

# Convergent Dental Partners with RND Group to assist with Solea System



## Our Client

Convergent Dental, Inc., is a privately owned dental equipment and technology company and developer of Solea™, the world's first computer-aided, CO2 laser system to ever be cleared by the FDA for both hard and soft tissue indications.

Solea cuts significantly quieter, finer and faster than any other laser-based system in dentistry. Solea's speed and precision are a result of patented technologies and computer system controls that are unique to Convergent Dental, Inc.



## Choosing RND

Convergent Dental was searching for a software partner who had expertise in writing software for medical devices, specifically, dental devices. Convergent Dental was referred to RND Group by Convergent Dental's product manager, who had worked with RND Group while at a previous company where an FDA approved dental device was successfully delivered to the market.

## Results

The result of this cooperative effort with Convergent Dental is a software application that is state of the art in terms of user interface and functionality. The software application was developed using design control procedures expected by the FDA.

The software features a touchscreen interface and controls the operation of a number of discrete hardware devices including a medical laser, foot pedal control, water pump, coolant pump, air pump, shutter motor, and a variety of valves and sensors. Safely operating the laser while performing continuous real-time monitoring of the status of multiple hardware devices required advanced design and software engineering skills that few firms besides RND Group could successfully deliver.

RND Group has worked with the leading companies in the medical device industry since 1997. RND Group fully understands the rigor required in designing, developing, documenting, and testing products that are regulated by the FDA. RND Group has applied that rigor to the software engineering support it has provided for countless product development efforts, and RND Group can point with pride to products that have been successfully introduced into the medical device marketplace.

## Full Lifecycle Services

- Analysis
- Requirements definition
- Software design
- Software implementation
- Software unit and integration testing

## Capabilities Applied

- FDA Part 820, Part 11
- Windows Development
- Project Management
- ISO 13485, HIPAA, IEC 62304
- Embedded Development
- Software Verification
- Software Lifecycle
- Requirements Management

## Software

- Instrument/Analyzers
- Remote Diagnostics
- WPF User Interfaces
- Firmware/Embedded Devices
- Algorithm Analysis

## Technologies Used

- WPF
- Firmware/Embedded Programming
- C#
- XML

