

# RAPID PROTOTYPING SAVES SCHEDULE TIME AND COST FOR NEW PRODUCT DEVELOPMENT

*A prototype is worth more than 1000 words*

If a picture is worth 1000 words, then a three-dimensional model is worth quite a bit more. Developed by MIT in the late 1980s, 3D printing is fast and produces an actual working prototype of a product at a fraction of the time required before this technology arrived. It is able to do this at a fraction of what it would normally cost to do so.

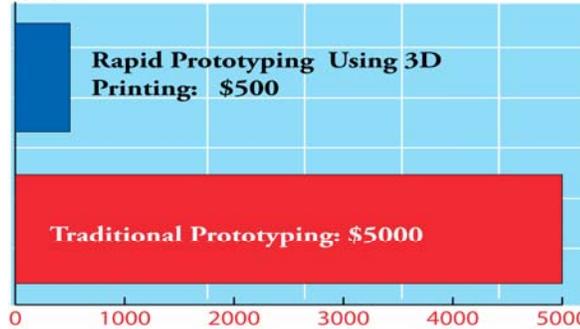
Such technology is being used by cutting-edge designers to create new products that accelerate product development chain. Early information allows early and wise decisions about further investment in the production effort for a new product.

For example, shoe manufacturers have used such prototyping based on lasers and a footprint from a soccer player. Intricate and careful design detail for a shoe can avoid injuries and allow the player to utilize their skills much better. A German producer of sanitary and water fittings, utilized rapid prototyping to create a flushing system for a client who asked that they develop a product for them.

Sigma Design Company has invested in a Dimension 768 Series 3D dimensional printer to create rapid prototypes for its client. Previously, Sigma had the experience of creating prototypes that required a third party vendor to produce it.

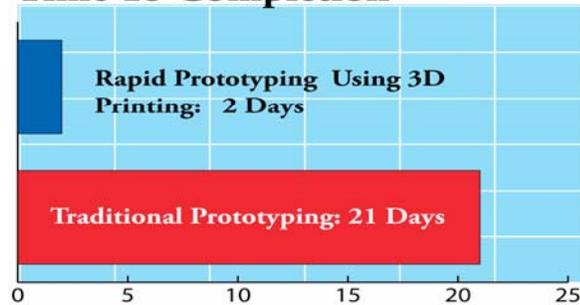
## Rapid Prototyping versus Traditional Prototyping

### Cost



When a client of Sigma Design Company procured a prototype made of Aluminum, it required a lead time of 21 days and cost \$5000 to produce. Marketing subsequently rejected the prototype. Had the prototype been produced using Sigma Design's 3D Printer, it may have been produced in 2 days at a cost of \$500. Ten iterations of the prototype could have been produced for the same cost.

### Time To Completion



*Source: Sigma Design Company*

This took longer and was more expensive. When a client sought a prototype of aluminum, four prototypes were produced at a machine shop. It took 21 days to produce, and cost \$5,000. Shortly after it was presented to the product development team only to be rejected by their marketing team.

"The technology that we offer would allow us to have produced a plastic prototype in two days, at a mere cost of \$500", says Jerry Lynch, President of Sigma Design Company. "We could have produced ten iterations of that prototype for the same investment and had them available in a fraction of the lead time."

Sigma's recent acquisition of a 3D dimensional printer allows prototypes to be produced from ABS plastic (Acrylonitrile Butadiene Styrene). This is a durable and versatile material, available in white, blue, yellow, black, red, green, and steel gray colors.

The material may be deposited at layers as thin as .010 inches in thickness. This plastic material is used to make everything from the heads of golf clubs and LEGO bricks to fabricated pipefitting.

