# The Road to Paperless Dentistry

*By Bruce A. Stephenson, DDS, FAGD*

In a previous article, I illustrated how paperless dentistry, using computer-based systems instead of paper-based systems for storing all the information about your patients and your practice, brings about an incredible increase in dental office efficiency.[1] This is why all big business and (gasp!) even the government are rapidly adopting this technology. But, as a small business with limited resources, a dental practice needs to proceed carefully to ensure that each dollar spent returns a tangible benefit for patients and a financial "return on investment" for the dentist.

In working with several hundred dental offices over the last 15 years, I have observed that successful dentists seem to follow a very similar "road" as they proceed toward paperless dentistry. I think the progression on this road is important to achieve the greatest return of benefits at the lowest possible cost. In other words, you'll save a lot of money and avoid a lot of mistakes if you do several things.
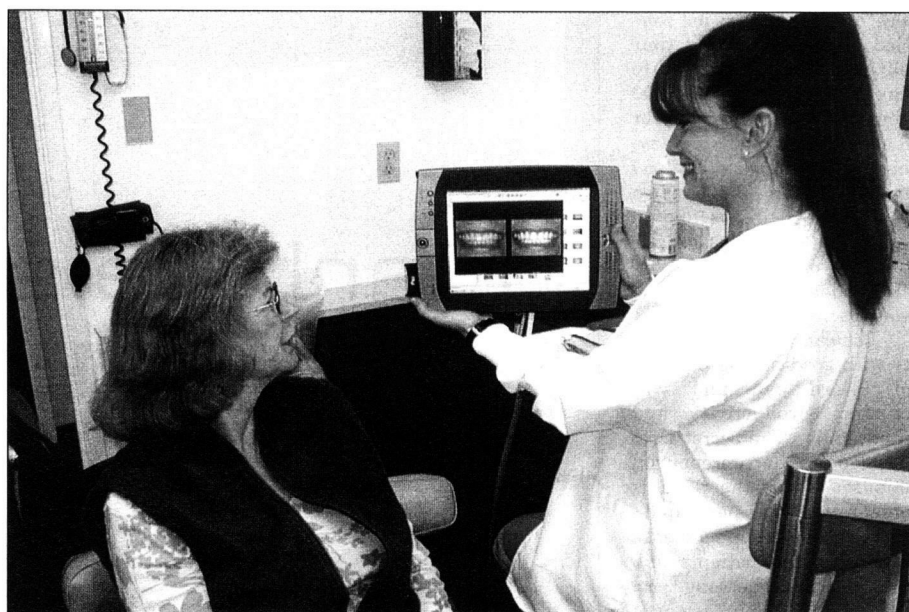


Because good imaging software is so easy to use, our clinical assistant does routine "before and after" computer bleaching during our new patient exams. This takes her about 3 minutes, including taking the digital photographs. This small, easy change in our exam procedure has produced a 3-fold increase in the number of cosmetic laminates and bleaching procedures in our office. Good management software makes it easy to track statistics such as these.

The benefits of paperless and wireless dentistry are actually so profound they are startling.

### DO YOUR RESEARCH

Read as many articles and visit as many websites as you can find. Ten years ago, almost nothing was published on computers in dentistry, and websites were where spiders lived. Now there is lots of free, but very valuable information written by people who have actually "been there and done that." Use an Internet search engine to locate information on paperless dentistry or the paperless dental office. You will find some very interesting "hits."

### GO TO SEMINARS

The Internet is a good source of information on high-tech dentistry seminars and consulting services. Two good websites to explore are www.hitech2thedoc.com and www.drlarryemmott.com. You should get ideas about what's possible, using which hardware and software, how much it will cost, and how to get the best return on the money you invest in technology. You should get a "feel" for what computers offer your practice. Include the staff members you want to stay with you in your new paperless dentistry practice. They should also "embrace the technology" and think of using computers as their "assistants" to make every aspect of their jobs easier. Computers are not "the enemy" and should not be sources of frustration. But unlike most home computers, they are not toys. Business computers are very powerful tools, and each person in the dental office needs to be trained in their use—especially the dentist!

### VISIT OFFICES PRACTICING PAPERLESS DENTISTRY

Visit some offices that are already doing what you want to do (B. Freydburg, oral communication. "The Barry Freydburg Rule," 1995), and be sure to take your staff along. With some patience, you should be able to find an office doing what you want to do and using the products you want to use. Finding someone to "follow" is much easier and cheaper than blazing a trail through the unknown yourself. But make sure you are following a real dental office where everything really works. This is very different than following the pretty picture in a brochure or the unsubstantiated claims of a salesperson. Whenever possible, you and your staff should "visit the site." Everyone should ask lots of questions. Your clinical staff should question their clinical staff. Your business staff should talk with their business staff. (But don't be surprised to find that in a well-run paperless practice, the distinctions between "front office" and "back office" have become so blurred that they have little meaning.) You are considering changes that will cost you a lot of money and substantially alter the way you and your staff work. In this situation, your mother will forgive you for asking rude

questions and being nosy! Here are four important questions you should ask:

(1) Who helped you with this project? Would you use them again?

(2) What went wrong? What went right?

(3) How much did it really cost and how long did it really take to accomplish?

(4) Would you do it this way, with this suite of dental products, if you were starting over today?

Schedule some demos. Most sales reps will be happy to come to your office to show you their latest and greatest. You need to understand that you are dealing with two distinct types of software, although they may be represented as an "integrated solution" and sold together by one salesperson. You should consider them separately. The management software handles billing, scheduling, and clinical charting, while the imaging software handles digital x-ray, cosmetic imaging, and intraoral image capture. Products from entirely different vendors can often be linked together to provide a solution that is superior to the "one size fits all" approach offered by an individual vendor. Don't forget to ask them for a list of their clients you can call. And don't forget to call a few of them, and ask lots of questions!

### DECIDE WHAT YOU CAN/WANT TO DO YOURSELF

Dentists are usually pretty good at drilling holes in things, but teeth are enough for many of them. Some dentists can go on to conquer walls, counters, and even floors and ceilings! These additional conquests can save lots of money. But remember the "carpenter's rule": "Measure twice, cut once." Are you really sure you want to put that monitor there? Maybe you should just set it on the countertop and run the cable across the floor while you try it out for a few days. Oh well, I guess you can just hang a picture over that new hole in the wall when you change your mind!

### PLAN YOUR BUDGET AND FINANCING

(If you're a rich "hobby dentist," you can skip this step.)

You need to gather prices and costs and write them down. If you plan to finance it, you should find out how much it's really going to cost. Now you need to answer some tough questions:

(a) Is there enough evidence for me to believe that this investment will absolutely pay for itself in less than 3 years if I use it? A well-planned, well-executed, and properly phased project should pay for itself in about 1 year. If the people helping you with the project cannot show you how this is possible, start looking for some new people to help you.

(b) Am I sure I am going to use it? The finest digital x-ray system in the world is a total waste of money if it goes unused.
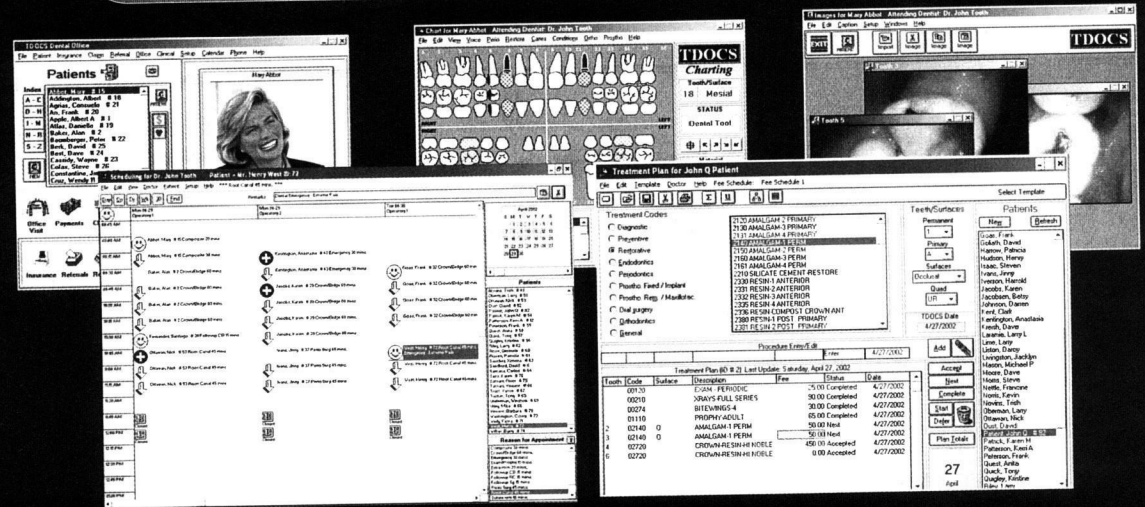
(c) What are realistic pro-

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jections for cost savings and improved production?

(d) Did the other offices with whom I spoke experience changes consistent with these projections?

(e) How much time and money is needed for training? This is the most important and yet most under-appreciated part of any project! And, yes, the doctor needs to be trained, too! You need to be trained on each step for doing the computer cosmetic makeover, but you also could benefit from some insight from the trainer as to how this is effectively used in other dental practices, and how it might best fit into your office routines. (Your trainer has seen this used effectively in other practices, hasn't he? Better ask for the names of those practices just to be sure!)

### PLAN YOUR "PHASES"

"Everything all at once" tends to end up as "Nothing works" or "We have it (and paid for it) but we don't use it." It is easier on everyone and much more likely to succeed if you integrate things in phases. Even if you purchase and install everything at once, have a realistic but flexible timetable with enough time and training so everyone can master each piece of technology.

### REMEMBER TO INCORPORATE ERGONOMIC DESIGN

A recent article in *Dentistry Today* stressed the problems caused by poorly designed dentist workstations.[2] The design of clinical computer workstations is also very important, and the position of the keyboard in the operatory is critical. Placing the monitor behind the dentist, at the twelve o'clock position, and the keyboard along the left wall at the three o'clock position makes it very difficult for the clinical assistant (computer operator) to comfortably enter data. The harder you make things, the less likely they are to happen. If you want to get the most out of your investment, make it as easy for your staff as possible. Wireless tablet PCs are now available and offer a more versatile, mobile, and less expensive alternative to cramming desktop computers and monitors into already crowded operatory space. These are not PDAs with only limited functions. These are powerful Windows 2000 or XP computers that can capture intraoral images, connect directly to digital x-ray sensors, run your dental management software, and even do before-and-after cosmetic imaging. They also solve the problem of "public" versus "private" computer monitors. If you want the patient to see his x-rays or cosmetic image, you simply hand him the whole clipboard-size computer!

### ANTICIPATE YOUR FUTURE NEEDS

This is a tough one with computers because things change so rapidly. Multimedia, ie, nifty sounds, music, narrations, still pictures, and full-screen videos are now old hat to computerized teenagers but are just beginning to appear in dentistry. Within 1 year, you should be able to hand your patients a computer wirelessly connected to the Internet so they can watch the latest patient education video on implants or cosmetics. Voice computer control and voice entry for all software has been "just around the corner" for several years. Good news! We have come to that corner! Early wireless networks were too slow for images. This is no longer true. Buying appropriate computers today will save you substantially in the future.

### PICK YOUR COMPONENTS

One of your key components is advice. But make sure the person from whom you are seeking advice knows more about the topic than you do. When the computer salesperson (or your know-it-all brother-in-law!) starts blowing smoke your way about the benefits of an AMD versus an Intel processor, ask him to tell you the difference between a home computer and a dental office business computer. When someone tries to sell you a "superfast SCSI drive" for "anyone doing imaging," ask them if they know just how much storage is required for a single digital bitewing image (200 to 500 kb). If they cannot answer such questions to your satisfaction, what qualifies them to recommend specific computers for your dental office? The wise dentist spends more money on good advice and less money on expensive, inappropriate hardware.

### PLAN YOUR INSTALLATION

This is harder to do with patients cluttering up the office. It's also harder to do on weekends if you need telephone support from someone. Sometimes software can be installed somewhere else, and the components just "dropped into place." This may seem easier said than done, but is highly desirable and doable.

### GET TRAINING AND PUT IT TO USE

Train, train, train. Use, use, use. Train, train, train. Use, use, use. Repeat as necessary until you have exceeded your expectations. Then pat yourself on the back for being so smart, and kick yourself in the butt for not doing it faster and sooner! The benefits of paperless and wireless dentistry are actually so profound they are startling. Once you have experienced them in your own office, I think you have an obligation to share the experience with other dentists. Talk about it at lunch, have an open house, and offer to become a mentor to other offices. Maybe you or your staff should even write an article about it! Have fun!◆

References
1. Stephenson B. Paperless dentistry. *Dent Today.* 2002;21(2):130-133.
2. Graham C. Ergonomics in dentistry. *Dent Today.* 2002;21(5):98-103.

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