Meshcam
gr3software.
shoelcam.

Review of CAD/CAM Software

Rhino

Positives

- Very powerful and intuitive surface modelling software
- Great for mouldings and intricate surface design

I made this on rhino, for my first attempt it took the same time or maybe faster than solidworks For organic 3D forms, it's awesome

Negatives

- Drafting and engineering drawing seems to be more limited. I assume since it's for making ultra-complex 3D shapes (which are impossible to do a 2d drawing for) They focussed less on this
- We don't do much surface modelling, unless we wanted to start up a car design sector

Conclusion

It's good but not at what we want. Solidworks still wins out in this

OneCNC

No trial version, the most basic is £1595, and the one we'd want is £2195. Not worth the risk of investing

Vcarve

Positives

- Genuinely powerful for the price. Vector based which means it can do complex curves (and I could draw the patterns in illustrator)
- Based on wood carving, so can do interesting and detailed patterning
- May be a good option for the assessment boxes
- Good option for interface boards also. With it being so easy to move the circles around, literally anyone could build the interface program
- Can do texture detail easily, so if we wanted to texture a tray etc, would be good
- Good interface

Negatives

- Doesn't automatically link lines in DXF files saved by solidworks. Takes a little more time to set up
- No coolant flow options

FeatureCAM

Has a trial version, but someone may have to sell their kidneys to afford it. (£2800)

VisualMILL

Looked specifically at VisualMILL as a plugin for Solidworks, but the standard VisualMILL program is extremely similar, just it requires the solidworks file to be exported as a STL. Solidworks plugin bulletpoints start with (SLD)

Positives

- Relatively intuitive interface and simple setup
- (SLD) can use specific in-model contours for certain paths
- (SLD) opportunity to add in clamps to ensure no collisions
- Graphically more easy to understand what tools do what, easier for a first timer than SheetCAM
- (SLD) Being contour and face based, no need for confusing layers
- (SLD) Wouldn't have to worry about DXFs being different issues to the solidworks files.

Negatives

- The non-solidworks version did crash on me. Not quite sure why.
- (SLD) Only I could really make the programs during work hours, or we would need more licenses, and that could get pricy fast.

Conclusion

It's essentially a more powerful and easier to use version of SheetCAM. It does the same basic functions but would save us a lot of fiddling about with the details. Using the solidworks plugin would make it so that there would be no issue problems with DXFs. Generally it's just a better version of SheetCAM and for the program, good value compared to featureCAM and OneCNC.

Mynest

Nesting for about £5 per nest. There is an option for bundles, where it can go down to £3.50 each. There is an option to use it for £3 per day.

It would be worth it if we started using the CNC machine in batches, instead of doing part-by-part like we do now, it can either quickly nest (1 minute, and saves a surprising amount of material compared to just arraying), or if you leave it for 5 minutes or so, save every last square mm. You'd definitely save the £3.50 to £5 on some material sheets. Doing this would need a re-think in how we currently CNC though.

Costs nothing to give it a shot. Got 1 free credit for signing up.

NestFab

Essentially Mynest but costing over £1000. We wouldn't use it enough for it to be worth it.

Sense 3D scanner/ iSense

After looking at some reviews of the Sense and iSense,

Positives

- A significant amount cheaper than the usual 3D scanners, and has a much bigger scan size (Makerbot scanner can only do 200 diameter x 200 height objects, and costs a lot more
- Both types can export STL files.
- Both come inbuilt with basic trimming software so that the floor or table can be cut off.

Negatives

- There seems to be some difficulty scanning objects smaller than a person's face.
- It's £359 and £399 for an ipad 4,
- Desktop version is cheaper at £250, but has a cable to a computer, so a laptop or windows tablet is required, and the wire is fiddly.

If you have time, check out this video. It's a couple guys 3D scanning faces, models etc. You will get a better idea of resolution from that. It seems to be resolving well enough. But not perfect.

https://www.youtube.com/watch?v=mnOzzbl0Uqw