

# VIRTUAL DENTISTRY

Newest technology could give you more to smile about

BY CAYLA MCMAHON

**WE** have great news that will make you smile. And while you're smiling, picture yourself with a perfect set of pearly whites.

Your days of multiple trips to the dentist, complete with pain, gagging, dread and exhaustion could be gone forever.

"The face of traditional dentistry will be literally changed with new advancements in virtual imaging," said Bob Pendry of Cadent, a leading provider of 3-D digital solutions for the orthodontic and dental industry.

With these technological advances, virtual impressions for crowns, veneers and any restoration merge the speed of the Internet with a technology called the Cadent iTero System. This merger creates a whole new level of perfection, accuracy and time-saving techniques for the dental professional.

"This is the most exciting technology to hit the general dentist's office in a hundred years and will offer the most precise finished product," Pendry said.

For the patient, it means the elimination of the terrible tasting gooey material previously used to make dental impressions. No longer will the patient have to come back for a return visit to take another impression due to error.

Dr. Ron Boshier, DDS, FAGD, is a pioneer in this new technology, the first dentist in the Metroplex to offer virtual imag-

ing for all procedures. Dr. Boshier is a respected member of the teaching faculty of CARD, the Center for Aesthetic Restorative Dentistry, a post-doctoral center specializing in teaching dentists worldwide in advanced restorative and cosmetic dentistry and facial pain therapy (TMJ).

Dr. Boshier agreed to guide us through the process of this new technology, give us a little history and explain the immense benefits.

### Give us a brief history of the developments in virtual dentistry.

Except for the improvement in materials, the original technique of taking impressions of the mouth or teeth has not undergone any changes since the early 1900s. The first digital optical scanner available to dentists, a CAD/CAM unit, originated about 20 years ago. This technique took a digital impression of the tooth and a computer designed the restoration. Then, using the CAM unit, a pure porcelain crown could be milled while the patient waited. However, the procedure could only be used for single ceramic restorations.

### Not all restorations are pure ceramic?

No, only about 30 percent of restorations are pure ceramic. For example, some of the newest ceramic crowns available today have a white ceramic type metal core for strength.

### And the technology has advanced even further?

Yes, the newest improvement is the Cadent iTero System. This system allows the dentist to offer patients virtual imaging on all procedures through optical scanning.

### How accurate is this system?

The virtual impression is perfect. With this system the dentist can see their work at 30 times the magnification from every side. They can identify and correct even the slightest change. Then the area in need of correction can simply be re-imaged. The Cadent iTero System doesn't require any impressions.

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– Bob Pendry

### Tell us about the additional benefits to the patient.

Well, along with alleviating the discomfort of the terrible tasting material on the bulky trays in your mouth, the patient is getting a much better restoration, whether a crown, veneer, implant, bridge or onlay. With the previous process, if the dentist wasn't positive an impression was accurate, the patient might have had to return, get another injection and repeat the process. With digital optical imaging, the scanning takes only about two minutes and the accuracy of the system makes the one appointment shorter and allows for the dentist to treat multiple teeth at one time. The patient also gets to view the entire process.

### What about the cost to the patient with the new procedure?

There is little additional cost to the patient.

### What advantages are there for the dental professional?

First of all, this new Cadent iTero process eliminates some major steps and is a time saver for both the dentist and the patient. There's a short learning curve on the part of the dentist for this system and, again, they can make any type of restoration. The ease of using this system is so superior. The digital image is transferred via the Internet to Cadent iTero where they make an exact plastic model of the mouth by computer milling. It is then shipped to the lab where the restoration is made. The restoration is made and the patient returns to have the restoration seated at their next appointment.



### How do you compare this with other advancements in dentistry in recent years?

There have been several advancements over the past 50 years that have totally changed the profession of dentistry. In the 1960s it was the air turbine; in the 1980s, dental bonding really came into its own; then, in the 1990s implants became commonplace. Now as we move forward into the 21st century and the wonders of modern technology, virtual digital imaging has taken the forefront for all restorative procedures.

### So how will this affect you and your profession?

There are not many times in one's career or profession that something comes down the pike that literally changes everything you do on a daily basis. This is certainly one of those instances. In the coming years, I believe those in our profession will look back and be astounded that we could accomplish what we did using the previous methods. And, from a personal perspective, after over 30 years as a dental professional, virtual imaging is the answer to the accuracy and innovation I have always wished I could provide for my patients. Today, I can say that the technology has finally caught up with the dream and both the dental professionals and the patients have entered into a new era of dentistry.



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