

"The in-house
Objet 3D Printing
System has improved our
competitiveness and turn-
around times."

Neal R Russell CDT
General Manager,
Protec Dental
Laboratories Ltd.



Objet Eden260V 3D Printer



Case Study



At a Glance

Company: Protec Dental Laboratories

URL: www.protecdental.com

Location: Vancouver, Canada

Industry: Dental

The Challenge

- Create digital models
- Reduce model fabrication times
- Maintain high dental model accuracy while increasing fabrication throughput

The Solution

- Objet Eden260V 3D Printing System with high resolution and fine detail output

The Result

- Full automated digital workflow for fabrication of dental models
- Increased throughput without adding dental technicians
- High precision of dental models
- Improved customer service, with faster delivery times

Protec Selects Objet's 3D Printer to Complete Full Integration of Digital Workflow

In the dental business, keeping up with technological innovations and new treatment methods can define a company's success.

From its early days, Vancouver-based Protec Dental Laboratories has worked hard to keep its staff and equipment up to date with the most advanced technologies in order to ensure it produces the highest quality dental restorations. Protec's organizational culture emphasizes continuing education and innovation and its manufacturing group technicians regularly attend seminars and professional programs.

It was therefore natural for Protec to carefully examine the possibilities of 3D printing, combined with digital imaging, and the potential of becoming a fully digital dental lab.

The Challenge

In today's fast-paced market, using manual operations for dental restorations has become too slow and labor-intensive. Off-shoring of dental restorations to low-cost countries has also started to pose serious competition for many dental labs.

For Protec, it became clear that adopting digital CAD/CAM procedures "leveled the global playing field" allowing possible cost reduction opportunities and enabled higher product quality.

Meeting customer demand and maintaining fast service was another challenge. "We realized we could not deliver models and restorations fast enough without owning the entire manufacturing process," says Neal Russell, General Manager of Protec Dental Laboratories.

"It became clear that bringing the entire manufacturing process in-house would improve our competitiveness on multiple levels."

About Protec:

Established in 1973, Protec Dental Laboratories Ltd. has grown to become one of Canada's leading full service dental laboratories.

With over 100 employees, Protec offers a complete range of crown & bridge, denture and orthodontic products.

Protec Laboratories is committed to producing the highest quality products with the most advanced technologies available.

We have integrated CAD/CAM digital dentistry solutions to produce increased efficiency and consistent standardized quality.

www.protecdental.com



Neal Russell, GM, Protec Dental Laboratories

The Solution

The Objet Eden260V™ 3D Printing System provided the ideal solution for Protec, as it enabled a seamless in-house, digital process – from oral scanning, through CAD/CAM design, through to 3D printing.

Using the Objet Eden260V 3D Printer, Protec technicians manufacture an extensive range of models directly from intraoral scans, physical impression scans and gypsum scans.

The high quality precision printing of the Objet 3D Printer allows Protec to accurately and rapidly manufacture dental models. The exceptionally fine details and outstanding surface finish of the Objet Eden260V ensure a high degree of accuracy, which is required by Protec's dentist clients.

"With the Objet 3D Printing System we can confidently and consistently deliver high accuracy and precision in all our resin printing processes."

The Result

The new in-house 3D printing capabilities based on the Objet 3D Printer allowed Protec to bypass its former slow and expensive outsourcing procedures. Protec can now deliver products faster and at lower costs, and maintain its competitive position even as the market gets tougher.

The Objet 3D Printing System has enabled Protec to introduce non-technicians into the manufacturing workflow, enabling dental technicians to focus on the higher-end tasks. This has resulted in a significant productivity increase by the lab technicians.

As a result of the increased productivity, Protec can now provide a wider range of dental solutions, with higher accuracy, and with improved turnaround times.

"Our in-house production has not only increased productivity, it has opened up new business opportunities."



ABOUT OBJET GEOMETRIES

Objet Geometries Ltd., the innovation leader in 3D printing for rapid prototyping and additive manufacturing, provides 3D printing systems that enable manufacturers and industrial designers to reduce cost of product development and dramatically shorten time-to-market of new products.

Objet's ultra-thin-layer, high-resolution 3D printing systems and materials utilize PolyJet™ polymer jetting technology, to print ultra-thin 16-micron layers. The market-proven Objet Eden™ line of 3D Printing Systems and the Objet24 and Objet30 Desktop 3D printers are based on Objet's patented office-friendly PolyJet™ Technology. The Objet Connex™ family is based on Objet's PolyJet Matrix Technology, which jets multiple model materials simultaneously and creates

composite Digital Materials™ on the fly. All Objet systems use Objet's FullCure® materials to create accurate, clean, smooth, and highly detailed 3D parts.

Objet systems are in use by world leaders in many industries, such as Education, Medical / Medical Devices & Dental, Consumer Electronics, Automotive, toys, 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, Mexico, Europe, Japan, China and Hong Kong, and a global network of distribution partners. Objet owns more than 50 patents and patent pending inventions. For more information, visit us at www.objet.com.

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