Shakin' all over

by **Paul Feuerstein**, DMD

Carestream Dental, Planmeca, and Glidewell Dental Laboratories are familiar names in dentistry. Now they have something interesting in common. In addition, the names A-Tron, Densys3D, and Condor will join the trio above, and try to find a spot in offices. Just when you thought it was going to be an easy decision to do intraoral scanning, and perhaps create restorations in your office, the confusion begins.

Carestream plans to introduce its CS 3500 scanner this fall at the ADA annual meeting. What is unique about this, and probably the model for the future, is that the scanner is a wand with a USB wire that can connect to a computer (provided it meets some basic specifications). Software called CS Restore seems to automate the process and the mill, CS 3000, creates the restoration in a compact unit that has one drill. There is also a CS Connect online portal that allows scans to be sent to a dental lab.

Planmeca also introduced PlanScan, PlanCAD, and PlanMill 40, "a complete system." The company originally partnered with 3Shape TRIOS, but the PlanScan is a bit different. It can be integrated in the Planmeca chair/delivery system or connected to a PC or laptop via USB. PlanCAD software comes in a dental office version and a lab version, and the PlanMill 40 is a four-axis milling unit for the office (PlanMill 50 for the labs).

Glidewell Dental has introduced an intraoral scanner, design software, and a milling unit. The IOS FastScan allows the dentist to scan an arch and either send to a lab or design/build the restorations in the office. The unique wand has a camera that moves back and forth about 13 mm while the wand is held steady.

The design software was built based on more than 50,000 restorations and preparations that Glidewell has used through the years. It guides the process while still allowing for operator modification. The mill is a bit different in construction than the familiar ones, and is "open." This means it can receive files from any system. At a recent meeting, there were three scanners (TRIOS, IOS, and True Definition) sending scans and designs to the milling center.

A number of other companies (at least six or seven) are introducing intraoral scanners that merely do this. Standard STL files allow export to a lab or one of the in-office design/mill systems. As these appear on the market, I will try to review them. For now, I have chosen three â€" Densys3D, a.tron and Condor â€" as examples of what is coming.

Densys3D, from a company in Israel, has been in development for more than five years. At the 2013 IDS show, the company showcased a small, lightweight, simple scanner at a cost of less than $20,000. At this time, there is no design software, and the company promises a full color version later this year. The product is still in clinical trials.

On December 12, 2012, a.tron, from a company in Austria, alerted us of its launch. The unit I observed at IDS was small and compact, and has a USB interface to a computer. The wand actually connected to a small box, which then connected via USB. The images were clear but unremarkable. I was told, though, that the software is still being upgraded.

Dr. Francois Duret, who some call the Father of Digital Scanning after his 1987 presentation at the Chicago Midwinter Meeting, announced that he plans to launch the Condor system. The prototype looks interesting. Duret's experience should yield something great, but again, we will have to wait for the actual unit to appear.

What does all of this mean? Should CEREC, E4D, True Definition, and iTero be shaking in their shoes? I do not think so, at least not for the next couple of years. The proliferation of these new products validates the existing ones. The current players also have thousands of users and hundreds of thousands of restorations made. TRIOS is also now making great inroads into this space.

Just like the early days of giant LCD TVs, many people bought them and spent a "fortune" because they wanted it "now." No one can honestly predict which system will be the best, simplest, or least expensive in two or three years. But with labs rapidly going all-digital, and the newer materials available for the in-office mills, time is "a-wasting."

In a busy office, there is good reason to dive into one of the current systems. Then when you are ready for the next scanner or system, there will be more choices. I predict the systems will be interoperable. Of course, the current companies are already tearing apart the new ones and looking for any nuances they can incorporate in updates.

In the end, practitioners will be the "winners" by being able to create better restorations.

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