

## Creating your Initials in Four Colors

Suppose you want to create your initials using electronic string art, ESA. ESA works by connecting the last vertex to the first vertex to form the vertex frame (whether we are talking about polygons or non-polygonal images), so it is important to be able to connect letters to one another. The only other option is to do each letter separately using different colors. In that event, if you have two initials, each one can still have two colors.

*Here are a few suggestions as to how to proceed.*

**Graph paper helps.** It helps to start by drawing out what you want. Use graph paper if you have it or use this [number-edged blank graph paper](#). This helps because you can use a ruler and see how the image gets roughed out. *Use a pencil and erase often.*

When drawing, think about slope if you plan to use intermediate points (like the horizontal bar in the **A** to the right). This is easily accomplished with graph paper.

**When using a point multiple times, you may want to link to its first usage.** If you do that you can easily adjust that vertex and it adjusts elsewhere within the vertex list. This can help you fine tune your image. For example, (30,5) is vertex 14, 20, 22, 33, and 34; and (50,0) is vertex 19, 23, and 32.

**Sometimes you must back up.** Suppose you start at the top of the **E**. In the end, you will have to backtrack to the top of the **E**.

**Before entering vertices, think about where you want to start.** It often helps to start in the middle and move out in both directions. The vertices to the right show that the image was started at the bottom of the **E**. Vertex 7 got to the end and by 14 we were back at the bottom of the **E**.

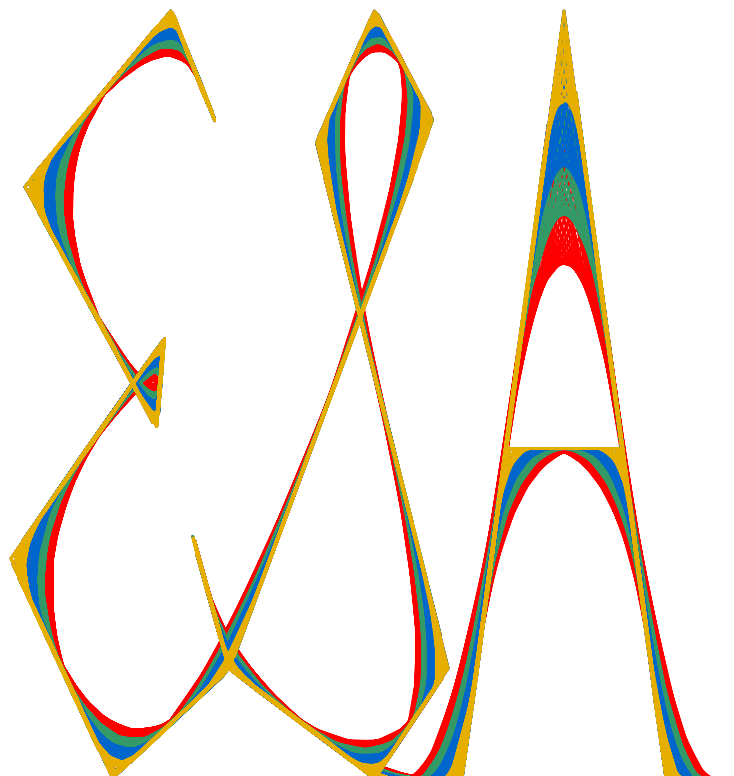
**Sometimes mixing *curative* and print fonts helps in connecting letters.** Do not think you need to stick to one font or another, what you are trying to achieve is something that people will recognize even though it is a blend of styles. The *curative* **S** provided a natural connection between **E** and **A**.

**Remember to use zero jumps if you do not want a curve.** If you want to create as small a connection as possible, you can use zero jumps. Suppose you did not want a curve connecting the bottom of **S** to the **A**. Increase the size of **V** by 2 to 36, move vertices 24 – 32 to 25 – 33, 33 and 34 to 35 and 36, and add (50,0) at vertices 24 and 34 (i.e., repeat vertices 23 and 33). The new image would not have a curve connecting **S** to **A**. This was not done in the image above but note vertices 33 and 34 are the same. This was done to remove a curve that would exist at (30,5) in the absence of this duplication. To see this, type 33 in A1 (A2:A4 are linked to A1) and note that a curve results.

**Use primes for **S** and **P** and make sure they do not have factors in common with **V**.** In the example just discussed, if you set **V** = 33, the gold curve is reduced from 1551 lines to 141 since SCF = 11.

**It is probably best to stick to  $P < S$ .** You need not use the same number for each **S** but that makes it easier to work with, thus you see links for the other **S** values in B2:B4. Try **S** = 7 to see why  $P < S$ .

**To stack colors, set  $E6 = 0$ .** The **X** and **Y** shifters in Row 6 all linked to this cell so one change will affect all colors. If you want them side by side, you need to figure out maximum values in both directions and shift accordingly.



	34	47	31
	34	47	25
	34	47	19
	34	47	11
<b>V</b>	<b>S</b>	<b>P</b>	
B50:B51 has red x,y			
Red Vertices			
	X	Y	
1	14	0	
2	0	10	
3	21	20	
4	20	16	
5	2	27	
6	22	35	
7	28	30	
8	22	35	
9	2	27	
10	20	16	
11	21	20	
12	0	10	
13	14	0	
14	30	5	
15	58	30	
16	50	35	
17	42	29	
18	60	5	
19	50	0	
20	30	5	
21	25	11	
22	30	5	
23	50	0	
24	62	0	
25	76	35	
26	90	0	
27	100	0	
28	90	0	
29	84	15	
30	68	15	
31	62	0	
32	50	0	
33	30	5	
34	30	5	