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Kimball Carriage Place
175 LINCOLN STREET

 **Helix**

201

603.644.1408

www.helixdesign.net

• Product Design

• Product Forecasting

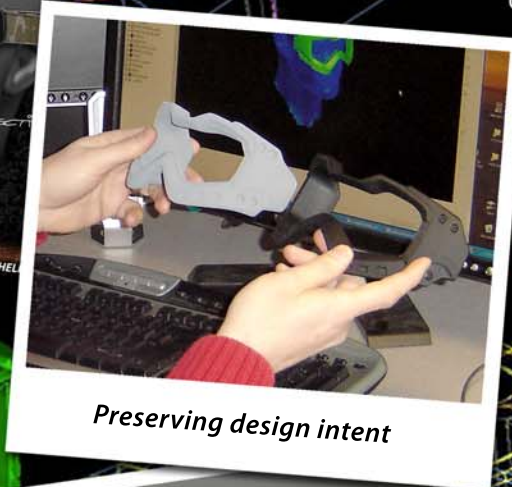
• **Engineering**

• Prototyping

Preserving design intent in Engineering



Measurement and interpretation



Preserving design intent



Evaluating FDM models



Evaluating Objet models and tolerances

The March 2009 Sneak Peek is the third of our 3-part series on how the Helix Design team generates solutions to your product development needs. In **January**, we highlighted our "blue-sky" concept generation capabilities in two dimensions. In **February**, we put our team's hand modeling skills front and center to show off how we refine product ergonomics prior to CAD generation. This month, we talk about how we ideate and solve mechanical problems in CAD.

As Helix industrial designers transition 2D concepts into 3D form, our mechanical engineers focus on retaining the customer-chosen aesthetics and interface of a product concept while incorporating real world considerations and constraints. In 2008, the Helix design team was hired to generate goggle concepts for the BMX market. Our client used the urethane foam models our team carved in the concept generation phase to choose features and concepts to move forward with. Helix engineers used the same foam models to streamline the transition of concepts into CAD. Once our engineering team generated preliminary 3D CAD geometry, we printed ABS-based prototypes on our Stratasys Dimension FDM machine to gauge gross form, part break-up, and various size options to best fit the feel of the product in its target market.

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Ideation in 3 dimensions



The ability to interrogate physical prototype parts answers many questions but often raises others: while our engineering team adds details and features to product geometry, "serial" prototyping allows us to confirm the merits of design solutions well in advance of production documentation release.

As the need for accuracy increases during CAD implementation, our team generates production-tolerance Polyjet prototypes of concepts on our Objet Eden350V machine. Prototyping throughout the product development process reduces risk by allowing us to interact (and potentially head off issues) with your product's enclosure before production release, and a typical project benefits from the inspection and analysis of dozens of prototype parts.

For more information on how we might help you get product development solutions in your hands more quickly, please contact:

Troy Barber @ 603.836.0290

For more information on Helix please visit:

www.helixdesign.com

Thank you for your continued interest in Helix Design. We look forward to working with you sometime soon!

Increasing model accuracy prior to production

• Product Design

• Product Forecasting

• **Engineering**

• Prototyping