

AT A GLANCE

Company: Ivivi Technologies
URL: www.ivivitechnologies.com
Location: Northvale, New Jersey, USA
Industry: Medical devices

Challenges

→ Ivivi sought to significantly cut time off the process of manufacturing medical devices for clinical trials.

Solution

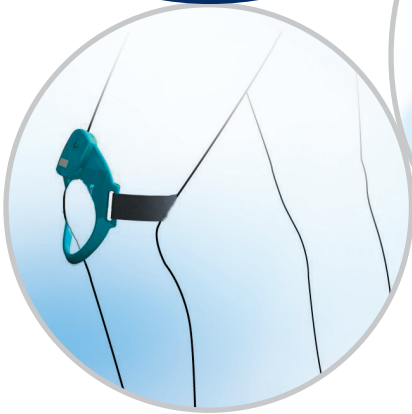
→ The Eden350 3-D Printing System from Objet

Results

→ Cut an average of five to six weeks off the clinical trial device manufacturing process
→ Yielded positive return on investment in less than one year. Improved company's ability to develop new prototypes
→ Strengthened relationships with key distribution partners

“
Objet has completely changed our business...it's given us the ability to create working medical devices overnight that are ready for clinical trials
”

Andre A. DiMino
Vice Chairman of the Board,
Executive Vice President & Chief
Technical Officer
Ivivi Technologies, Inc



IVIVI TECHNOLOGIES

With Objet, Ivivi Technologies rapidly, accurately and cost-effectively engineers, develops and manufactures medical devices in-house for clinical trials

Ivivi Technologies, a publicly traded medical technology company, develops non-invasive electrotherapies for a wide range of different medical applications. Ivivi's medical devices are used to treat pain and swelling by stimulating patients' anti-inflammatory responses. The firm is also developing electrotherapeutic devices for a wide range of other medical uses including cardiac, neurological and orthopedic applications as well as for the treatment of non-healing wounds (e.g., bed sores, diabetic ulcers), sports injuries and other health conditions.

The diverse and expanding opportunities for application of Ivivi's electrotherapies required the continuous production of small quantities of units for clinical trials. Preparation for each trial took costly months of planning, development and production – which, of course, significantly delayed the company's ability to bring products to completion.

“We were relying on outside resources and, often, it was taking months to create just one very expensive and extremely delicate prototype, which of course would have to be modified at least a few times to get the final product right for the trial,” said Andre' A. DiMino, Vice Chairman of the Board, Executive Vice President and Chief Technical Officer, Ivivi Technologies. “We needed a faster, more streamlined system: one that would let us do the engineering, development and production of clinical trial-ready devices in-house. We had heard about rapid prototyping and were very excited about seeing how it could help us.”



Eden350™ chosen for speed, accuracy and printed item's weight, finish, durability

DiMino spoke with representatives of each rapid prototyping system on the market. He found that these systems could enhance the production of single units of new medical devices but, except for Objet, each had significant drawbacks: the units they produced could be coarse, heavy and inaccurate and the production process could be frustratingly slow. Only Objet's technology proved capable of quickly creating precise devices ready to be fit with electronic components and delivered to clinical trial participants.

DiMino chose the Objet Eden350 for its speed and accuracy, and the printed item's light weight, smooth finish and durability. In late 2007, after advising on the best location for the system at Ivivi and providing a comprehensive tutorial on the technology, Objet made the delivery and installation.

Positive return in less than a year

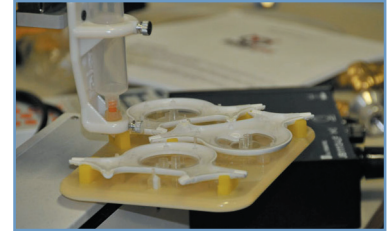
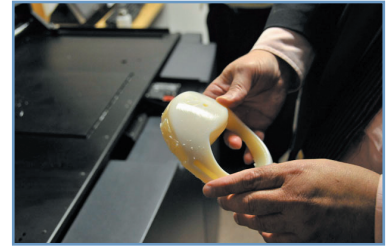
The integration of the Eden350 into the product development and production cycle at Ivivi has been an unqualified success, yielding a positive return on investment in less than one year. "We've cut an average of five to six weeks off the clinical trial device production process," said DiMino. The system is providing other major benefits as well:

- enhancing Ivivi's ability to develop new prototypes, empowering designers to make product changes overnight.
- strengthening relationships with key distribution partners, who have been amazed to discover that Ivivi can modify devices to meet business and patient needs in just one day's time.
- providing rapid, cost-efficient ways to design and manufacture customized production tools (i.e., jigs, fixtures) and for finishing clinical trial devices. Previously, these required repeated and expensive outside machine shop support.

And to underscore just how responsive, versatile and creative the Objet system is, DiMino used the technology to print key chains for each member of Ivivi's board of directors.

Ivivi is now considering upgrading to Objet's revolutionary Connex500™, the first-ever system to allow simultaneous 3-D printing of several materials with different mechanical and physical properties. According to DiMino, the new technology would allow the company to further streamline the production of devices consisting of both rigid electronic casements and softer components designed for patient comfort.

"Acquisition of the Objet system has proven to be one of the best business decisions I've ever made," said DiMino. "Objet is one of those rare examples of technology innovation that truly enable a company to reach higher levels of success."



About Objet Geometries

Objet Geometries, the photopolymer jetting pioneer, develops, manufactures and globally markets ultra-thin-layer, high-resolution 3-dimensional printing solutions for rapid prototyping and rapid manufacturing.

The market-proven Eden™ line of systems is based on Objet's patented office-friendly PolyJet™ technology. Objet's FullCure® materials create accurate, clean, smooth and highly detailed 3-dimensional models, enabling the most complex 3-D models to be printed with exceptionally high quality, accuracy and speed.

Connex500™, Objet's latest innovation, is based on Objet's PolyJet Matrix™ technology, which offers jetting multiple model materials simultaneously. PolyJet Matrix jets Digital Materials™ creating composite materials which are fabricated on the fly.

Objet's solutions enable manufacturers and industrial designers to reduce cost of product development cycles and dramatically shorten time-to-market of new products. Objet systems are in use by world leaders in many industries, such as automotive, electronics, toy, consumer goods, and footwear industries in North America, Europe, Asia, Australia and Japan.

Founded in 1998, Objet serves its growing worldwide customer base through offices in USA, Europe, China and Hong Kong, and a global network of distribution partners. Objet owns more than 50 patents and patent pending inventions.

**Objet Geometries Ltd.
Headquarters**
2 Holtzman st.,
Science Park,
P.O. Box 2496,
Rehovot 76124, Israel
T: +972-8-931-4314
F: +972-8-931-4315

**Objet Geometries Inc.
North America**
5 Fortune Drive
Billerica, MA 01821
USA
T: +1-877-489-9449
F: +1-866-676-1533

**Objet Geometries
GMBH**
Im Leuschnerpark 4,
64347 Griesheim
Germany
T: +49-6155-605-346
F: +49-6155-605-344

**Objet Geometries AP
Asia Pacific**
13th floor, Unit 52A, HITEC
1 Trademart Drive
Kowloon Bay, Hong Kong
T: +852-217-40111
F: +852-217-40555

**Objet Geometries AP
Limited China Rep Office**
Rm1220, CIMIC Tower,
1090 Century Blvd,
Pudong Shanghai
2000120 P. R. China
T: +86-21-5836-2468
F: +86-21-5836-2469

info@objet.com www.objet.com

© 2008 Objet, Quadra, QuadraTempo, PolyJet, FullCure, SHR, Eden, Eden250, Eden260, Eden330, Eden350, Eden350V, Eden500V, Job Manager, Objet Studio, Connex, Connex500, PolyLog, TangoBlack, TangoGray, TangoPlus, VeroBlue, VeroWhite, VeroBlack, Digital Materials and PolyJet Matrix are trademarks of Objet Geometries Ltd. and may be registered in certain jurisdictions. All other trademarks belong to their respective owners.

