

ARAHNE SOFTWARE UPDATES 2023

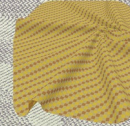


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The updates presented in this brochure were made from January 2023 until January 2024. We have fixed numerous bugs and implemented 683 new features. Only a small selection of new features is presented in this document.

From January 2023 till January 2024, Arahne software covered the following versions:

- ArahWeave: from version 9.7s till 10.0
- ArahPaint6: version 6.0.3140 till 6.0.3541
- ArahDrape: from version 3.3n till 3.3r



1. ARAHWEAVE

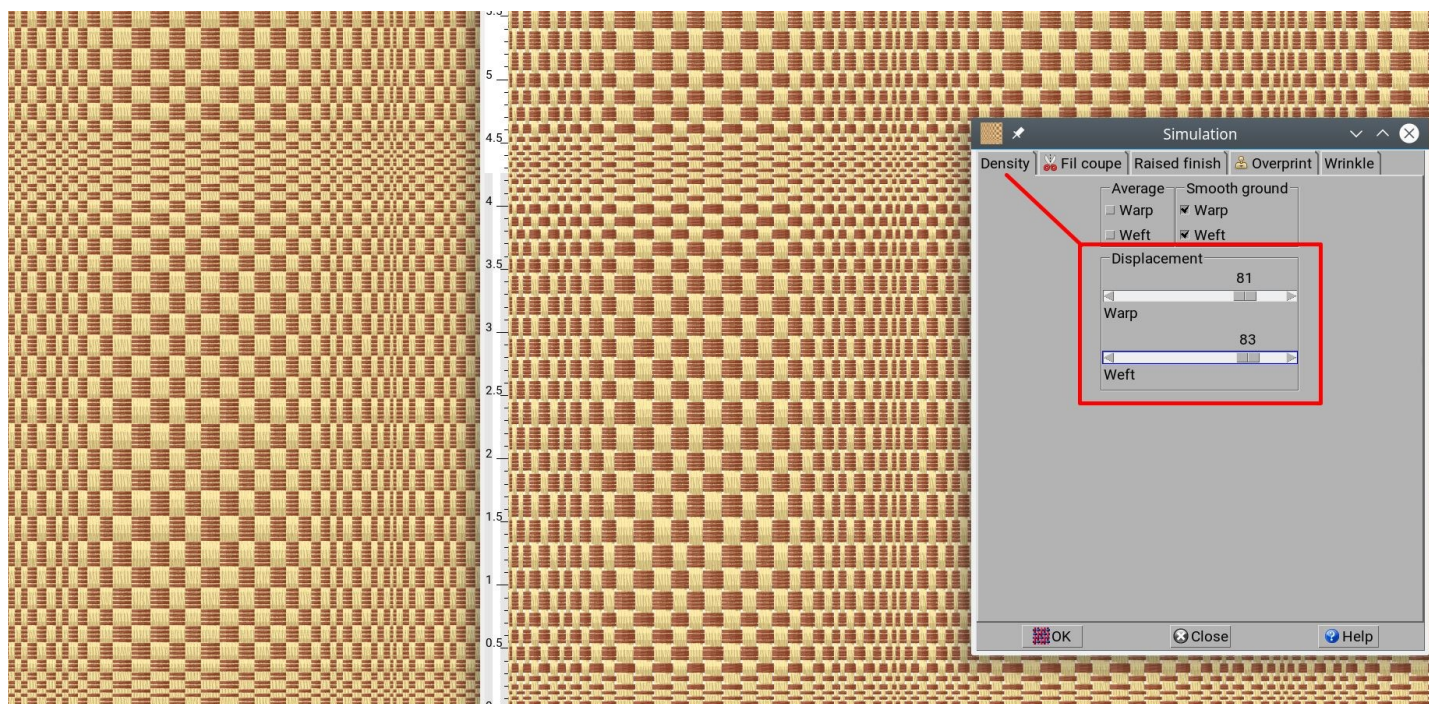
1.1 THREAD GROUPING WEAVES

WHAT DOES IT DO?

ArahWeave can now simulate thread grouping weaves in which all threads follow an equal path through the weave. As equal threads move closer together, panama weaves can have larger gaps.

WHERE AND HOW TO USE IT?

Go to **Fabric > Simulation, Density** tab and adjust the **Displacement** for Warp and Weft.



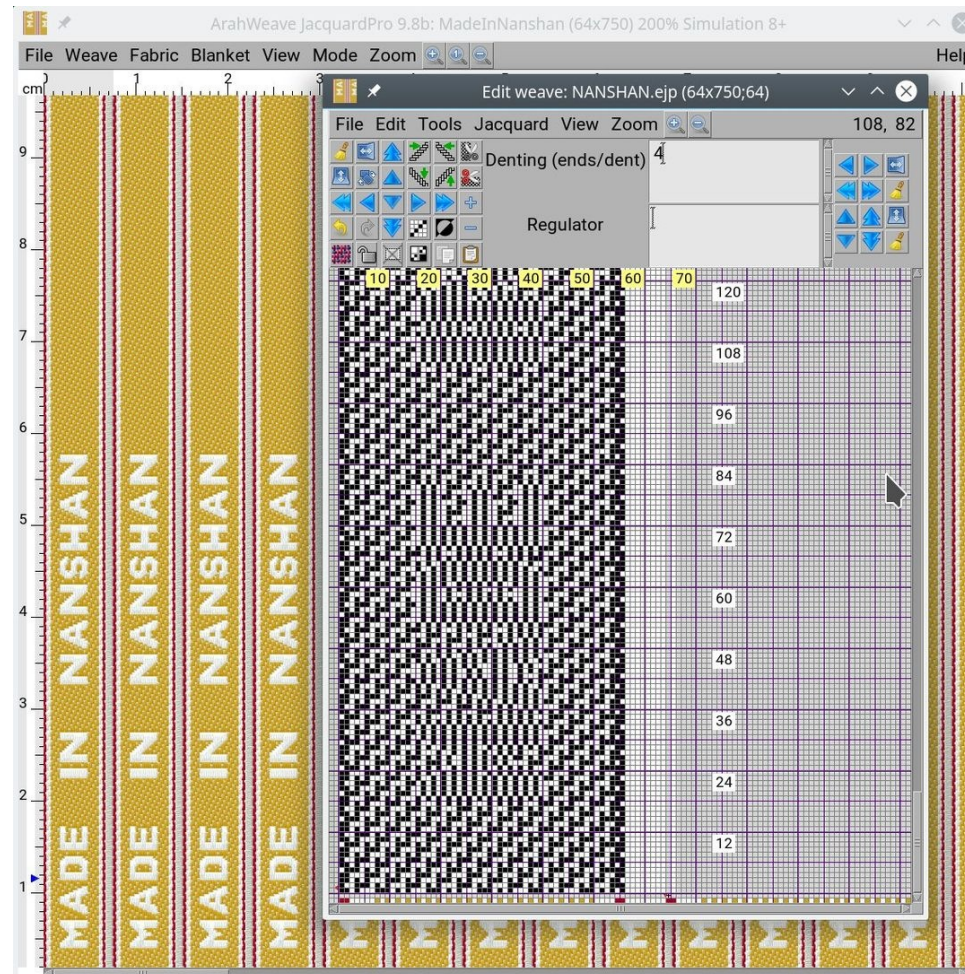
1.2 SUPPORT FOR READING AND WRITING ELTEX .EJP

WHAT DOES IT DO?

ArahWeave and ArahPaint can now read Eltex .EJP format of jacquard selvages. ArahWeave can also write it.

WHERE?

Go to **Fabric > Save cards for production**, under Format choose Eltex or load the .EJP file from **Weave > Browse cards**.



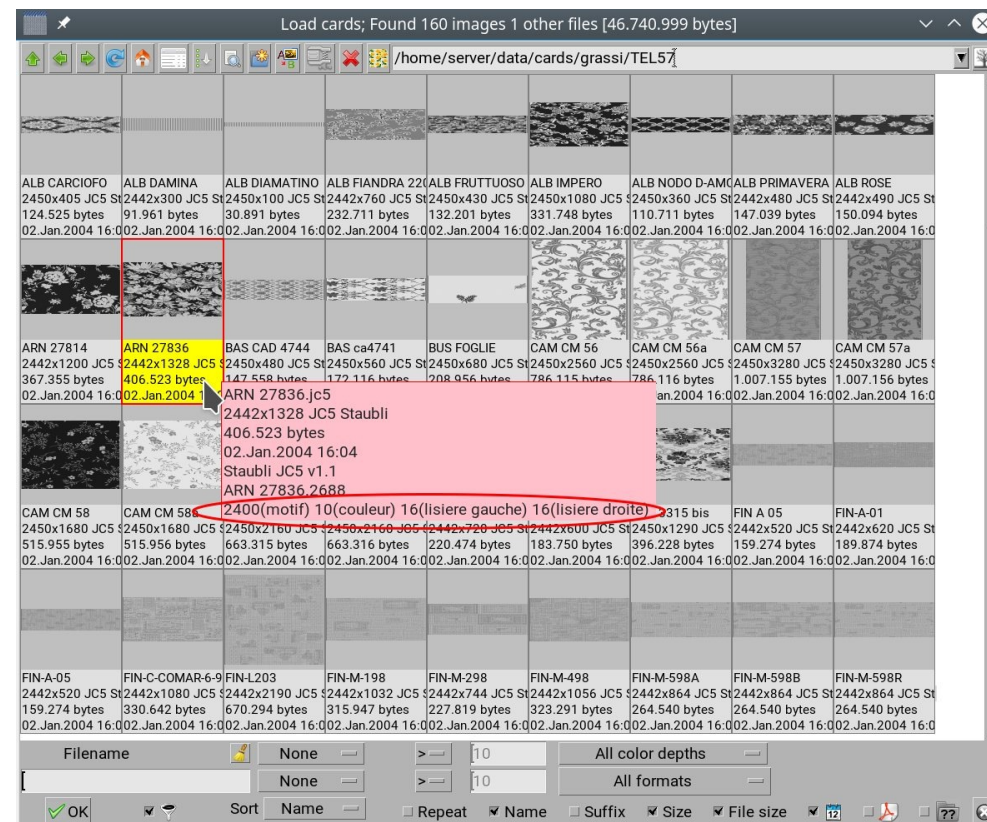
1.3 LOOM LAYOUT INFO IN THE TOOL-TIP OF IMAGE BROWSER

WHAT DOES IT DO?

In ArahWeave and ArahPaint's image browser, we added extra information about loom layout to the tooltip. For example, the number of weft bytes used for loom weft control in a Bonas file, or information about zones that define the meaning of various parts of the jacquard card in Stäubli JC5 format, etc.

WHERE AND HOW TO USE IT?

Go to Browser, in ArahWeave from **Weave > Browse cards** and in ArahPaint go to regular Image browser. When you hover the mouse over the image icon, information will appear in the tool-tip.



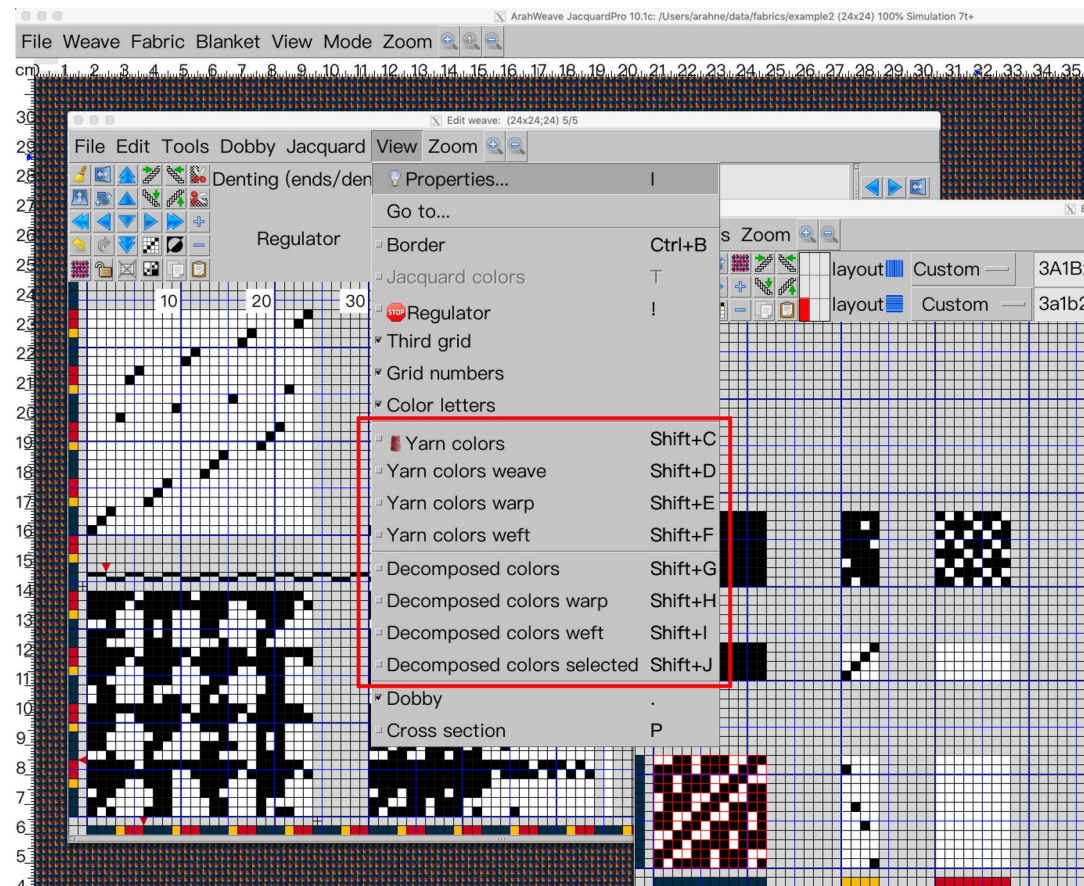
1.4 COLORING MODES OF WEAVES IN DECOMPOSED

WHAT DOES IT DO?

We added additional 3 weave views that take the colors from yarn colors.

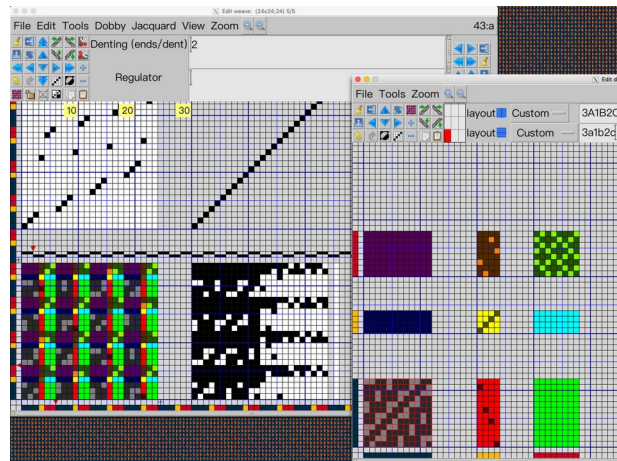
WHERE AND HOW TO USE IT?

In Weave Editor window go to **View** and select among different weave views.

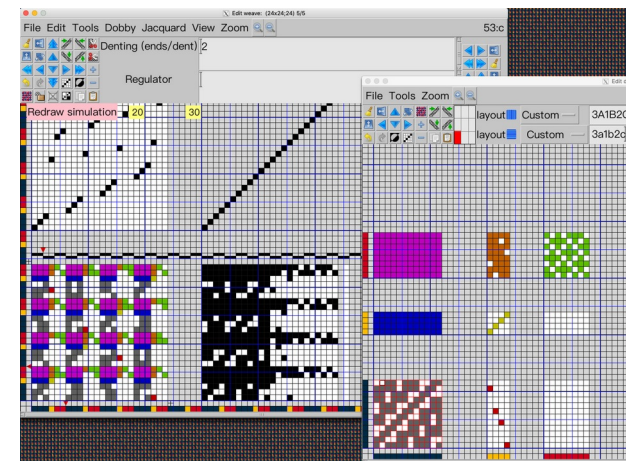


You're already familiar with the 4 Views in Decomposed: **Decomposed colors**, **Decomposed colors warp**, **Decomposed colors weft**, **Decomposed colors selected**.

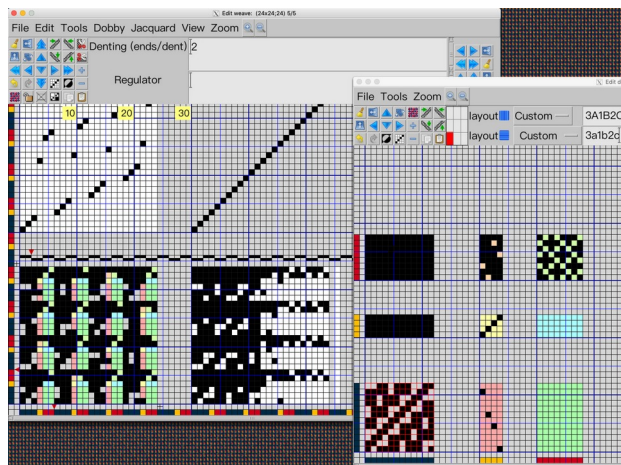
DECOMPOSED COLORS VIEW



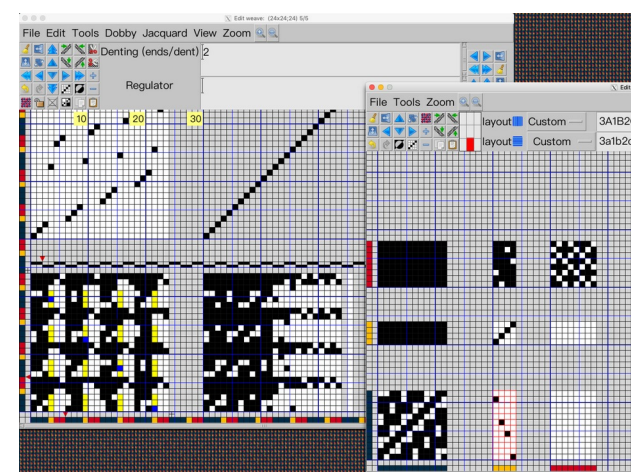
DECOMPOSED COLORS WARP



DECOMPOSED COLORS WEFT

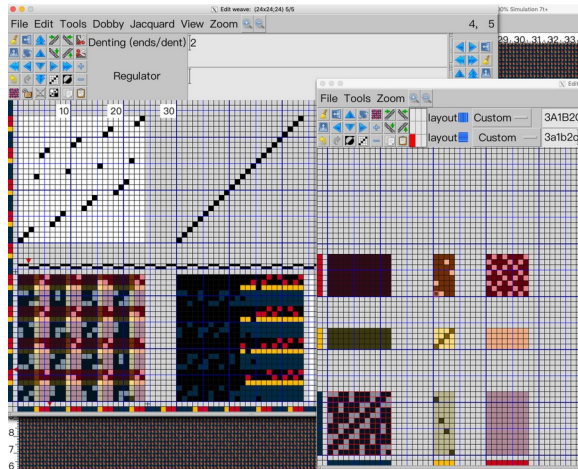


DECOMPOSED COLORS SELECTED

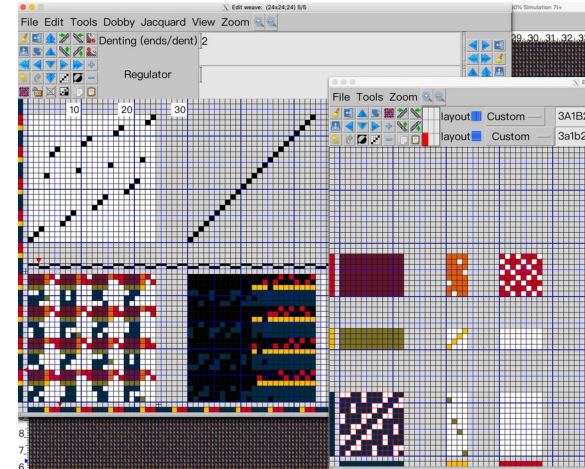


You can now choose among the 3 new views: **Yarn colors weave**, **Yarn colors warp** and **Yarn colors weft**.

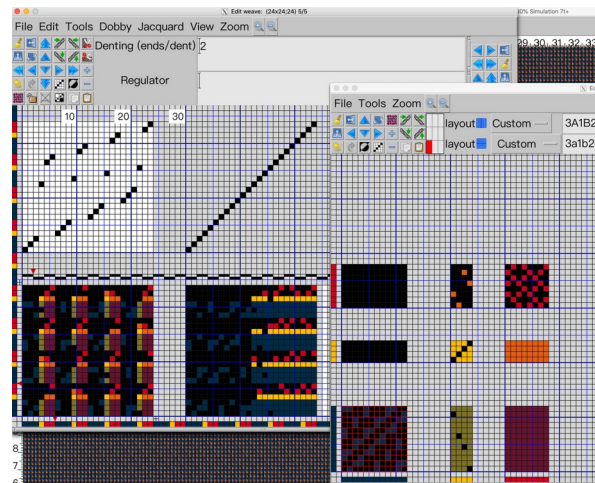
YARN COLORS WEAVE



YARN COLORS WARP



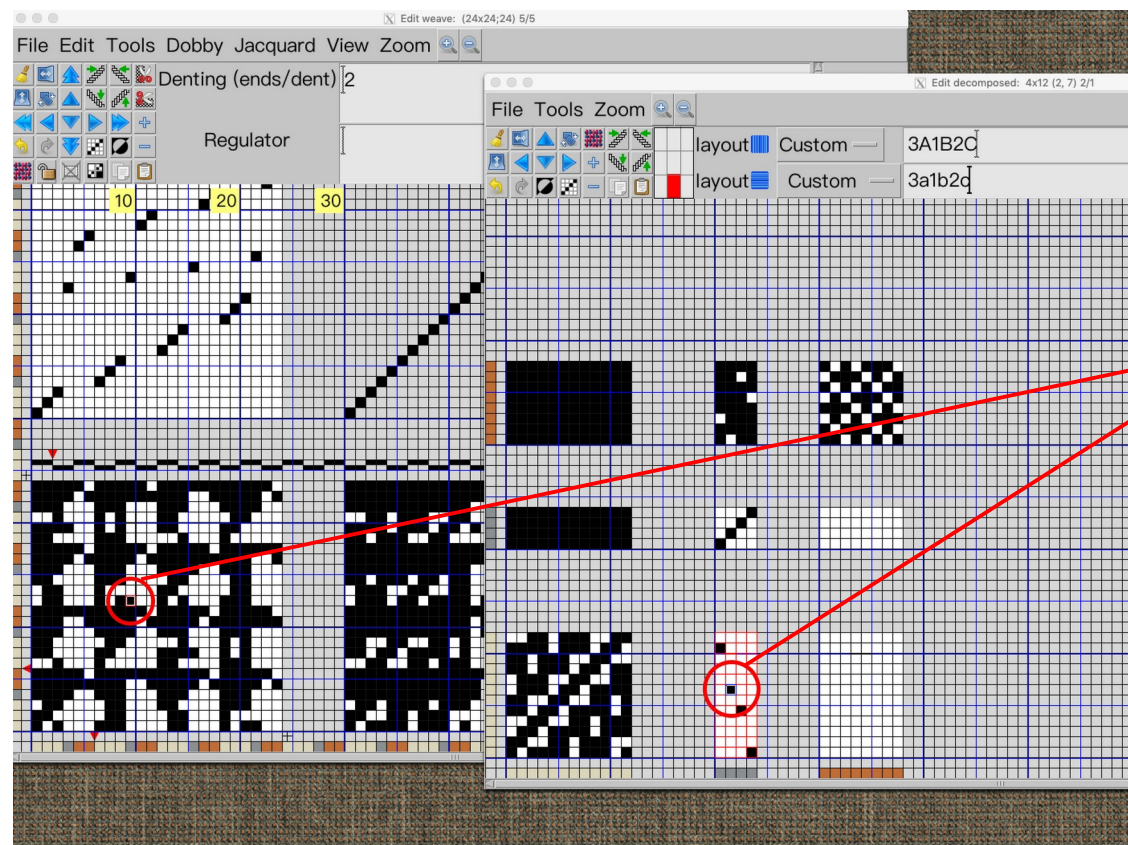
YARN COLORS WEFT



1.5 WEAVE CURSOR

WHAT DOES IT DO?

The weave cursor indicates which point will be changed even before you click the mouse. Some users are unfamiliar with mouse hot point: when you click, the computer takes the value from the mouse pointer's sharp tip rather than the center. The two cursors are coordinated; they indicate where the point from the decomposed weave editor will land on the main weave. This makes it easier to draw the precise stitch points. Additionally, when pointing the mouse pointer on the fabric simulation, the weave cursor also displays the position on the weave in the editor.



1.6 SUPPORT FOR SPECTROPHOTOMETER NIX SPECTRO 2

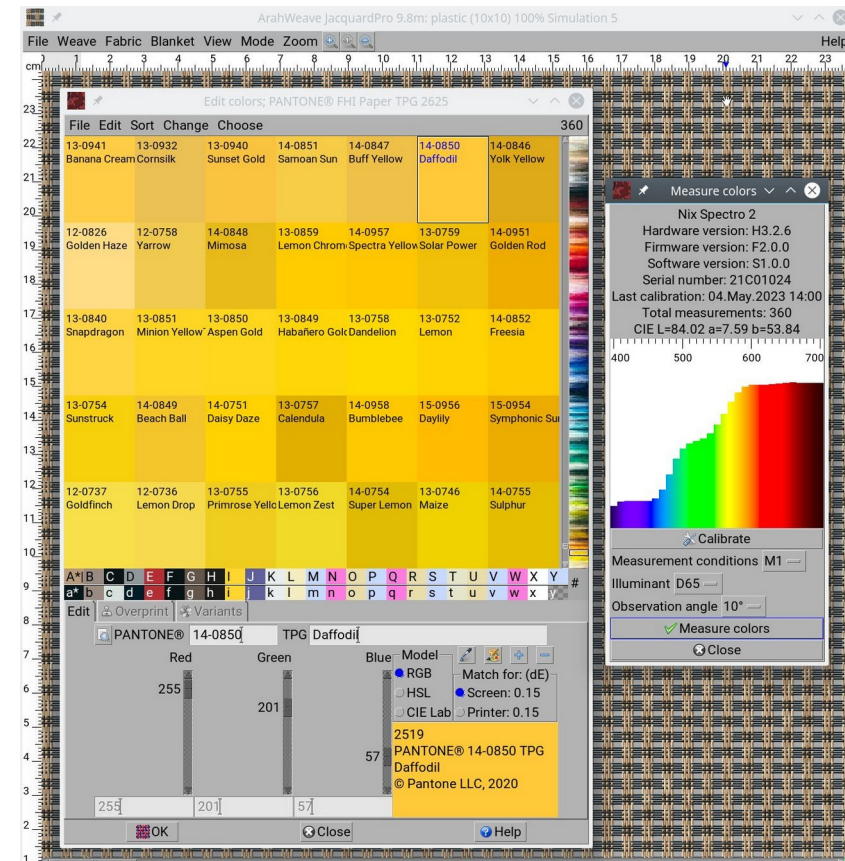
WHAT DOES IT DO?

ArahWeave now enables direct color measurements using the Nix Spectro 2, a compact portable spectrophotometer. In addition to CIE Lab values in D65 and 2° or 10° observation angles, you will receive full reflectance data. You can also change the measurement mode to M2 to prevent the effect of optical brighteners. Best of all, it's relatively affordable: <https://www.nixsensor.com/nix-spectro-2/>

WHERE AND HOW TO USE IT?

Connect your Nix Spectro 2 to a computer. Under Colors, go to **Change > Measure colors** and select Nix Spectro 2. After calibration you can begin to measure your colors.

Note: On Linux, you need to add a user to "aux" group to gain permissions to interface the program with USB connection to Nix. On SUSE Linux, you can do it in the YAST system administration tool, under Security and Users > User and Group management, Edit > Details.



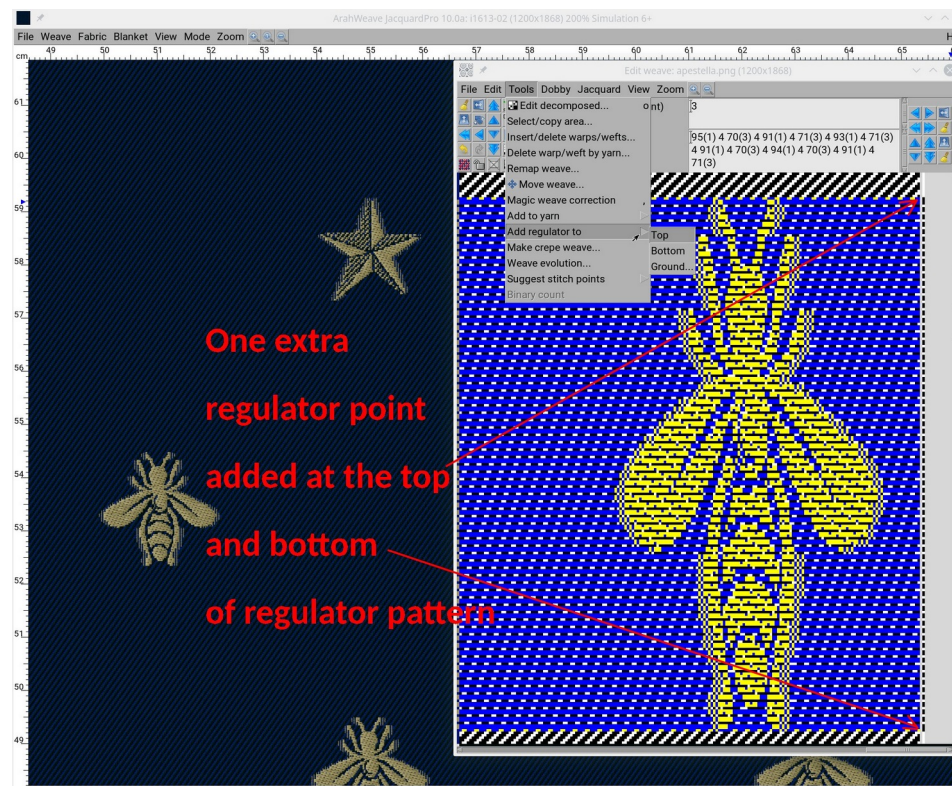
1.7 ADD REGULATOR

WHAT DOES IT DO?

Customers have suggested an alternative way of hiding the defect at the start or end of regulator pattern: add another regulator point. This was always achievable simply by drawing it with the mouse. Customers, however, desired an automatic function, because they frequently work on very large designs that require numerous mouse clicks.

WHERE AND HOW TO USE IT?

In Weave Editor window go to **Tools > Add regulator** to, and select Top, Bottom or Ground.



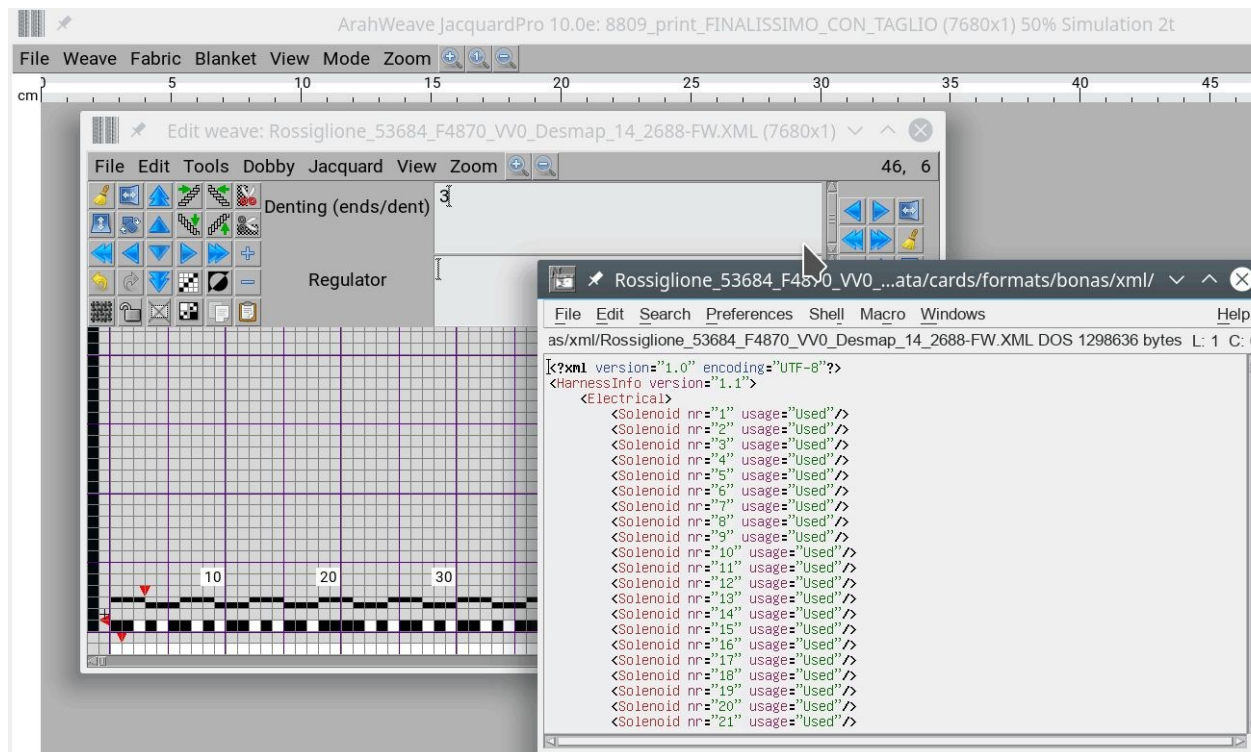
1.8 BONAS HARNESS XML SUPPORTED

WHAT DOES IT DO?

ArahWeave can read Bonas harness XML files as black and white graphics, with unused hooks colored black. Users who want to modify existing Bonas harness files can thus add another level of skipped hooks and re-save the Bonas harness XML. Reading is currently supported in version 1.1 and 2.0 formats, but writing is only supported in version 1.1.

WHERE AND HOW TO USE IT?

To open it go to **Weave > Browse cards**. To re-save it, go to **Fabric > Save cards for production**, under **Format** select Bonas Harness .XML.



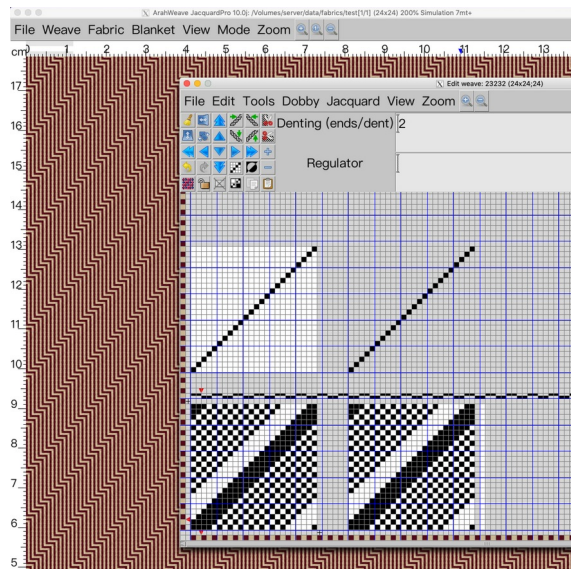
1.9 QUADRUPLE WEAVES

WHAT DOES IT DO?

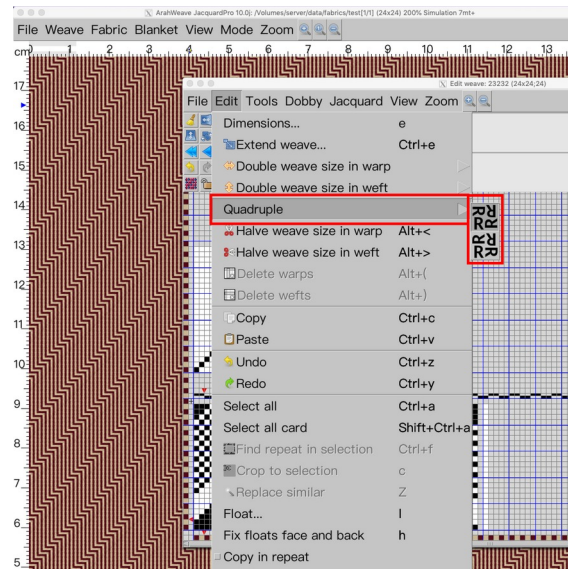
In the ArahWeave Weave Editor window use the quadruple function to easily create of quadruple weaves with clockwise or anticlockwise rotation. This is one of the classical approaches for creating complex weaves.

WHERE AND HOW TO USE IT?

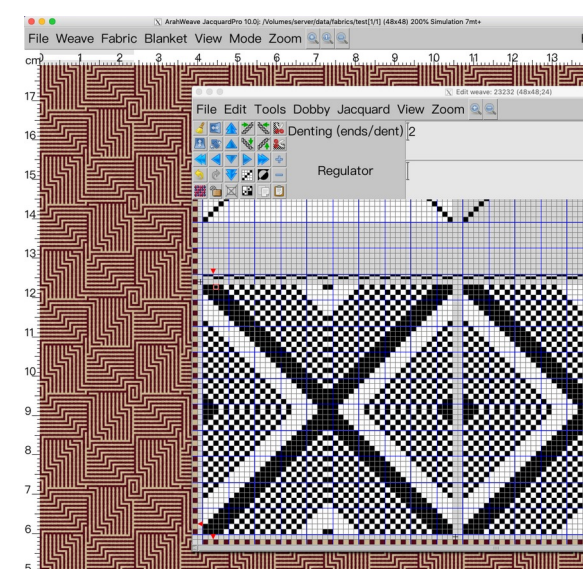
To use it draw a simple square weave in the Weave Editor window, then go to **Edit > Quadruple**, and choose either clockwise or anticlockwise direction to create a new weave.



STEP 1: Draw a simple weave



STEP 2: Select the quadruple function to create a complex weave

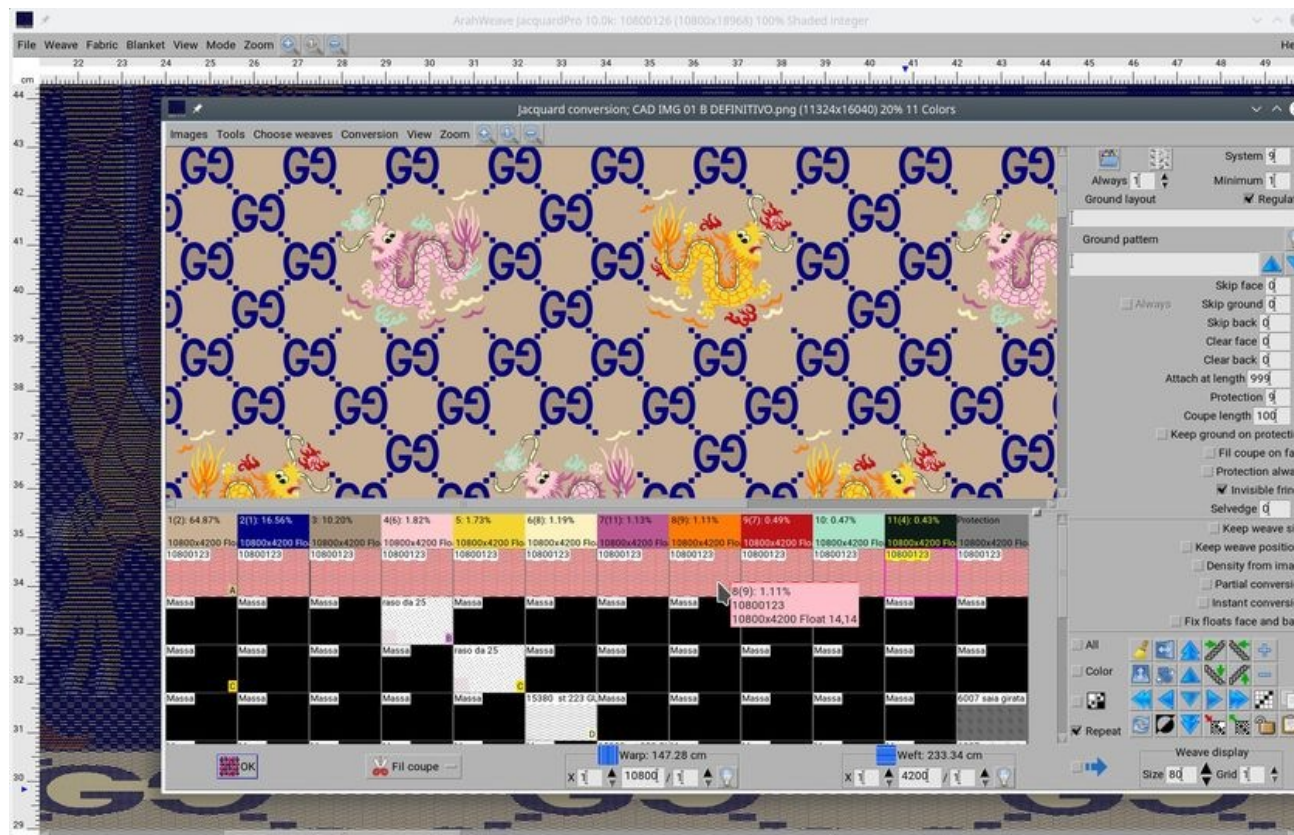


STEP 3: Apply the new weave to fabric simulation

1.10 OPTIMIZATION FOR VERY LARGE WEAVES

WHAT DOES IT DO?

One of the advantages of ArahWeave is that it handles well large weaves. If you need a complicated ground weave in extra weft or fil coupe fabric, you can enter complete jacquard weaves in jacquard conversion. In some extreme cases, such as the one shown on the picture (ground component weave of 10800x4200), even ArahWeave got slow when resizing the window and applying the weave. We have now optimized the program, so that it works quickly even on such edge cases.

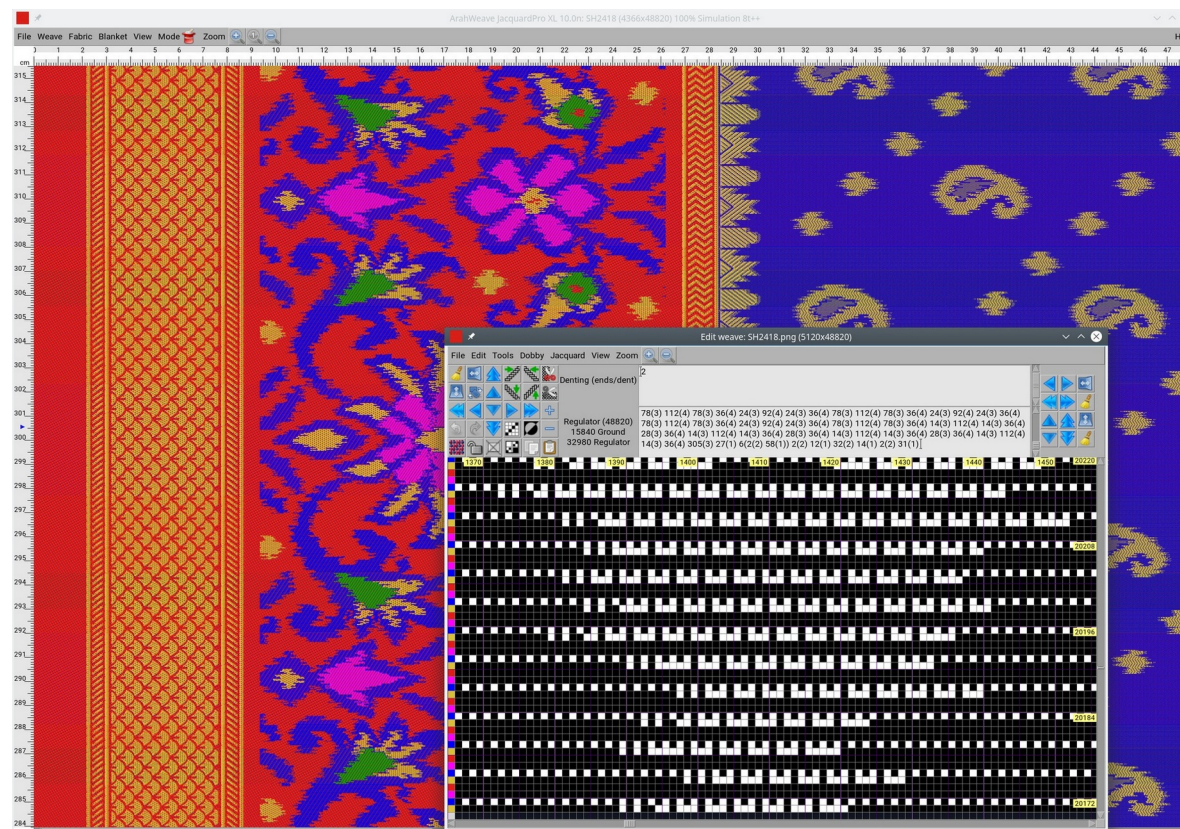


1.11 SAVING OF JACQUARD SINGLE FILES FOR STÄUBLI, BONAS AND GROSSE, ON MORE THAN 10 FLOPPIES

WHAT DOES IT DO?

Numerous jacquard manufacturers support multi-floppy jacquard formats (Stäubli JC3, JC4, JC5, Bonas, Grosse), while ArahWeave supported splitting and saving of a single card file across multiple floppies. However, a single card file could only be split into 10 floppies.

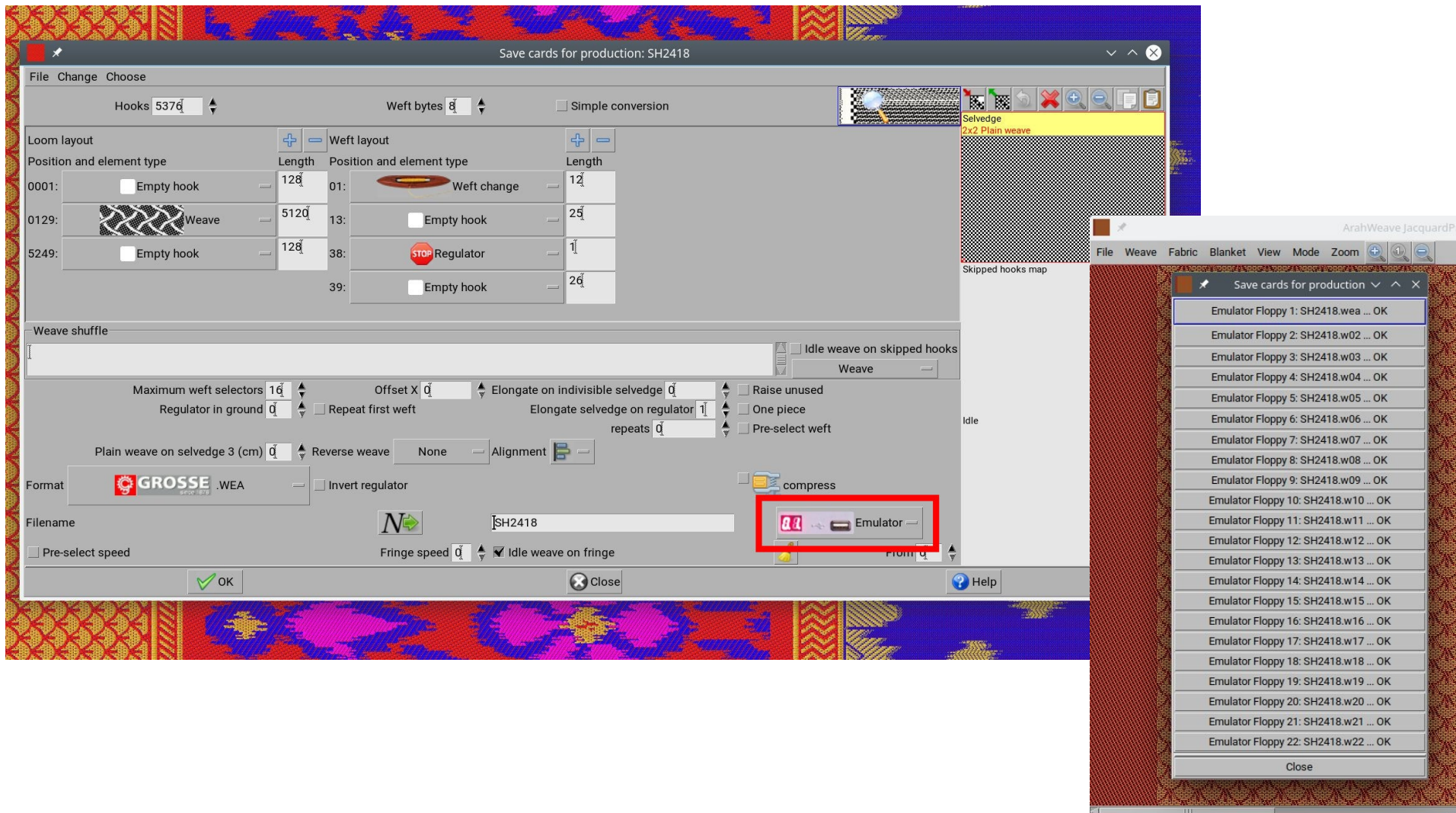
Some of our customers create huge designs that require the weave divided to more than 10 floppies. In order to facilitate the saving of a single design on more than 10 floppies, we made improvements to the ArahWeave program and thus our customers don't need to spend 100.000 EUR on a new jacquard loom to weave their large designs.



Very large weave, 5120x48820

WHERE AND HOW TO USE IT?

In **Save cards for production** window, select the saving destination **Emulator** and write to floppy to save the whole design split among several floppies.



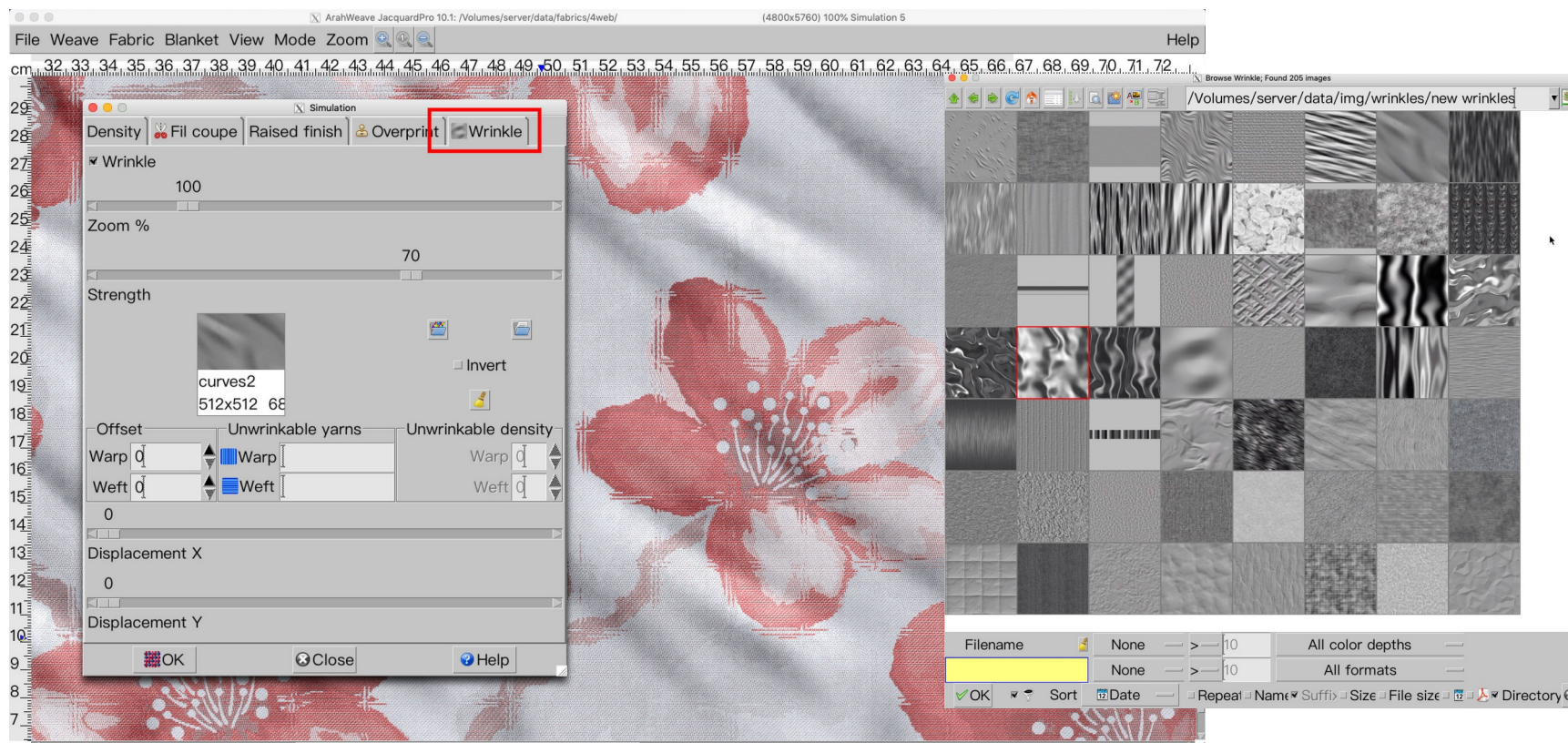
1.12 NEW COLLECTION OF WRINKLES

WHAT DOES IT DO?

We have collected over 90 different wrinkle images for you to utilize in your fabric simulations. If you want to add a finishing touch to your fabric simulation, such as hair, drapes, seersucker, fur, denim, bumps, and so on, use wrinkle image.

WHERE AND HOW TO USE IT?

Go to **Fabric > Simulation**, then click on the **Wrinkle** tab and load the image with the desired wrinkle effect. To get varied results, change the size with Zoom and the intensity with Strength. Unwrinkable yarns, Unwrinkable density, Offset, and X&Y displacement are other options.



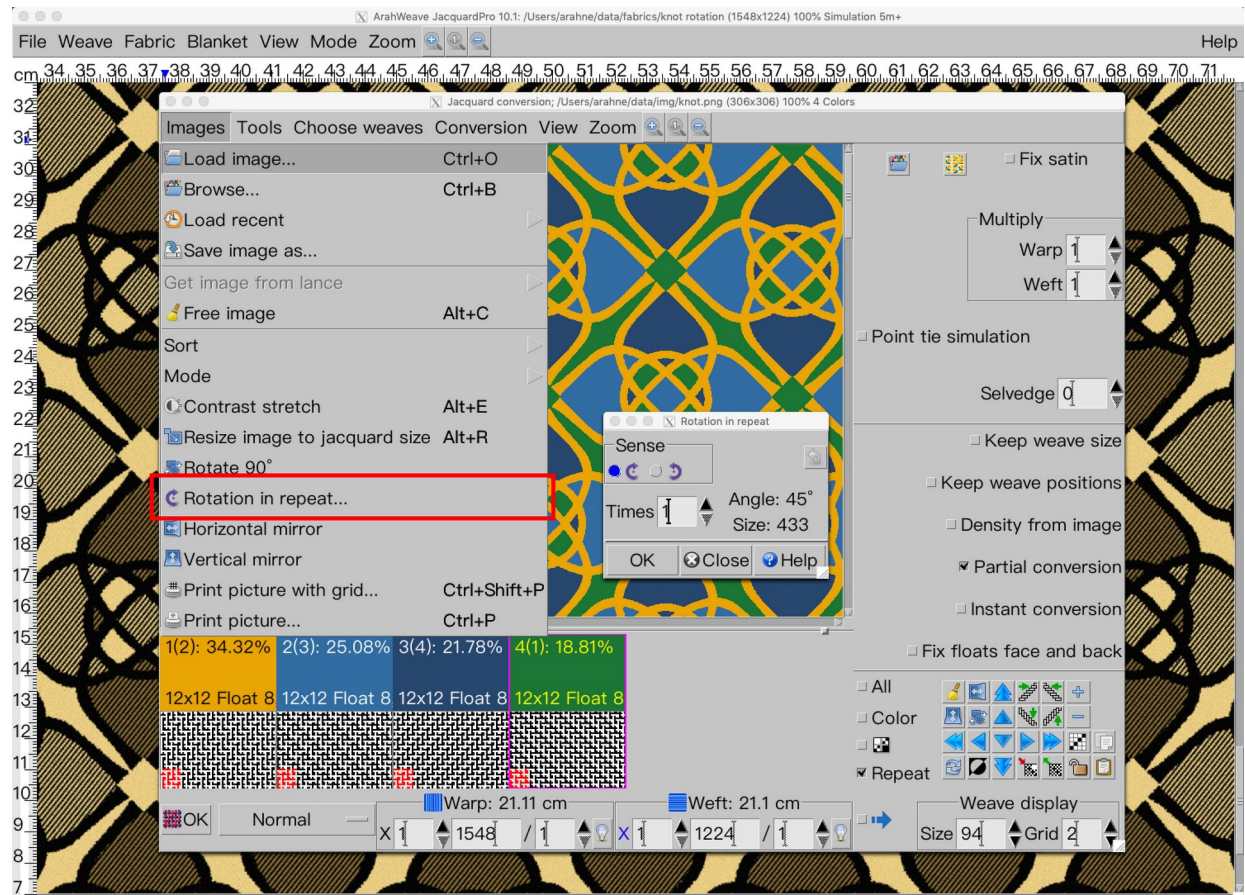
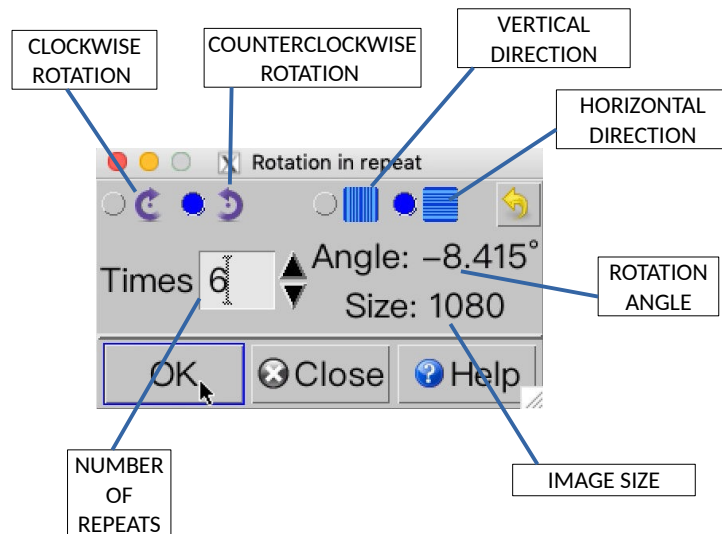
1.13 ROTATE DESIGN IN REPEAT

WHAT DOES IT DO?

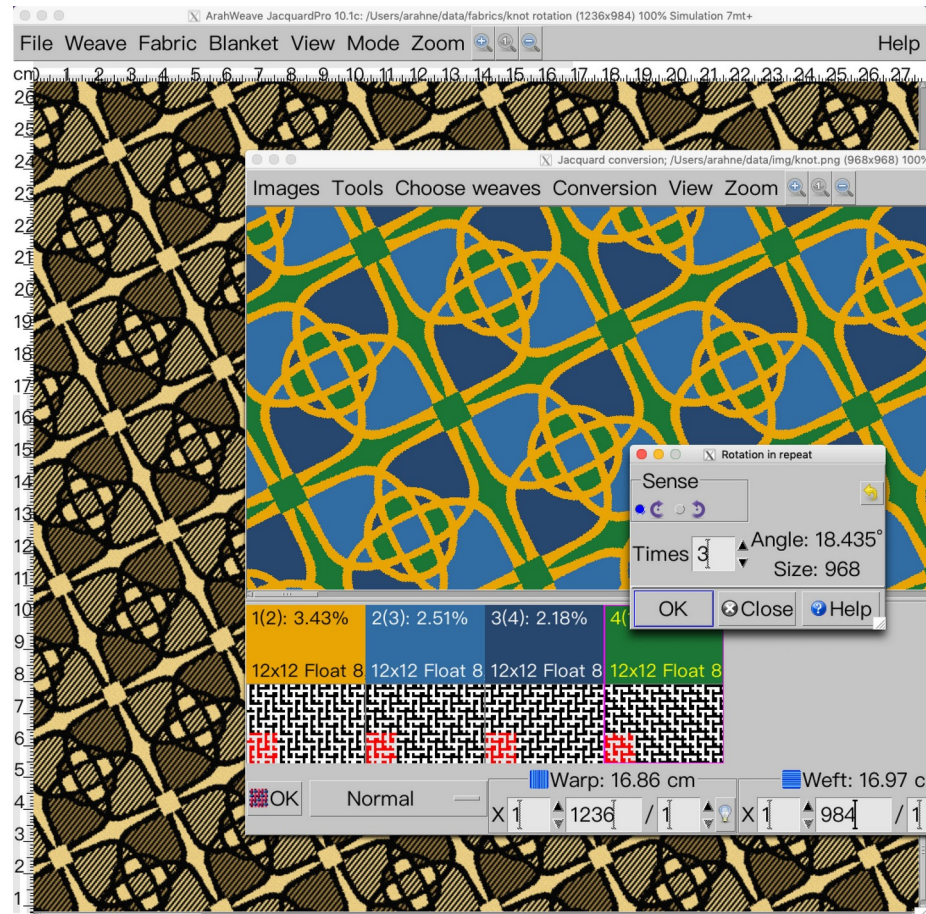
In ArahWeave you can now rotate an image at an angle in seamless repeat. Our colleague Anton did his homework and calculated all of the possible angles that would keep the image in seamless repeat. Only at certain angles will the image repeat, and even then only for square images. Images that are not square can only be rotated in one direction at a time: horizontally or vertically.

WHERE AND HOW TO USE IT?

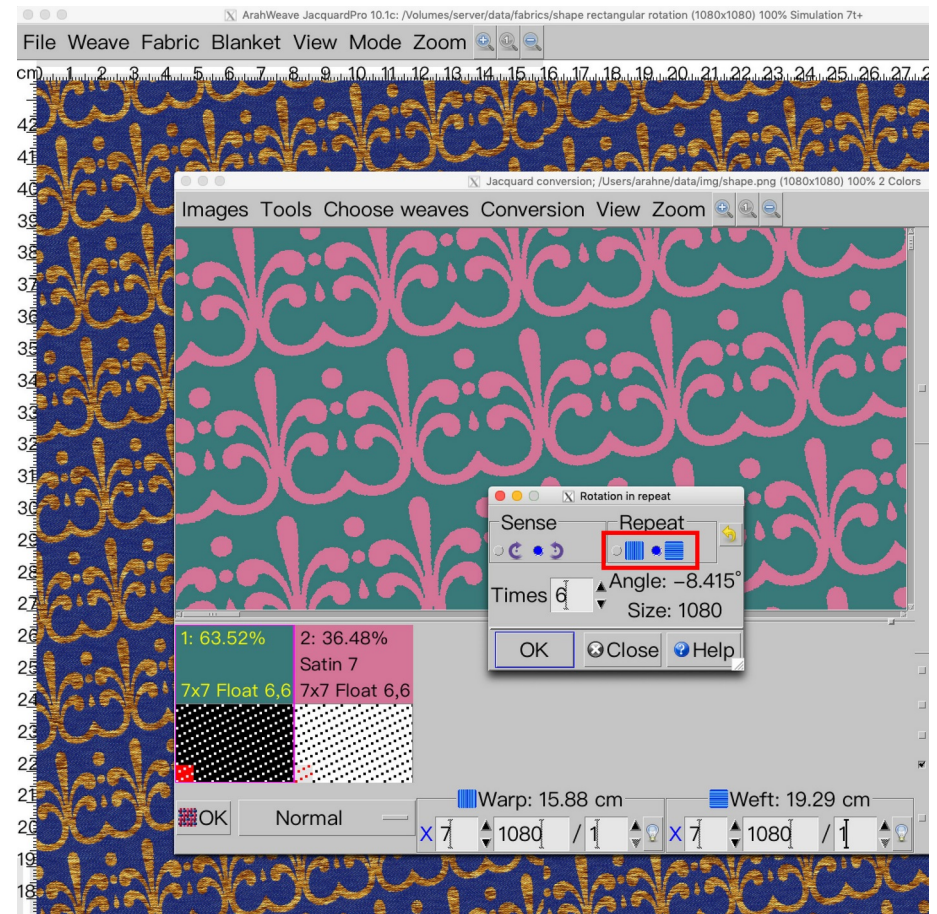
In **Jacquard conversion** window go to **File > Rotation in repeat**. You can select from 99 different angles that have been calculated to produce an image in a seamless repeat. You can rotate the image clockwise or counterclockwise. For non-square images you can choose to keep the repeat either horizontally or vertically.



ROTATION OF A SQUARE IMAGE, SEAMLESS REPEAT IN ALL DIRECTIONS



ROTATION OF A NON-SQUARE IMAGE, SEAMLESS REPEAT ONLY IN ONE WAY, HORIZONTAL OR VERTICAL



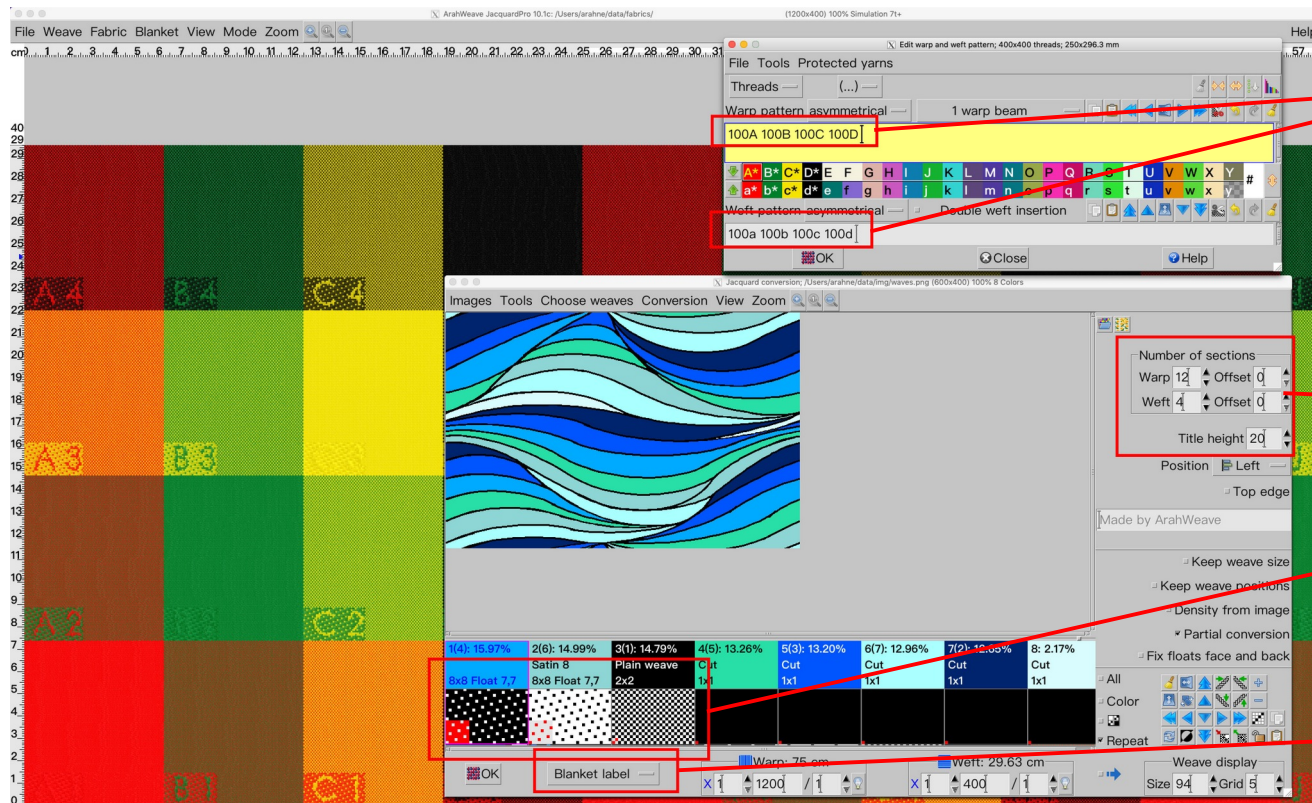
1.14 BLANKET LABEL

WHAT DOES IT DO?

You can create and weave a blanket from jacquard fabric with each section labeled separately.

WHERE AND HOW TO USE IT?

In **Thread pattern** insert the number of threads for warp and weft sections. In **Jacquard conversion** window select **Blanket label**. In the first two colors, insert the weaves for the label, and in the third color insert the total weave of the fabric. Insert the number of sections for warp and weft, offset, title height, position. Then click OK and check the labels on the simulation.



The screenshot shows the ArahWeave software interface. The main window displays a simulation of a jacquard fabric with a grid of colored squares labeled A1, B1, C1, A2, B2, C2, A3, B3, C3, A4, B4, C4. The Jacquard conversion window is open, showing settings for warp and weft sections, title height, and position. The 'Blanket label' option is selected in the 'Weave display' section.

Annotations with red boxes and arrows point to the following elements:

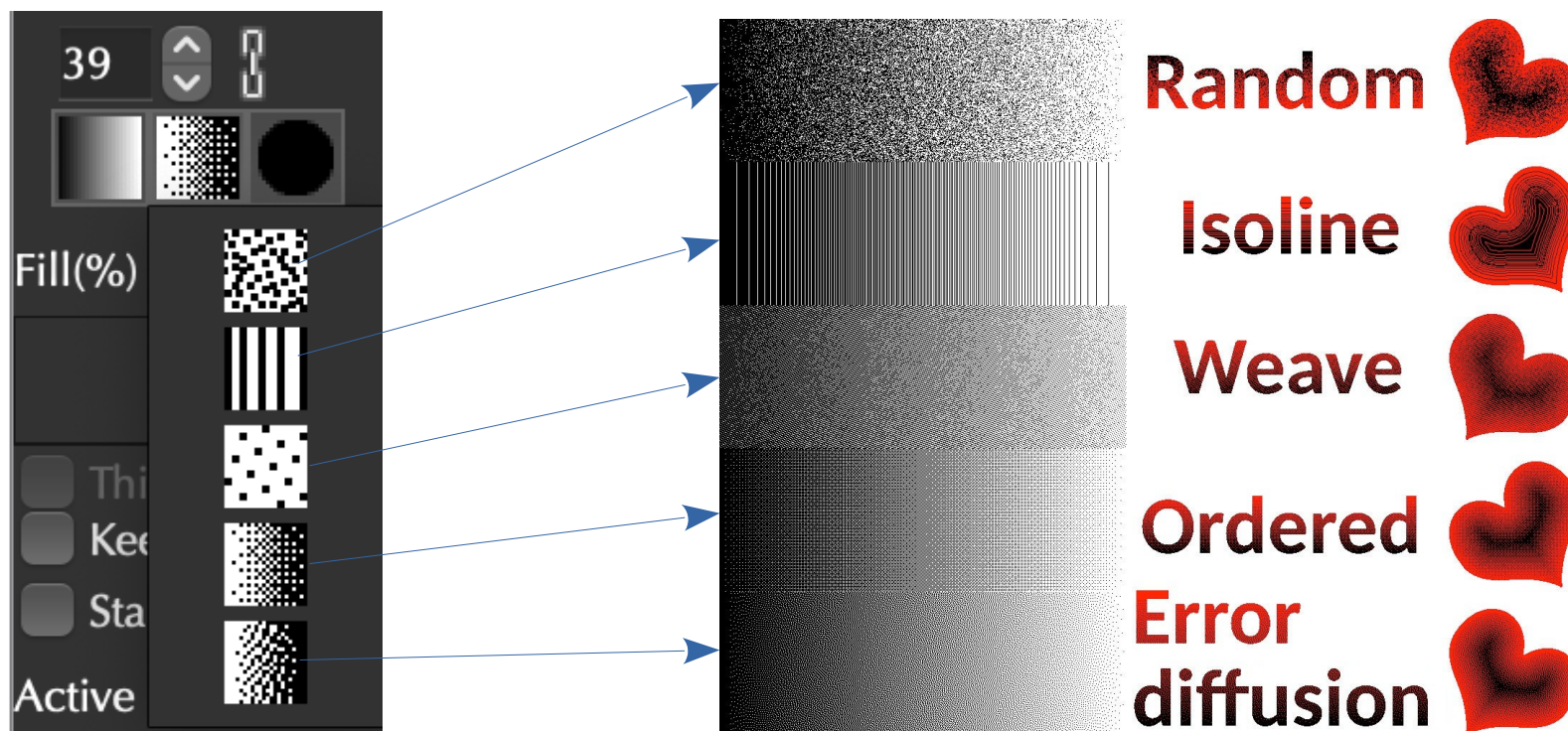
- NUMBER OF THREADS FOR WARP AND WEFT SECTIONS:** Points to the 'Warp pattern asymmetrical' and 'Weft pattern asymmetrical' fields in the Jacquard conversion window, which contain the text '100A 100B 100C 100D'.
- NUMBER OF WARP AND WEFT SECTIONS, TITLE HEIGHT:** Points to the 'Number of sections' section in the Jacquard conversion window, which includes 'Warp 12', 'Weft 4', 'Offset 0', and 'Title height 20'.
- 1ST AND THE 2ND WEAVE FOR LABELS, THE 3RD COPY/PASTE THE WHOLE FABRIC WEAVE:** Points to the 'Weave display' section in the Jacquard conversion window, which includes 'Keep weave size', 'Keep weave positions', 'Density from image', 'Partial conversion', and 'Fix floats face and back'.
- SELECT BLANKET LABEL:** Points to the 'Blanket label' option in the 'Weave display' section of the Jacquard conversion window.

2. ARAHPAINT

2.1 SHADING ALGORITHMS

WHAT DOES IT DO?

In addition to Random and Isoline, ArahPaint now supports three new shading algorithms: ordered dithering, error diffusion, and weave. They work with all drawing tools (including fill and text), with multicolor, in all directions and in repeat.

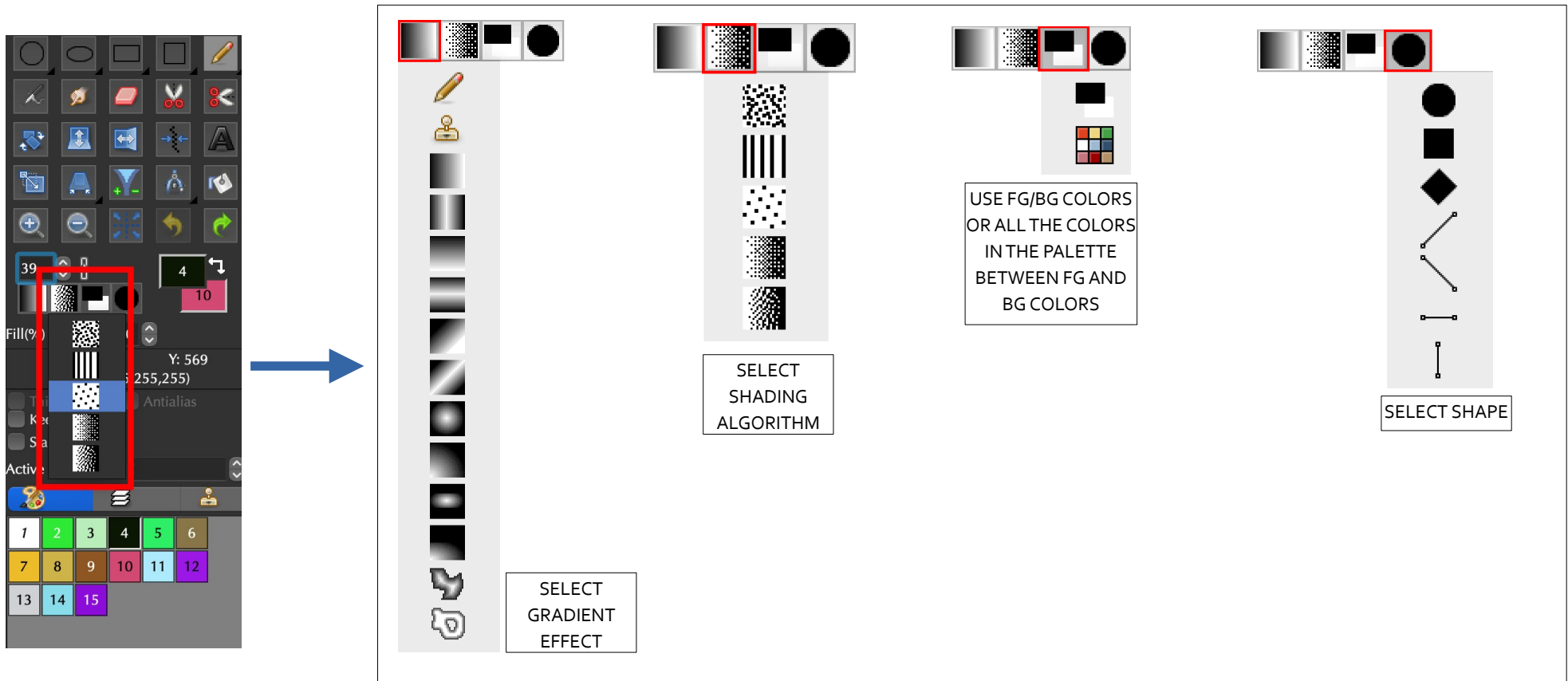


WHERE?

Below the brush size, the second square next to gradient effect.

HOW TO US IT?

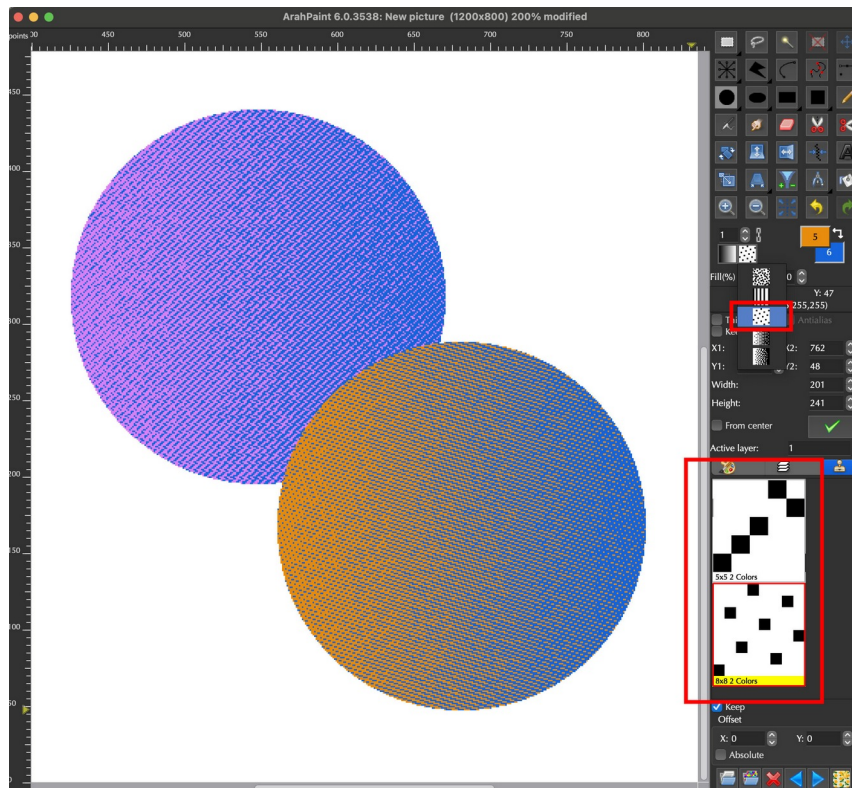
Select any drawing tool, fill or text. Select one of the gradient effects, two-colored or multicolored and the shape. Next choose among the 5 shading algorithms. 2 of them were already developed last year (random and isolate). Now you can choose also among Weave, Ordered dithering and Error diffusion.



WEAVE SHADING

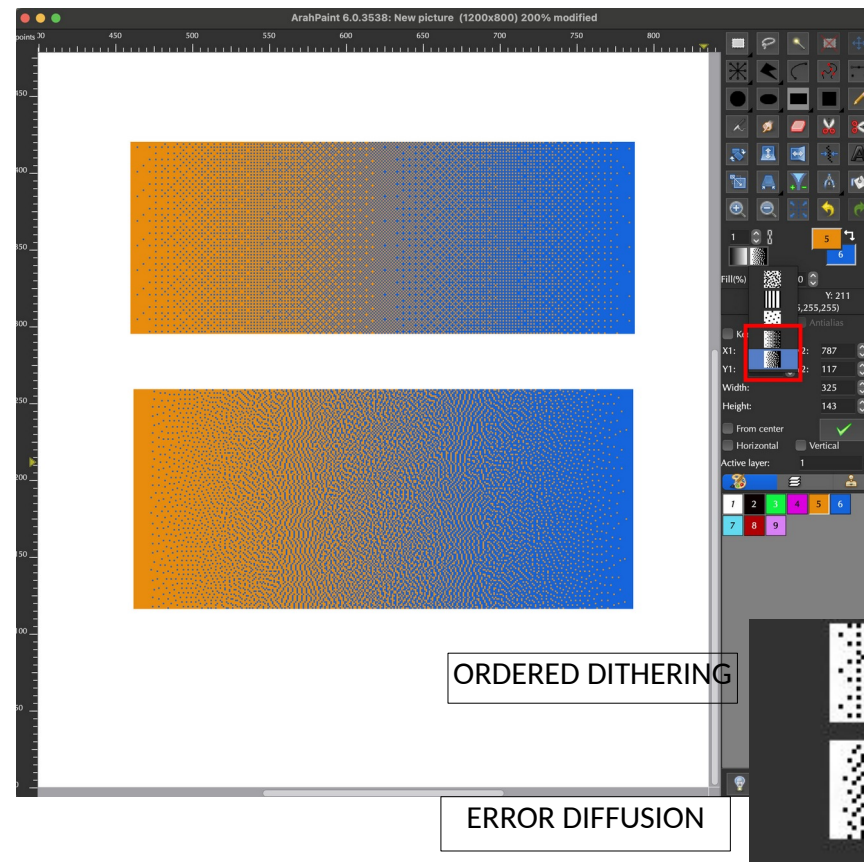
To use weave shading, load a weave under **Brush** tab and start drawing.

Weave shading algorithm uses the weave in Brush to create a weave shading effect.



ORDERED DITHERING&ERROR DIFFUSION SHADING

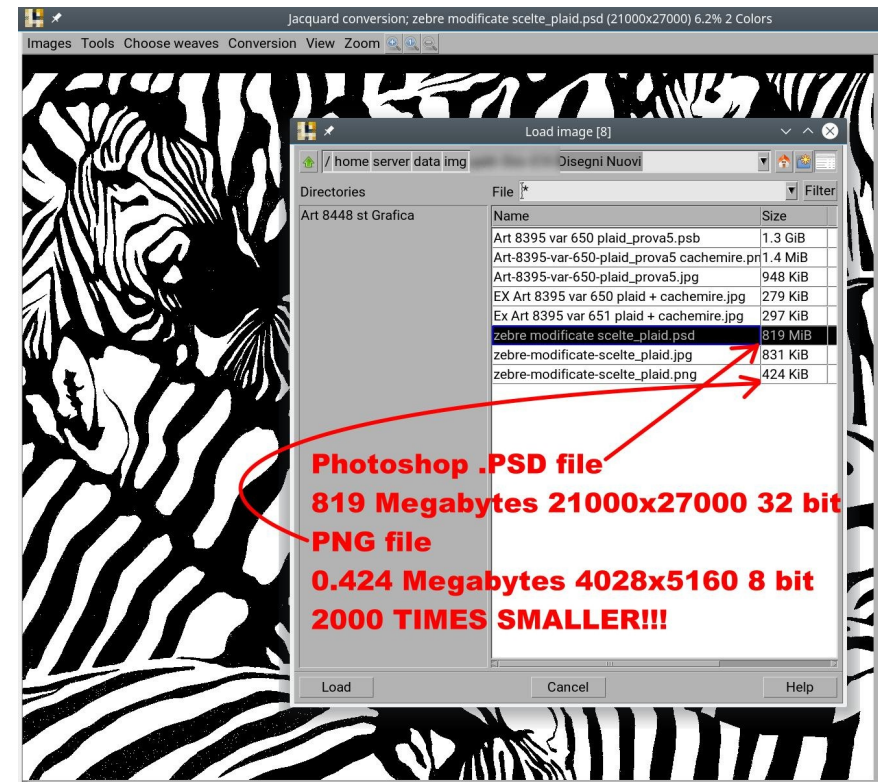
Select either **ordered dithering** icon or **error diffusion** icon to draw in the selected shading algorithm. Error diffusion is scattering of dots which make the most visually smooth transition between two colors.



2.2 READING PHOTOSHOP .PSD AND .PSB IMAGE FORMAT

We have added reading of Photoshop .PSD and .PSB image format to ArahPaint and ArahWeave. We rely on external tools to read it, so it only works on Linux and Mac, not on Windows, which lacks those tools. Some more exotic variants like duo-tone or multi-channel are not supported. Multi-layer images are collapsed into a single layer. If you need to keep the layers for editing purposes, we suggest you use the GIMP.

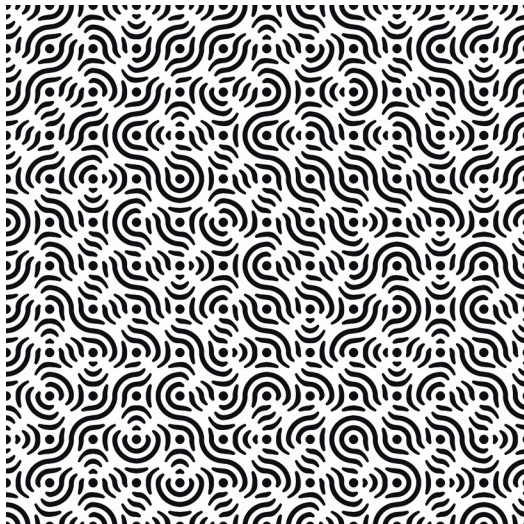
What is the difference between .PSD and .PSB files? PSB files support even larger images, instead of maximum of 30.000 pixels, PSB supports 300.000 pixels. And maximum file size can be bigger than 2 gigabyte.



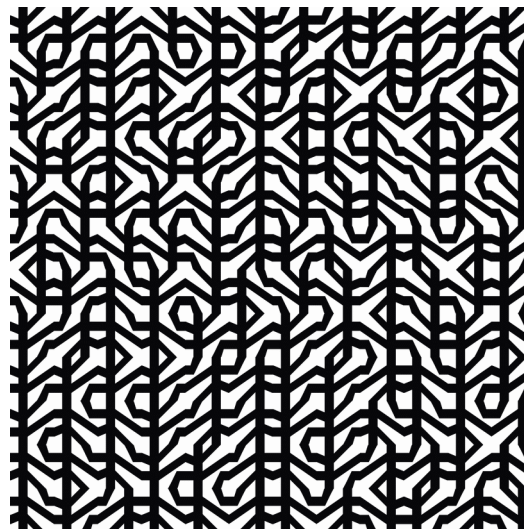
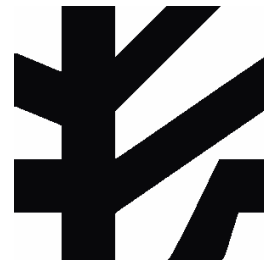
2.3 TRUCHET TILES

We digitalized a collection of 84 Truchet tiles, so you can use them to create interesting random patterns in only a few clicks using the Random function in ArahPaint. We use the base tiles designed by Edward Borlenghi <http://arearugscarpet.blogspot.com/2014/04/the-curse-of-truchets-tiles.html>

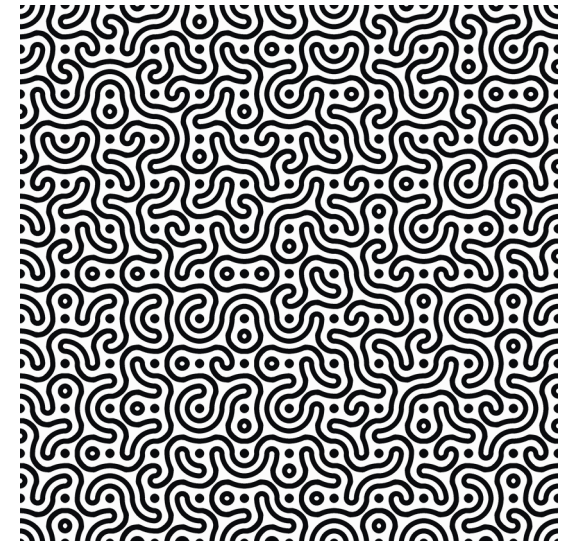
TRUCHET TILE 35



TRUCHET TILE 45

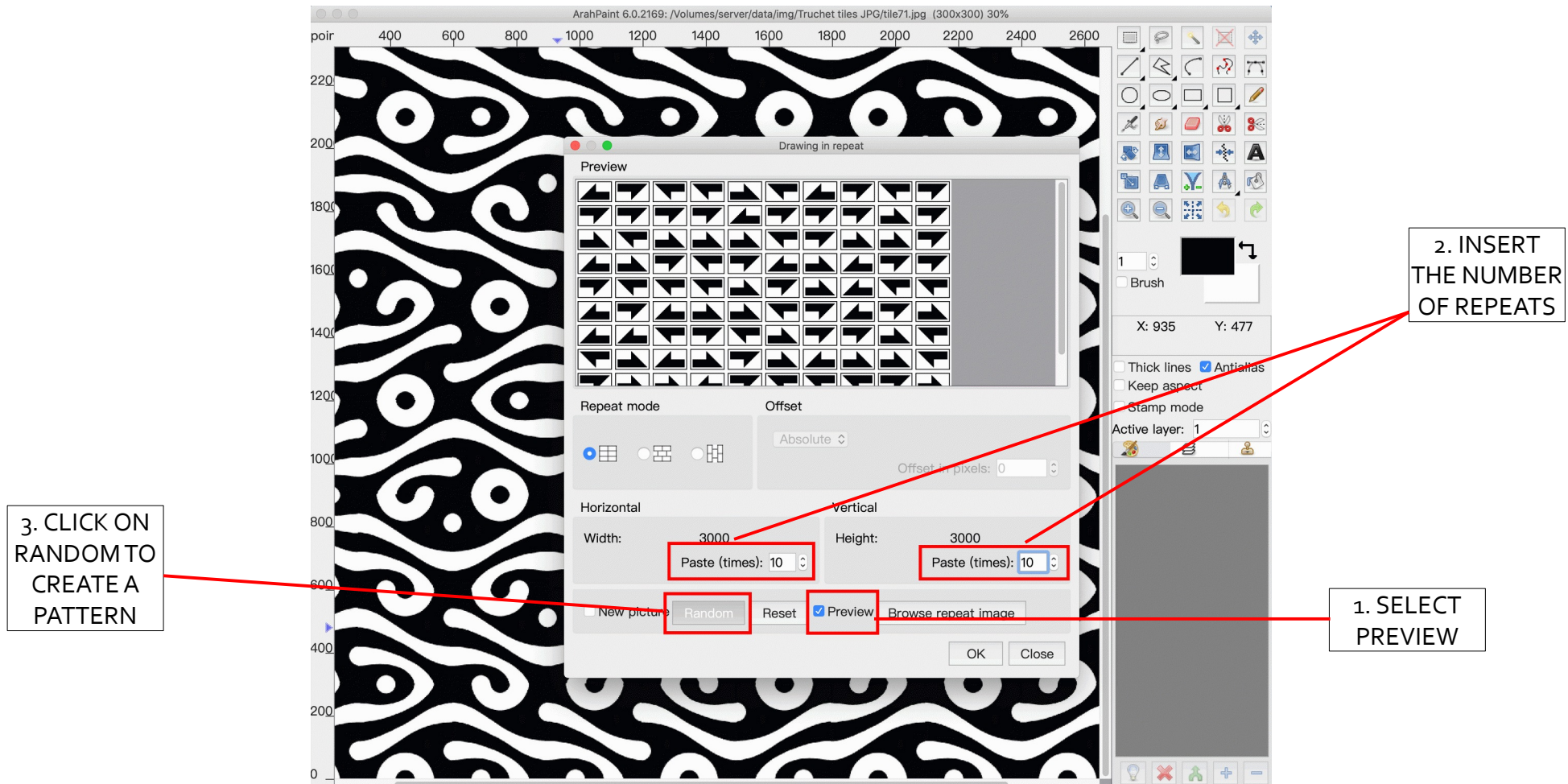


TRUCHET TILE 49



WHERE AND HOW TO USE IT?

In ArahPaint load the Truchet tile (under data/img) from the Browser. Go to **Image > Drawing in repeat**. Select **Preview** and enter the number of repeats in horizontal and vertical directions. Then click on **Random** to generate a pattern. Click on Random a few time until you get the desired pattern, then select **New picture** and click OK.



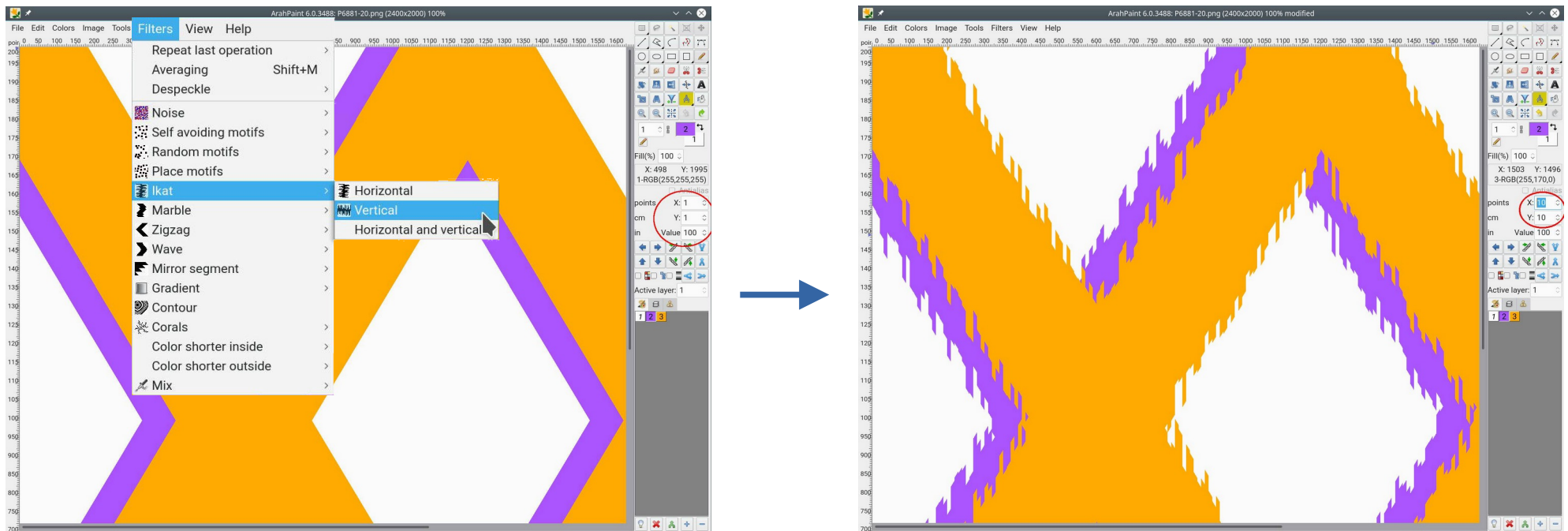
2.4 Ikat

WHAT DOES IT DO?

Previously, the Ikat filter in ArahPaint6 would only move one thread by a random size of the Value parameter. You may now set the x and y parameters, and it will move multiple groups of threads.

WHERE AND HOW TO USE IT?

Click on the **Measure tool** and enter the following parameters: X, Y, Value. Go to **Filters > Ikat** and select the direction: Horizontal, Vertical, or both.



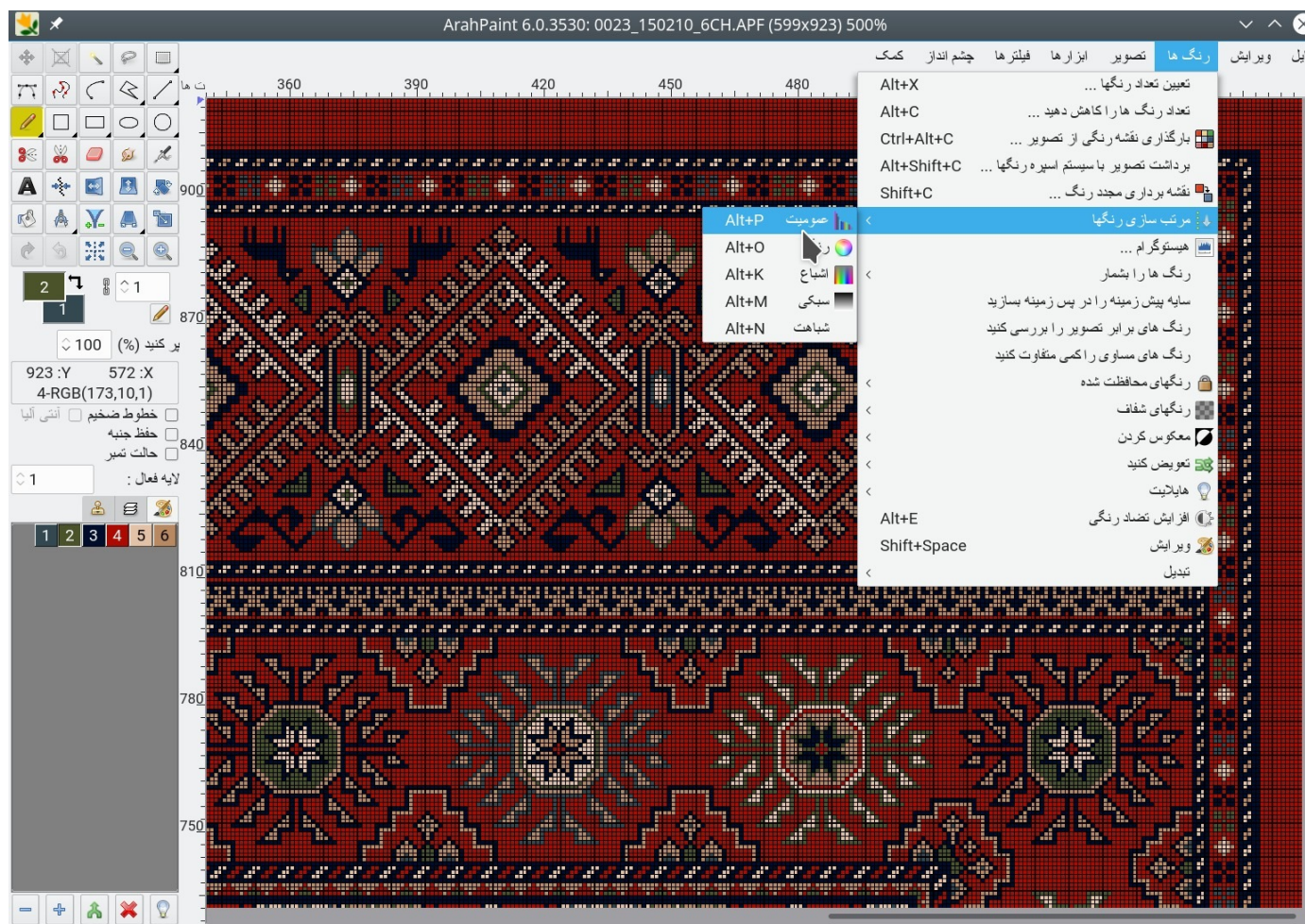
2.5 FIXED CUT AND PASTE

We fixed the cut and paste in ArahPaint6, so now the pasted selection no longer changes the position on the image. Click on the social media icon, to watch the tutorial on Facebook, Instagram or LinkedIn.



2.6 TRANSLATION TO PERSIAN (FARSI)

We have translated ArahPaint6 to Persian language. To change the language, go to **Help > Save setup** and select Farsi.



3. NEW SHORT TUTORIALS

Click on the social media icon, to watch the tutorial on Facebook, Instagram or LinkedIn.



