

Make it Real, Make it Cheap, Make it Green

3C 1:00 – 2:15 pm

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Getting the most out of your design models

Autodesk technologies provide the shortest path from art to part. By combining Autodesk's world class design solutions like AutoCAD Inventor or AutoCAD Inventor LT suite, with CNC, 3D printer and other technologies you can build an integrated process to rapidly convert your concepts to prototype, and then to cost effective production parts.

Manufacturers gain competitive advantages by seamlessly integrating their design solution with production support applications. Key support applications include

- CAM and Computer Numerical Control systems (CNC) for production parts,**
- 3D printer technology for rapid prototyping and,**
- Manufacturability and Sustainability analysis.**

Making it real

Customers can go directly from 2D sketches to 3D models to physical parts with little or no re-creation of the design information. By using CAM or CNC tools like InventorCAM design engineers can simulate the production processes of everything from simple Lathe work to complex 5 axis milling. Companies see dramatic time and cost savings in the production process when using these techniques.

In addition, manufacturers can now quickly create physical prototypes or all types of products using desktop 3D printers. These low cost devices can be installed within a standard office environment and enable engineers to convert their 3D design models into hand held parts that can be used for presentations, design reviews or as samples.

Making it Cheap(er)

Gaining a clearer understanding and control of the costs associated with the manufacturing process is one of the fastest ways to increase overall profitability.

For the design of plastic parts, manufacturability concerns such as gate and runner placement, fill and cooling rates, process cycle times, surface finish and warping all play a major role in defining the costs and quality of the part. New manufacturability simulation capabilities embedded within the design tools give engineers unprecedented access to control over the parameters that contribute to these concerns and make it easier to optimize the parts for cost.

Making it Green

"Sustainability is on the agenda of every management team. Some feel it's just PR, while other businesses can't be 'green' enough." - ClearPath Sustainability advisors.

What impact are your design and manufacturability decisions having on the ecology? What can you do to ensure that you produce socially responsible products while maintaining a reasonable cost and profit structure. Sometimes just knowing where the materials used in your products are coming from and where they will eventually be "going to" can make all of the difference. Design tools such as Sustainability Advisor provided in Autodesk Inventor now enable engineers to analyze sustainability factors early in the process and to deride materials sections and production solutions that result in clearer, greener designs.