Some New "Fat Tail" Arrow Utilities

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Presented here is an improved version of our **Fat Tail Utilities** that were found in **GuruGram #117**. Original files remain **here** as .pdf; **here** as .psl sourcecode, and **here** as extractable **PostScript** And the corresponding latest files are found **here**, **here**, and **here**.

Here's a group portrait for most of the new candidates…
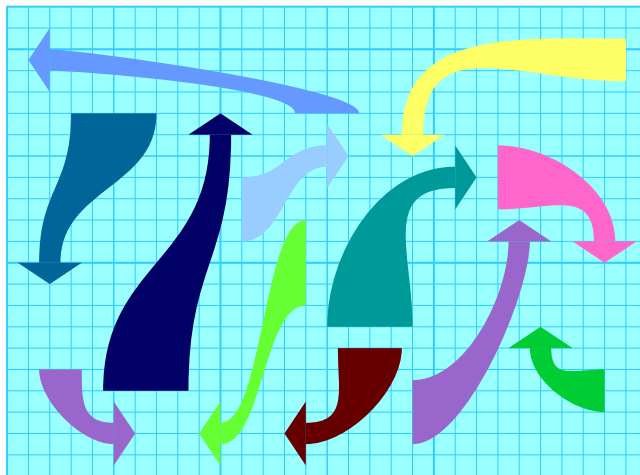
As before, the method is based on using single "fairly weak" **cubic splines** for the sides and straight line segments for the ends. It turns out there might be **twenty** possible arrangements of end orientations for fat tailed arrows of this type. Twelve of these are **straight arrows** of chosen positive, zero, and negative tail offsets. An additional eight are **right arrows**, which are always assumed to have positive or "absolute" offsets.

Now included are much shorter files, relative data values for all but the head tips, newly being offset oriented, optional control point plots for debugging, and full

web friendly color access. The tip and tail tensions are newly adjustable for any unusual needs. The **Gonzo Utilities** are not needed for the new code but remain extremely useful for demos and general fattail apps. In the demos, our gridding has been "web friendly" upgraded as well.

It is our custom to normally work at a 10X magnification as this makes data values less cumbersome and discourages excess precision.

In updating some of our **eBooks** to **Level II**, I decided I needed a fairly simple way to programatically create and enter these arrows. One older but detailed fattail demo appears **here**.

The **new arrow sourcecode** is easily extracted and inserted into your **PostScript** textfile routine . It can then be sent to Acrobat Distiller or GhostScript to create your final .PDF file. But note a secret gotcha: **Distiller arrives from the factory with most disk access locked**. If you are using our **Gonzo Utilities** or otherwise want disk access, always run Distiller **from the command line** using the magic and top secret **//acrodist /F** incantation.

Each fattail arrow command consists of an eight element array followed by a "cardinal" key using this format…

[tipx tipy arrlen tailoff tipthk tailthk tipwd tipsiz] fatcommand

And here are the actual commands used in the above demo…

[6 2 3 3.5 1 2 3 1] rtailne

[2 9 8 3   1 4   3 1] ftailns

[10 17 13 -3.5 1 4 3 1] ftailsn

[1 19.5 2.5 14 1 3 3 1] rtailsw

[19 15 10 4.5 1 2 3 1] rtailes

[16 15 5 -2.5 1 3 3 1] ftailwe

[9   2 5 8 1 4   3   1] ftailew

[13 2   4 4 1 3 3 1] rtailnw
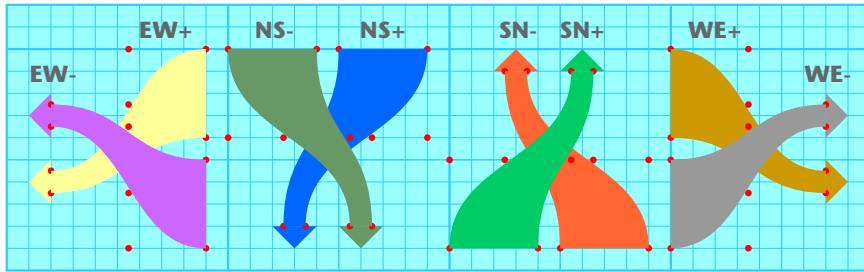
[25 7 3 3 1 2 3 1] rtailen

**[24 12 5 9 1 3 3 1] rtailwn**

[22 14 7 5 1 4 3 1] rtailse

[28 10 5 4 1 3 3 1] rtailws

Here are the names and offsets of the "straight" fattail arrows. **The offset value is positive if east, north, or zero**. The offset is negative if south or west. The offset is the distance from the tip to the center of the tail…
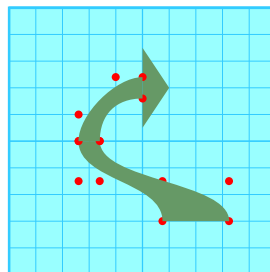
Here are the names and offsets of the "right" fattail arrows. Note the offset is the distance from the tip to the center of the tail. Be sure to also note that **the right arrows always spec their offset as a positive or "absolute" value**…
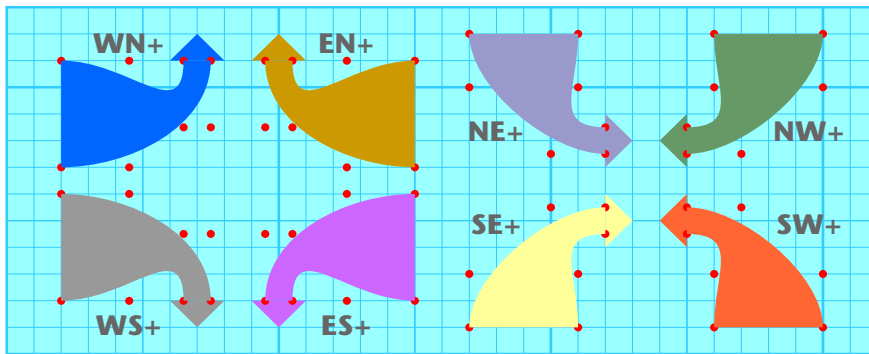
Getting Fancy

A sneaky trick can greatly expand your fat arrow possibilities. One that lets you do arrows like this one…

Note that we can make any arrowhead "disappear" by setting both **tipsiz** and **tipwid** to zero. So, what we have done above is place a "tipless" fattail arrow immediately **below** a "regular" fattail arrow. Giving us two splines on each side. And greatly extending the possibilities of just where the tip is allowed to be with respect to the tail. The coding might look something like this…

[3 5   3   4   0.8   2.5   0   0] ftailsn

[6 7   2   3   0.8   0.8   3   1] rtailse

For More Help

Additional examples and tutorials appear in our **GuruGram** and **PostScript** libraries. Sourcecode for this GuruGram can be found **here** .

Seminars, training, **consulting**, and direct PostScript programming projects are available. You can **email me** or call (928) 428-4073 for more details.