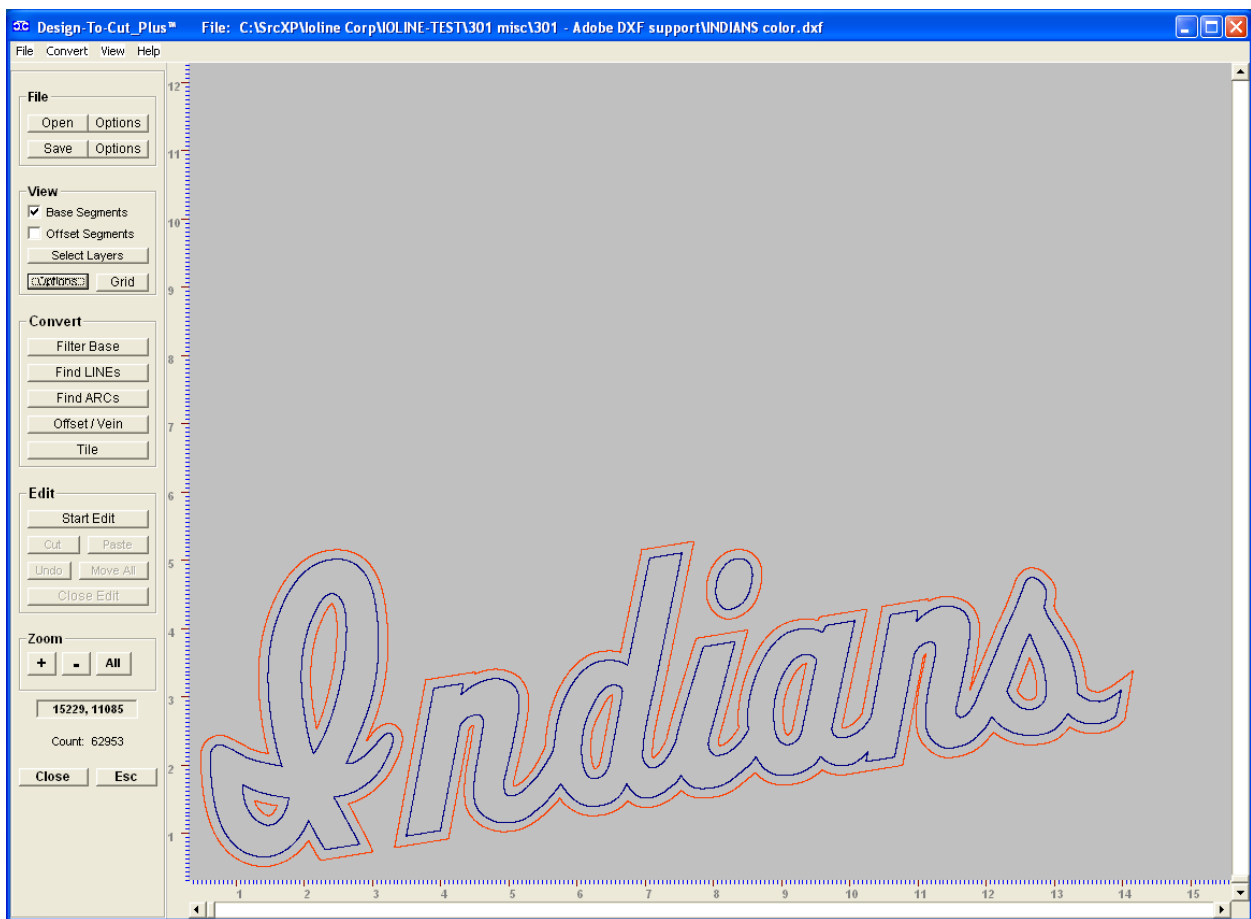


Find LINES and Find ARCs

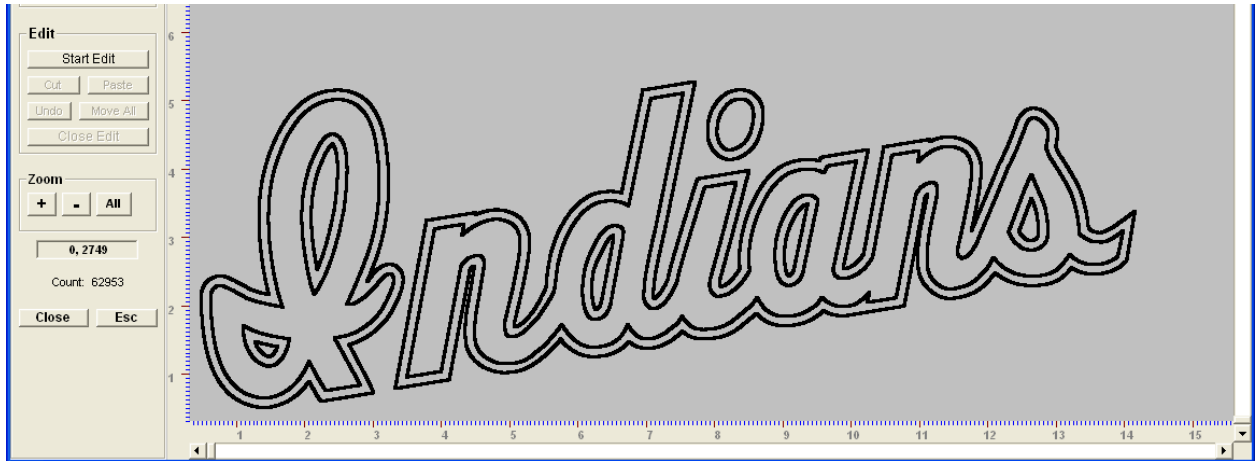
Here we've imported a file that was created using SPLINES but now consists of tiny lines – 62,953 points to be precise. The points are accurately placed so the image looks good on screen. However, if this file was sent to a cutting machine, the results would probably be less than acceptable. And the cutting machine may actually be prematurely worn trying to accomplish so many points in such small proximity (some points are less than 0.01" apart).

This situation occurs when a file that was originally created using ARCs or SPLINES (or other curve entities) is converted to tiny segments during the file saving process (export). It may also occur when a file of a particular file type is imported by CAD software that does not retain the ARC or SPLINE definition records, and exports as tiny segments.

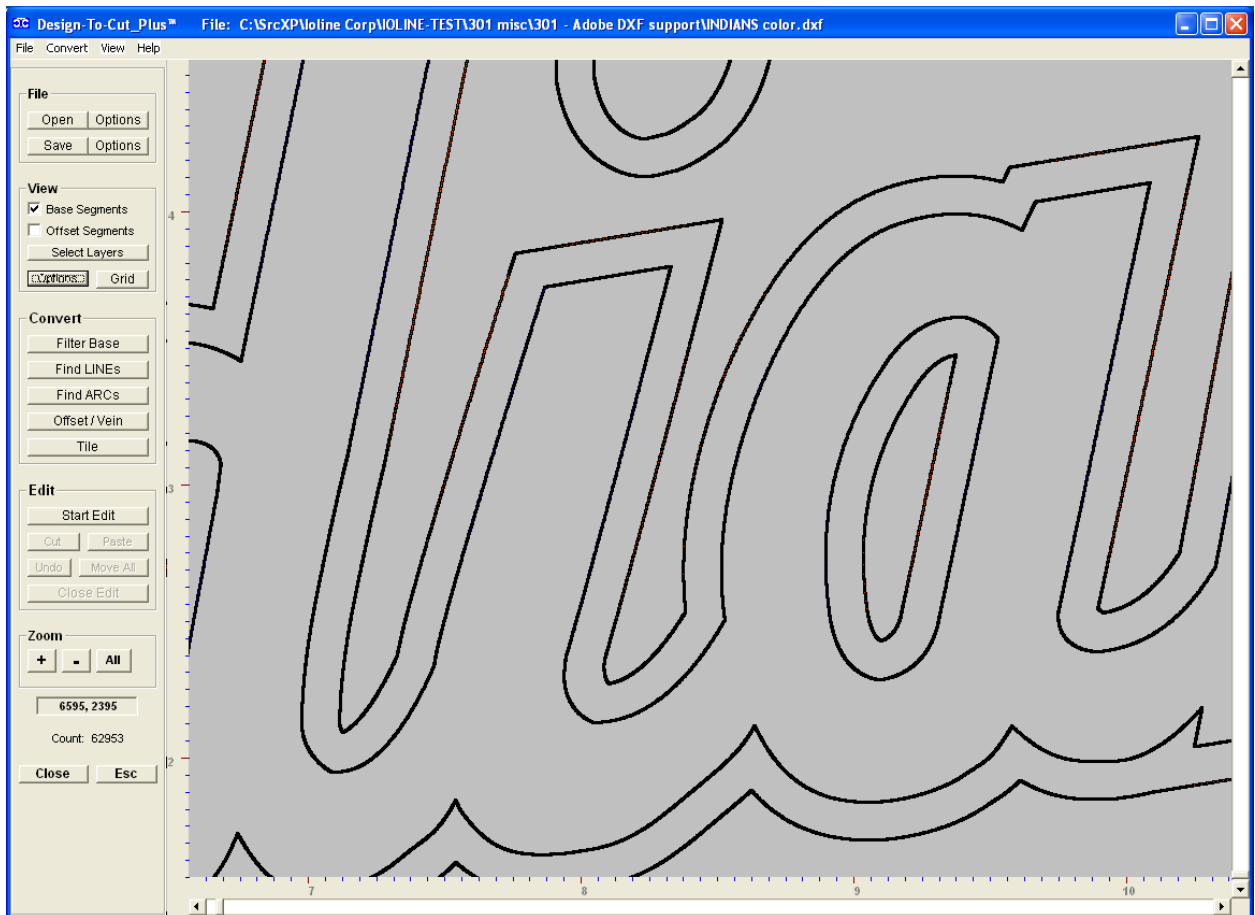


Continued next page..

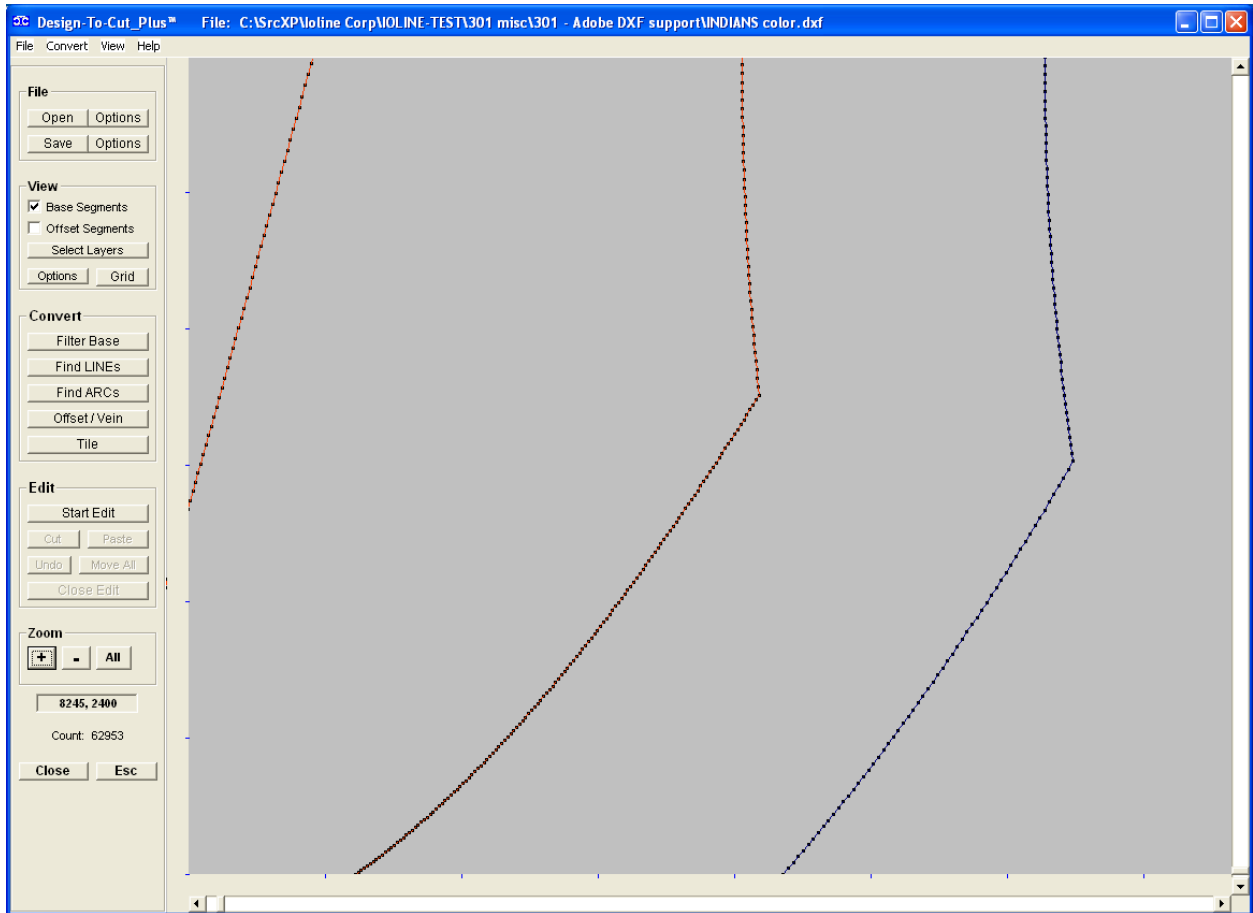
Here is the same file but with all points highlighted in black. Because the points are so close together, all we see is black.



A closer look – each point is highlighted in black. The points are so close together, at this zoom level they are still touching each other so it appears as a continuous line.

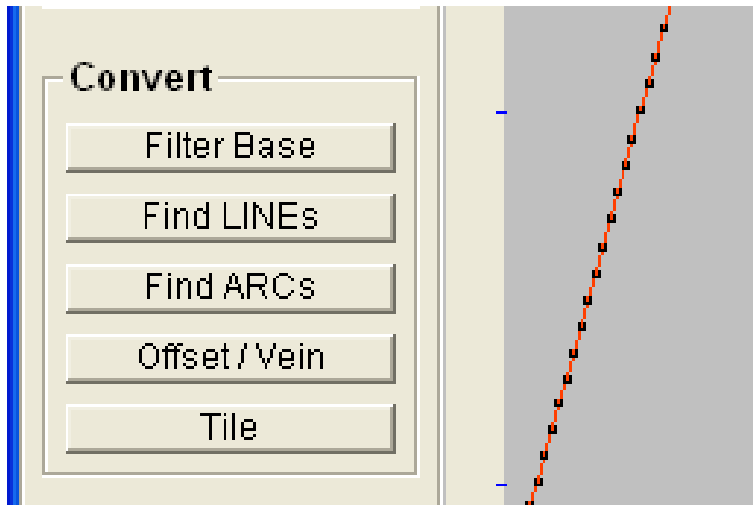


Here we've zoomed in much further. The points are still almost on top of each other. This is hard on cutting systems and would likely render an unacceptable result.

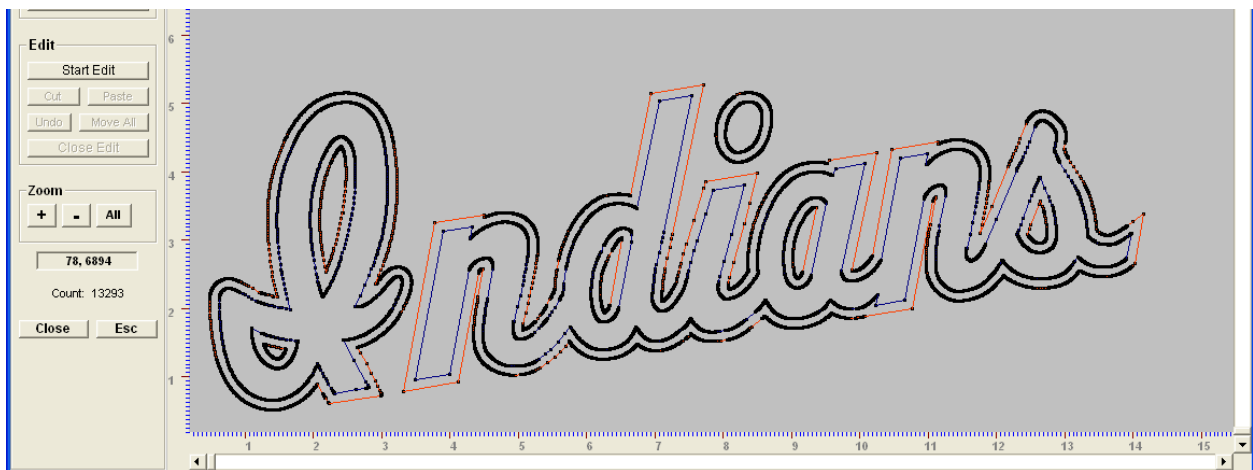


See next page for how to convert a file of this type, to a file with consolidated entities which will render a much smoother cut piece (and greatly reduce wear and tear on the cutting machine)..

To convert this file to one with far few endpoints (condensed entities ARC and LINE), select the options from the Convert frame at left of the Design-To-Cut window.



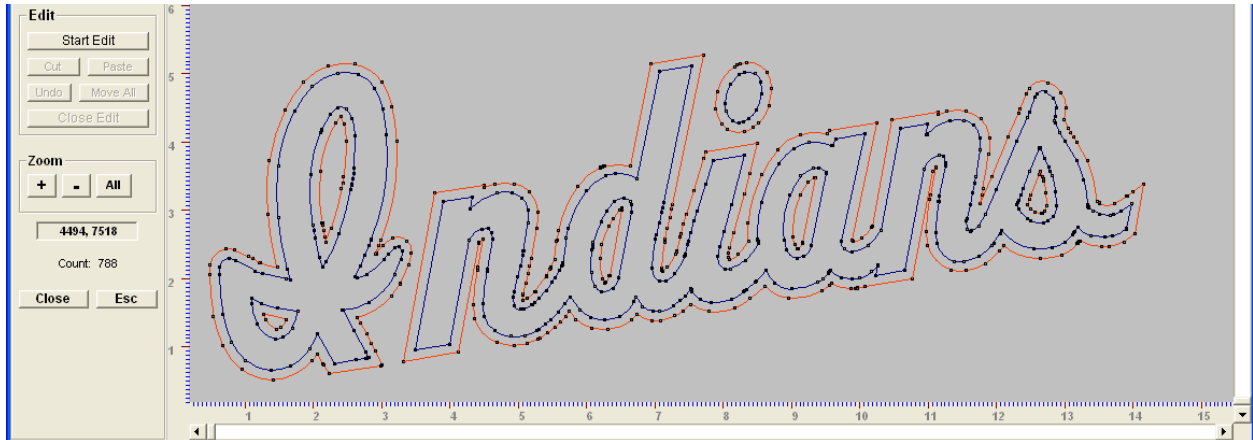
First, select **Find LINES**. The result shows that sequences of points that were in a straight line have been converted to longer lines, greatly reducing our original count of 62,953 points to just 13,293.



Continued..

Next, select **Find ARCs**. The result shows that sequences of points that were in curves have been converted to continuous arcs, greatly reducing our original count even further. After this last stage of conversion our total count has been reduced from 62,953 to just 788!

All endpoints are still highlighted in black, but you can see that there is a much greater distance between each endpoint. This enables cutting systems to do their best.



A closer look:

