3D Scanners help Grovely Wood speed up their production time

Grovely Wood is a new family run company based in Hampshire. They currently produce a small, but unique range of toy stable-houses and accessories made of real quality wood, complete and ready for play.

Tricia Grady, owner and founder of Grovely Wood approached 3D Scanners in the hope that their manufacturing process of each individual wooden horse could be made much more efficient with the help of reverse engineering.

It was currently taking Tricia's daughter two hours to cut and sand the horse profiles from Birch. These profiles then had to be glued together before being hand sanded again for another thirty minutes.

To complete the process the wooden toys have at least two coats of natural Osmo® oil/wax applied to produce a beautiful and enduring toy.

As Tricia had access to a CNC machine with Mach 3 software in her workshop, the obvious solution was to 3d scan the horse profiles producing a polygon mesh, called an stl file. This type of file can be imported directly into the CNC machine and used to produce a machined version.

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The profiles were scanned at the 3D Scanners' Coventry premises using the new PolyWorks® 2014 Real Time Meshing™ feature.

This new feature creates a polygon mesh as you are scanning, eliminating the need to align and merge the point clouds into a polygon mesh later on.

This consquently speeds up the whole process and makes it easier to spot any issues whilst you are still scanning.

From the photograph on the left you can see the polygon mesh appearing whilst the toy horse profile is being scanned.

In the photographs above you can see the polygon mesh appearing whilst the toy horse profile is being scanned.

Using PolyWorks Inspector ™
A plane is used to crop the unwanted data picked up from the surface it was scanned on. The screenshot (above right) is a close up of the polygon mesh in wireframe mode.

The polygon mesh (stl) was then available to Tricia at Grovely Wood to be imported into Mach 3 for use on the CNC machine.
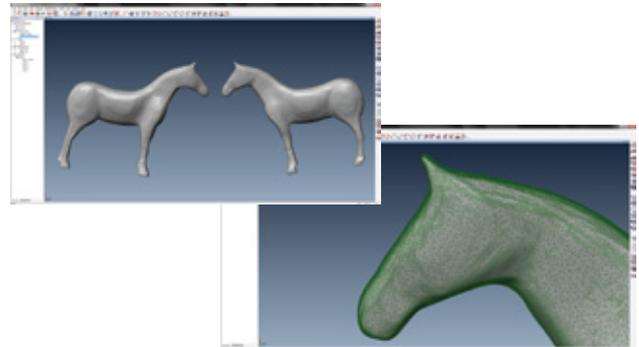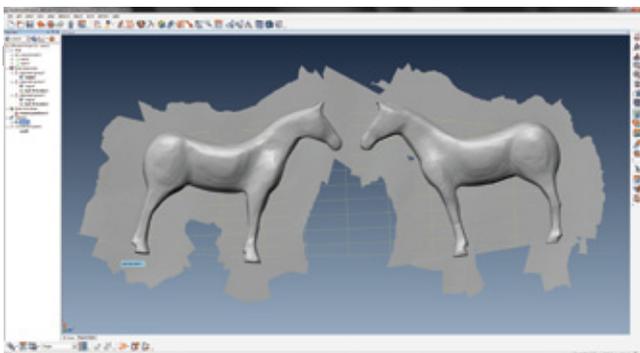
Production time reduced by a massive 50%

'We would like to thank all the team at 3D Scanners UK for their outstanding assistance and support. Your kind efforts have been really instrumental in reducing a very labour intensive job down to something far more manageable.' and we really do 'THANK YOU ALL'

All our very best regards,

Tricia & Emily Sims

www.grovelywood.co.uk
Click here to view the video showing the new process