Creating Symmetrical Patterns using Clones in Inkscape

- Art: designs using symmetry •
- Programming: creating clones of objects •
- Math: symmetry, translation of geometric shapes •

Clones change when the original object is changed. There are many ways to use Clones to create symmetrical patterns.

Project 1: Creating symmetrical patterns using clones and P6 transformation

- 1. Create any object circle, rectangle, star etc.
- 2. Select the object and open the Fill-Stroke window by clicking on the paintbrush icon on the top.
- Click on RGB Fill and slide the Alpha value from 255 to any number below 3. 100 to make it transparent.



Paint brush Fill Stroke

- 4. Select Your object and click on Edit- Clone-Create Tiled Clones
- 5. Symmetry tab Set the parameters

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- 6. Use arrow keys on the keyboard to move the original object out of the pattern.
- 7. Select original object and click on Path Object to Path.
- 8. Click on Edit Path by Node and drag and edit nodes to change pattern.



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Same pattern as above after nodes are changed.

Project 2: Creating symmetrical patterns using other Clone transformations.

- 1. Create the original shape to be cloned use a square the first time.
- 2. Select the shape and click on the paintbrush (RGB window).
- 3. Click on Fill and click on ? make the color undefined.

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- 4. Select original shape and click on Edit-Clone- Create Tiled Clones.
- 5. Set Symmetry

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6. Click on Color : change Hue – row 20% column 20%.

Do not change anything else. Make sure the initial color is NOT black.

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Edit Path by Node



7. Click on Create.

8. Unclump

9. Clones are created and the original is under the first cloned shape. See the selected square.



9. Find original shape (under first cloned shape) and edit it (use Path-Object to Path to make object editable) and see all clones change.





Troubleshooting Tips:

If the shapes do not line up, check your Shift tab and make sure Shift X and Shift Y are O's Make sure in Edit – Clone – Created Tiled Clone you have Use saved size and position of the tile unchecked. The line at the very bottom offers suggestions.

Excerpted from http://www.computersforcreativity.com