

From VF to String Art with Larger Jump Sets

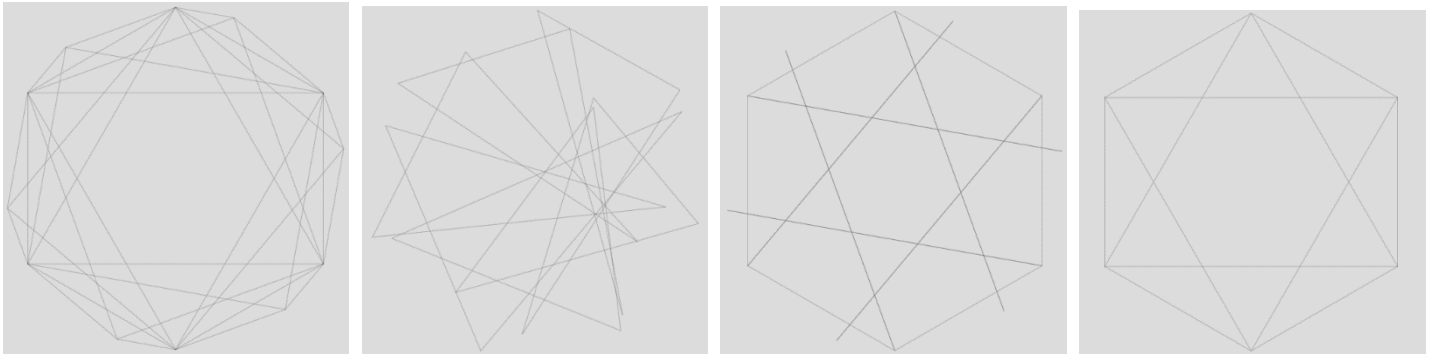
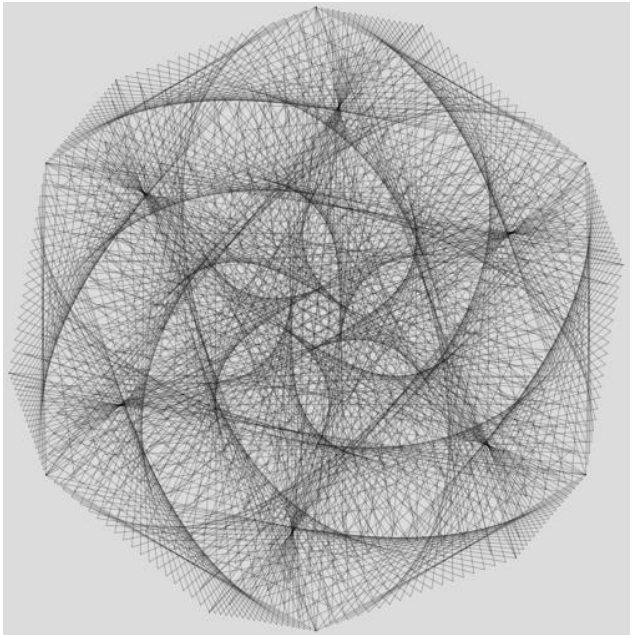
Having a larger number of jumps in a jump set requires having larger n , which increases the number of lines in the VF if $VCF = 1$. As we consider final images using S subdivisions, the number of lines in the image often gets to the point where it is impractical to try to follow exactly how the image was created. The question becomes: *How can one use $VCF > 1$ and or $SCF > 1$ to find images among neighboring images that are much more densely packed?*

There are a number of ways to proceed, and we will only examine a couple of options here, more to offer suggestive hints than to lay out a complete superstructure of what you will find as you explore larger jump set images.

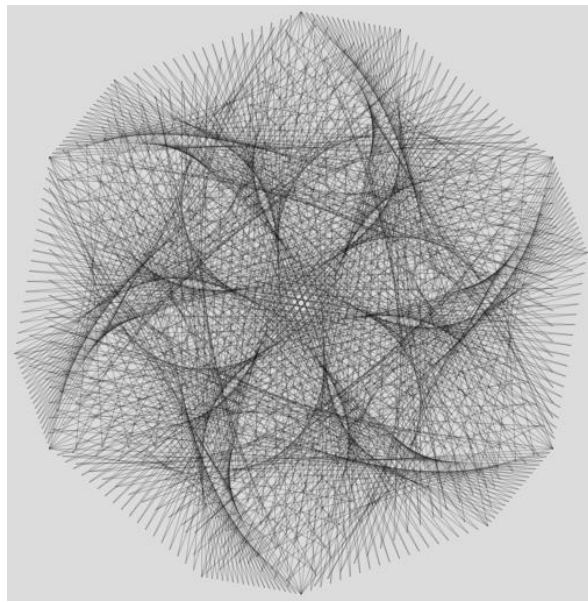
Take, this 684 line $P = 35$ [Hexagons with off-center 6,2 needle fan](#) (18,19,35,J(1,2,3,4,5,6)). It is reminiscent of [needle fans](#) examined when $k = 2$. The image remains manageable because $VCF = 3$.

(Change to $n = 17$ or 19 and get 1938 or 2166 lines, respectively.) Or change $J_6 = 6$ to 8 above and a [2052 lines image](#) occurs because $VCF = 1$. Discernable patterns are visible, but are more difficult to see due to overall line density issues.

Some nearby images have large SCF. The $P = 19$ VF is 36 lines, $P = 36$ is 19 lines, $P = 38$ is 18 lines, and $P = 57$ is 12 lines.



Use the scroll key on P to check out other options. Each of the following images maintains $SCF = 1$ so there are 684 lines. $P = 37$ is a rotating \cup 6 petal internal flower. [MA. This image is [single step](#) with $DL = 37$. $1 = DL \cdot P = 37 \cdot 37 \text{ MOD } 36 \cdot 19$ and $V_{used} = k \cdot n / VCF = 36$ (as noted in the $P = 19$ VF image above).] $P = 41$ is a rotating \cup 6 petal internal flower. $P = 49$ is something akin to six rotating feet. The last two $P = 53$, a 6,2 internal star with eyelet ends and curves, and $P = 59$, a 6,2



internal star with curved ends, are shown here. Change to $n = 15$ for $P = 59$ and note five large and five small off-center gathering points in the resulting 570 line image.

