

CAD/CAM Collaboration

CAD/CAM

The **TEP CAD/CAM training programme** introduces teachers to a creative approach to achieving a manufactured outcome using CNC technology. The framework of the course considers using CAD as a creative tool in the same way an artist would use drawing media or a sculptor would use clay. The significant advantage of CAD/CAM is its ability to exist as a medium to express a design skill and also its inherent capacity to perform as an accurate engineering and manufacturing tool. The course invites teachers to investigate the natural and built world and to take visual and structural clues from organic forms and architecture and to transpose those elements into a product design. The aim of the course is to take teachers with a very basic understanding of the technical elements of CAD/CAM and to raise their level of expertise to a position where they can confidently take their skills back to the classroom. Integral to the technical elements of the course is an overriding concern to guide the teachers down a creative path to achieving a manufactured outcome.

A recent **Pro/DESKTOP CAD/CAM** training course delivered by **Stephen Stott** (TEP) and coordinated by **John Adams** (Dorset Design and Technology advisor) brought together 26 teachers and representatives from four CNC tool manufacturers. The course was delivered in the training department of Cobham plc who design

and manufacture valves and systems for aerospace flight refuelling. This industrial venue gave the teachers an opportunity to visit the companies CAD/CAM facility and observe a process that involved designing on Pro/ENGINEER CAD and manufacturing on industrial size CNC machines.

The approach adopted at Dorset invited representatives from the CNC manufacturers community to contribute to the course and give the



▲ From paper sketch to Pro/DESKTOP to manufacture



▲ Manufacturing their designs on Techsoft Roland Modela

teachers the opportunity to investigate which machine best suited the requirements of their own Design and Technology department. This strategy gave TEP the opportunity to access the training expertise of the four collaborating companies and provide a much broader and enriching experience for the teachers. The companies that collaborated were **Boxford, Denford, Suregrave** and **Techsoft**.

The result of this very successful collaboration was

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that teachers attending the course were able to gain a level of expertise in Pro/DESKTOP that allowed them to export their designs to a CNC machine and manufacture a product.

① For further information regarding CAD/CAM training courses contact Stephen Stott via the TEP office at Warwick (see back page for contact details).



◀ CNC manufactured designs of storage and racking systems inspired by architecture



Gaining expert training from Denford ▶



Look what I've made! ▶



Designing in progress ▶



▶ Gaining expert training from Boxford



Some of the designs created on the course ▶