Subject: From mathematical curve to 3D business card object?
Posted by sylvar on Mon, 25 Mar 2013 19:59:25 GMT
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I'm trying to make a plastic card of roughly 85.60 Ã— 53.98 mm that will have a curved groove cut through it so that I can use it to trace a standard normal distribution (also called a bell curve). I've been able to create a list of coordinates in Excel and import them as a curve in SketchUp, but that only represents the values themselves -- I'd want the groove to be about 1.5mm thick.

What are some good approaches to take here? If I can create a 2D graphics file with the groove on it (i.e. "cut out all the black bits"), obeying minimum thickness requirements, what next? I know I can import the image itself into SketchUp and put it onto the face of the blank card. I don't know how to turn that image into an area that I could then push/pull through the card to punch it out, or alternately to select the inverse of the area and push/pull the non-cutout part of the card out of the plane.

Thanks for any suggestions you have, folks.

File Attachments
1) Standard Normal Curve Template - with bell curve.skp, downloaded 29 times

Subject: Re: From mathematical curve to 3D business card object?
Posted by sylvar on Mon, 25 Mar 2013 20:44:53 GMT
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...And here's the version that has the points imported as a curve (calculated in Excel, saved as CSV, imported with the Cloud plugin).

File Attachments
1) Standard Normal Curve Template with points imported as curve.skp, downloaded 30 times

Subject: Re: From mathematical curve to 3D business card object?
Posted by JACANT on Mon, 25 Mar 2013 21:16:20 GMT
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Join the points together then use the offset tool 1.5mm. Join ends, then use push/pull to delete groove.

Make sure you are in top view and the camera is set to Parallel Projection

File Attachments

1) image.png, downloaded 73 times