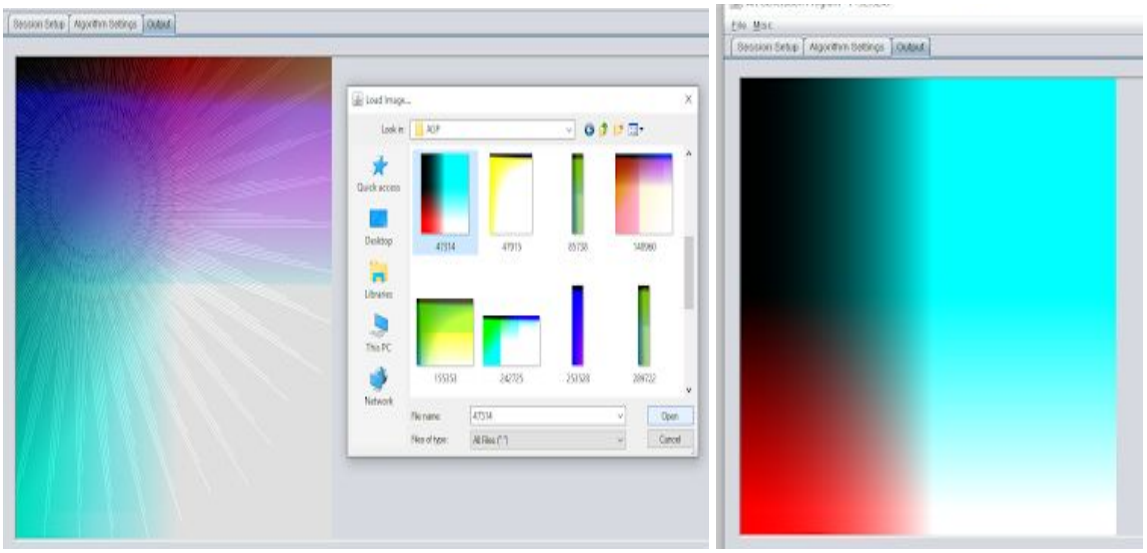

Figure UG7.2 - Loading

Elements 4 and 5 are used to traverse the history of the current session and to revert to items within that history

Element 6 is used to exit the program.

The Misc menu consists of one element.

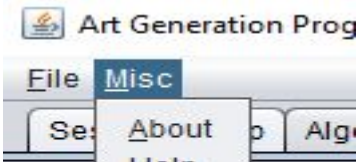

Figure UG8 - the misc menu

When the user clicks the about button, a dialog with a brief description of the program opens.