

## The company that has pioneered development of dental lasers and periodontal therapy asked Enginasion for help.

**In 2001, Millennium Dental Technologies received FDA clearance to market the world's first patented periodontal laser, the *PerioLase® MVP-7™*, for removal of diseased gum tissue. Recently, Millennium Dental Technologies asked Enginasion for help with overhauling their controller board software, user interface and other mission-critical needs.**

**"Enginasion is the perfect solution for us," says Tom Haney, Vice President of Manufacturing & Engineering for Millennium Dental. "We're a small business. The only EE in our company happens to be the CFO. My own background is lasers and solid state physics, not software. We must outsource for engineering expertise."**

Clients of Enginasion include "big" and "little" companies in the Industrial, Medtech, Military, and Pharmaceutical sectors—some of whom have in-house engineering resources while some do not. Enginasion has helped clients to design and build hardware and software that monitors, measures and controls mechanical and electrical systems.

**Millennium challenged Enginasion to enhance the efficiency of its breakthrough PerioLase® dental laser for periodontal disease therapy.**



### Benefits of the Enginasion Solution

- Reduced control system costs by 20%.
- Updated to color graphical user interface.
- Transformed the physician-user's experience.
- Drop-in replacement for obsolete control.

Millennium Dental Technologies has been pioneering periodontal therapy for more than 17 years.

**OVERVIEW:** Enginasion specializes in solving the most difficult automation problems, applying ingenuity, in-depth understanding of physical phenomena and materials, and wide-ranging expertise in digital and analog electronics, software, user interfaces, networks, fluid controls, motion control systems and measurement techniques.

**CLIENT:** Robert H. Gregg II, D.D.S., and Delwin K. McCarthy, D.D.S., are pioneering laser clinicians who were fascinated by the potential of laser/tissue interaction as an alternative to the extant standard—and dreaded—scalpel/suture flap surgery for treating gum disease. Their vision resulted in the founding of Millennium Dental Technologies in 1994, and development of (1) the PerioLase® MVP-7™ device, a breakthrough in soft tissue dental lasers; and (2) the LANAP® protocol, the first patented periodontal procedure.

**CHALLENGE:** "We asked Enginasion to redo our software," explains Tom Haney, Vice President of Manufacturing and Engineering at Millennium Dental Technologies. "It was written more than 10 years ago. The control is burned into an EPROM chip, making the software very difficult to access. Getting into the mindset of the original developer was a big challenge, which Enginasion was readily able to overcome, on time and on budget. As a result, they are now a long-term partner of Millennium Dental."

**SOLUTION:** "Millennium Dental had control boards that were outdated for some of their laser surgery units," says David Bonneau, founder and CEO of Enginasion. "They hired us to engineer a replacement control board and legacy upgrade for their line of equipment. We also upgraded the look and feel of the physician experience, as well as added additional features for networking and data-logging."

### What the experts are saying...



**Tom Haney**

Vice President, Manufacturing & Engineering  
Millennium Dental Technologies, Inc.

*"Enginasion is the perfect solution for us. We're a small business and don't have the in-house resources to undertake software redevelopment and hardware enhancements. Enginasion is a great partner."*



**Roy Greenwood, BSEE**

VP, Electronic Software & Hardware Design  
Enginasion

*"Millennium hired us to engineer a legacy upgrade strategy for their line of equipment, as well as add networking and data-logging features."*



**David Bonneau, BSEE**

Founder and CEO  
Enginasion

*"We put ourselves in our clients' shoes. We have been able to help Millennium Dental because we go to great lengths to empathize with their unique challenges."*