BRAINSTORM

NordicNeuroLab Reduces Time to Market with an Objet 3D Printer

"Our Objet 3D Printer has helped us to reduce time to market and has also decreased the risk of building a faulty mold."

— Svein Reidar Rasmussen, NordicNeuroLab

NordicNeuroLab uses 3D printed parts to test form and fit at an early stage in the design process.

NordicNeuroLab (NNL) is an innovative Scandinavian medical design and production company that specializes in functional magnetic resonance imaging (fMRI). fMRI uses MRI technology to measure brain activity by detecting associated changes in blood flow. The entire NNL product line is designed and developed in collaboration with its customer base of medical research and clinical groups. Strong partnerships with MRI system manufacturers, leading research institutes and feedback from customers drive the continuing evolution of the NNL product line.

NNL operates in a competitive market where uncompromising product quality must be combined with tight control of costs. Extensive pre-production testing of new products is essential. Looking for an effective way to fully evaluate its product designs early on in the development process, NNL decided to use an Objet® Eden™ 3D Printer to create prototypes at different stages of the product development process.

Models Provide Product Behavior Insight

The Objet 3D Printer enables NNL to visualize concepts and test form and fit in relation to other components at an early stage in the design process. NNL also uses its 3D printer to test ergonomics and evaluate the overall design. 3D printed parts are used not just for prototyping but also in the final product.

"The Objet Eden 3D Printer helps us easily and quickly meet our customers' requirements," said Svein Reidar Rasmussen, hardware developer at NNL. "During development and design of a new product, we use rapid prototyping to show us how the final product is going to look and feel." NNL uses prototypes to make decisions and solve problems in cases where other external products are used in combination with its solutions.

NNL uses rubber-like material to evaluate the ergonomics of buttons and controls.

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"3D printed prototypes give us the ability to quickly verify our designs," Rasmussen said. "This has enabled us to speed up our workflow and create a highly effective development and design process. We have reduced time to market for our product line."

NNL uses the rubber-like material to evaluate the ergonomics of buttons and controls. It uses transparent material to create translucent models of product shells. With electronics inserted inside the shells, NNL can better understand and identify otherwise unpredictable design flaws.

Reduced Manufacturing Costs

3D printing has helped NNL eliminate errors in the pre-production phase of injection molding. Mold building represents a significant portion of the costs of developing any new NNL product. The ability to verify, before production, that the product is correct eliminates the need for changing the mold, reducing overall costs.

"The high accuracy, smooth surfaces and strength of models produced on our Objet 3D Printer enables us to use them in the end product," Rasmussen said.

The Objet 3D Printer enables NNL to fully evaluate the ergonomic functionality of its product line and even use prototype models in the final product. The result is a substntial reduction in production costs and time to market.
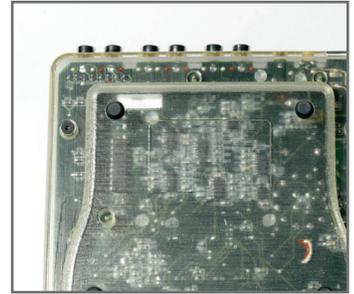
NNL uses an Objet 3D Printer to evaluate the overall design.
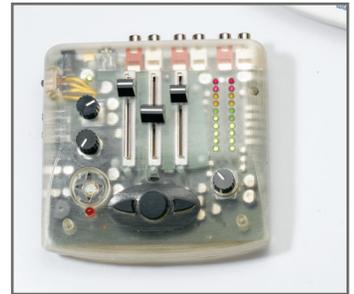
Prototyping helps NNL eliminate errors in the pre-production phase of injection molding.

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