

Defensive Driving

When Considering Dental Software, Be Wary of "Blind Spots"



By Bruce Stephenson, DDS, FAGD

Computers have changed dentistry, and the dental software we choose has a tremendous influence on how well the whole dental office functions¹ (and on how much money is left over at the end of the month for the dentist!). But picking good software is a perplexing problem. We are presented with hundreds of "nifty features" that might be useful, or may simply make computers more difficult for staff to learn, lead to more system crashes, and needlessly drive up our costs. The decision about which computer system is best for a particular dental office is a lot like the decision about which car is best for a particular individual. Some people need an "urban assault vehicle" like a Ford Expedition, while other people prefer something more petite like a Honda Civic. But, irrespective of the brand and model of vehicle, hidden "blind spots" present very real problems for *all* drivers. Some have potentially fatal consequences, whether in automobiles or the dental computer systems.

Wise investing in expensive dental technologies is a skill most of us were not taught in school.

In this article, I outline some critical blind spots we need dental software vendors to address. Feature shopping is important, and watching a good software demonstration can be an eye-opening experience. But dentists also need to ask some probing questions about the real "vehicle performance."

Figure 1 shows a questionnaire I ask my clients to have software salespeople complete before they schedule a demonstration. Its purpose is to focus on their performance in addressing critical blind spots in dental computing. There are no absolute right or wrong answers, but in the following text I discuss some of the considerations I think are important.

WHAT IS YOUR COMPANY'S VISION?

I am looking for a clear, concrete definition that can be expressed in only one or two sentences. Some software companies seem to use a vague shotgun approach, picking "new features" at random without any clear focus. I have repeatedly preached the "vision" of paperless dentistry²—storing the critical information you use repeatedly to run your practice and treat your patients in the most secure, reliable, efficient medium avail-

Dental Software Questionnaire

1. What is your company's "vision" or "mission statement?"
2. How did your last 2 software updates advance this vision? Please be very specific.
3. What data backup features are incorporated in your software? Does this include backup of my images, including digital x-ray?
4. What precautions has your company taken to protect my office network from Internet threats? What additional precautions does your company recommend I take to protect my office network from Internet threats?
5. Please provide me with references of at least 3 dental offices that are currently using the same software and technologies you are recommending for my office.
6. Do you offer a full money-back guarantee if your system does not meet the written specifications I provide you at the beginning of the project?
7. Please show me how to "dump" all the information contained in your software about any patient into a standard format such as a "txt" file. Please show me how to dump all the images into TIFF or JPEG formats.
8. What strategies does your company have to lower my installation costs? What strategies do you have to lower my ongoing and maintenance costs?
9. Show me how I can get a 1-year return on my investment in your system.
10. Can you provide me with a "preflight" checklist of tests my IT person can run before my office training to ensure that the system is installed and configured correctly?

Figure 1. Asking a software salesperson to spend a little time completing this questionnaire not only gives you information about the company the salesperson represents, but the answers also allow you to gauge the knowledge of the salesperson.

able; ie, a good computer system. The goal is to make the whole dental office run more smoothly and efficiently by providing solutions that are easier, cheaper, simpler, and better—not more complicated! To quote Bill Gates, "Information

at your fingertips."³ Software companies that lack a clear vision needlessly add to the software clutter by producing "bloatware." They contribute to the cost of dental computing without providing tangible benefits.

HOW DID YOUR LAST 2 SOFTWARE UPDATES ADVANCE THIS VISION?

This is where "the rubber meets the road." Software upgrades cost the dentist time and money. Are yours worth it? A good, well-tested upgrade should be no more complicated than a trip to the gas station. But unfortunately, some actually precipitate a major, unplanned engine overhaul. How have each of the features you added in your last 2 software updates made it easier, cheaper, simpler, and better to accomplish paperlessness? A good update feature needs to do one of 3 things: (1) fix a feature that did not work well in a previous software version (I see this only rarely); (2) update the dental software's compatibility with current business computing standards, such as the use of Windows XP, the switch to wireless networks, and the elimination of "security keys" requiring parallel ports; or (3) add something new that requires no additional work for staff members but provides a real benefit they could use. An example is a software feature with a TM attribute (a feature that supplies needed information or actions without the computer user specifically requesting it). Just as a good dental assistant anticipates which instrument the doctor will use next and has it ready, a software TM attribute anticipates daily office routines and automatically prepares the "instruments." For example, it might "tag" dental procedures that involve laboratories, such as crown cementations or denture try-ins, then automatically generate a list of all the patients scheduled for those procedures 2 days from now. This list would involve no additional work for staff members and would remove the necessity for them to check the next day's schedule for needed lab cases. It can also be made invisible by simply turning it off so it does not add to software clutter. Easier, cheaper, simpler, and better—paperless dentistry!

SAFETY FIRST! TELL ME ABOUT BACKUP

I am putting all my critical information into a computer system. What has your company done to make it easier for me to back up my data? Do you provide clear, written backup recommendations and proce-

dures that name current backup products and tell my hardware person exactly how to back up, validate, and restore all the files I need when my computer dies? Better yet, because data backup is such a

critical part of any dental office, do you incorporate it as a feature of your software? Or do you simply assume I will find a competent hardware/network person who is familiar enough with both dentistry and your

particular dental software to set up a reliable backup system?

One half of the dental offices I visit do not have valid data backups. The dentists certainly share some of the blame

for this, but I would place the larger part of the responsibility on the software vendors. Many have failed to adequately emphasize the importance of

continued on page 114

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continued from page 113

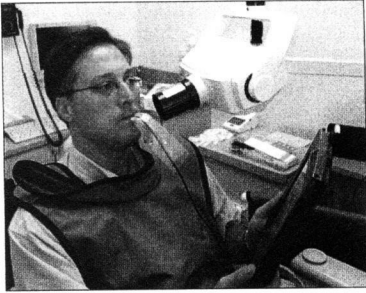


Figure 2. Digital x-rays go from the Schick sensor in the patient's mouth through the USB port on the tablet PC and over the wireless network to be saved on the office file server. It's a big "wow factor" when patients see their images pop up on the screen in their hands! The mobility and versatility of wireless mobile computers makes meeting the HIPAA privacy requirements much easier and also lowers the cost of dental computing.

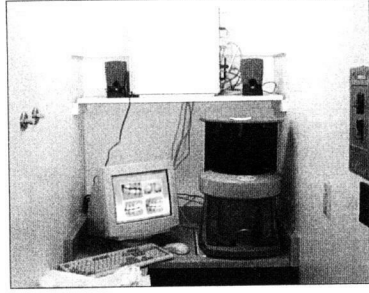


Figure 3. This "digital darkroom" using the ScanX (Air Techniques) phosphor plate technology and Dentrix Image 3.1 software delivers an image in 17 seconds, almost as fast as a direct digital sensor. The computer to which it is connected has a wireless network card for communication with the office file server and the other computers on the office network.

data backup or have failed to make it easier for their users to protect their data! *I think this is the most critical blind spot in dental computing today.*

WHAT ARE YOU DOING TO PROTECT ME FROM THE INTERNET?

Unfortunately, many dentists don't even know they need protection from the Internet! About one third of the dentists who come to my seminars have had their computer systems infected with viruses. Some of them have been shut down for days and have spent several thousand dollars to disinfect their systems. In at least one case, the dentist lost all his data. I find this alarming! To have a software company simply say "Get some antivirus software" is not enough! I need specific brands and written instructions! I need you to emphasize the importance of frequent, automatic updating of virus definitions. I need you to tell me how much this is going to cost and what to look for in the person who will install and configure it for me.

What about firewalls; hardware, software, or both? Which brands, who will install it, and how much will it cost? What about other Internet threats from "crackers" and "spyware"?⁴ I have patient information and social security numbers in my computer. What is my liability if I inadvertently expose this information to the Internet? This is a

complicated area, but software vendors are supposed to be the experts. Naive dentists are stampeding to the Internet without anyone alerting them to the real hazards and costs involved. Their dental software companies are in the best position to recommend some specific forms of protection and not just exaggerate the benefits of e-business. I have personally taken the position that, for the present, *most dentists should not connect their dental networks to the Internet.*⁵ Don't misunderstand me. I use the Internet constantly in my office and think dentists who do not avail themselves of its benefits are limiting their practices. But dentists need to either spend some time and money protecting their computers from Internet hazards, or simply use a stand-alone, non-networked computer for Internet access. *The Internet is a very dangerous place right now, and ignoring these dangers is another very critical blind spot in dental computing.*

SHOW ME SOME REFERENCES!

Please give me a list of at least 3 offices currently doing what you say I can do with the products you are trying to sell me. I see products advertised every day that I know do not work. I see dentists wasting thousands of dollars and many frustrating hours because they believed a glossy ad or a glib sales presentation. Dentists need to be a lit-

tle more hardheaded when investing in technology that is this expensive! Buying the wrong handpiece will not sink a practice. Investing in "vaporware" technology just might!

DO YOU OFFER A MONEY-BACK GUARANTEE IF YOUR PRODUCT DOES NOT WORK IN MY OFFICE?

I think it behooves the dentist and his computer consultant to provide a written outline of what they expect the software vendor to provide. For example, my written "scope of project"⁶ for a digital x-ray system states that the digital x-ray system actually take diagnostic digital radiographs in my office! It also includes a requirement for a valid data backup as part of the installation. It specifies exactly how much I will pay for the product, for installation, and for training. It specifies a completion date. If the vendor fails to live up to this agreement, will they return all my money? Every software vendor I have encountered has a "sales agreement" that protects the vendor 10 different ways from Sunday! But I have rarely seen a dentist extract any type of written agreement from a vendor! I don't think you write it down for legal reasons. I think you write it down because it makes expectations more concrete and clear to people on both sides of the agreement.

Can I Do a "Chart Dump"?

I am putting all my patient

information, including charting, x-rays, images, and scanned documents, into a computer system. Show me how I can easily get all that information back out for one patient, or for all my patients. I don't like my patient information "held hostage" in proprietary data formats. Suppose my patient moves away and switches to a new dentist. Do you have a single button I can click to copy all my patient's information to a CD-R disk? What if they need to see a specialist? Can I easily and quickly burn a CD-RW containing my patient's medical history, medications, medical precautions, x-rays done today, my relevant dental diagnoses, and the patient's personal data and insurance information? If this information is exported in standard text and image file formats, it doesn't matter what software the other office is using; it can still easily import the data without typing. This eliminates work for that office, improves communication, and lessens the burden on the patient because the patient does not have to fill out a new set of paper forms. The specialty office can also use the same CD-RW disk to return its x-rays and reports to me. If I retire or decide to switch dental software, show me how I can dump all the records for all my patients into these standard formats. I can do some of this now, but I have to work pretty hard to get it done. Show me how you can make this easier, cheaper, simpler, and better for me!

HOW CAN I GET MORE OUT OF MY HARDWARE INVESTMENT?

Computers need to be replaced every 3 to 5 years in an office actively practicing paperless dentistry. They don't "wear out" or "slow down." They are simply made less efficient by the rapid improvements in speed and capabilities of new computers. What strategies does your company have to lower my installation costs? Have you published any articles for your users on this issue? How many different CDs does it take to install all your software? If it is more than just one, why? I have to pay someone to deal with this unnecessary complexity! Have you recommended, in writing, that I very carefully store the installation CDs for all the software

on my system? Or (better), have you told me how to copy those installation CDs onto an area of my file server hard drive so a new computer can be installed more easily, quicker, and cheaper over a network? Have you shown me how to include these copies of my critical software CDs in my data backup? Have you given me a copy of my hardware inventory that shows all my system specifications and installed software? (You can do such an inventory yourself with a free download from Belarc.com.⁷) Do you have any written suggestions for my old computers, or do I just toss them into the landfill? (They make great stand-alone Web browsers and fax machines!) This stuff is expensive! Show me how to get more for the money I have already spent.

SHOW ME YOUR PLAN FOR A 1-YEAR RETURN ON MY INVESTMENT

Computer technology changes very quickly. Every year there are new products that cause a shift in the most efficient way dentists need to use them. The advent of fast wireless networks and tablet PCs⁸ are a clear example (Figures 2 and 3). *If you cannot realize a full return on your investment in computer technology in 1 year, you should probably not spend the money.* Sometimes major computer projects need to be purchased and executed over several years to achieve this level of return on investment. Show me your phased treatment plan for my office, with details of the costs for software, hardware, installation, and most importantly, training. Show me how to monitor my progress with benchmarks built into your plans that are tied to my accountant's P&L. Show me how to motivate my staff members to use your technology. Do you have frequent hands-on user groups in my area that emphasize to my staff that their jobs get easier as you show them how to use your software? Are these local training sessions focused on the true needs of my dental office, and do they advance my vision of easier, cheaper, simpler, and better paperless dentistry? The absolute worst business mistake I can make as a dentist is to buy something but not use it. Show me your strategies to prevent this from happening to me!

HOW CAN I FIND QUALIFIED HELP?

In most states, you need a license to catch a fish, but you do not need a license to install a computer. Many software companies have local vendors who will install their systems. But what if I'm unhappy with that vendor? Who else can help? Software vendor, show me your written recommendations for selecting qualified help! Do you provide local seminars for hardware/network people in my area? Do you provide detailed written specifications for them to use when installing your software? Do you provide a list of "preflight" tests they should perform to be sure your system is correctly installed before the trainer shows up? I know of many instances where large staffs sat around for several hours while a trainer tried to figure out why the software did not work. A written preflight checklist from the software vendors would have prevented this.

CONCLUSION

What I have attempted to do in this article is shift the emphasis away from the important-but-exhaustive list of "features" and toward the important role software vendors play in the safety and drivability of our computer systems. It is very difficult to really test drive dental software. But by asking dental computer vendors to take a few minutes to address these blind spots, I think dentists can help advance our goals of better patient care, easier computer solutions, and improved practice profitability. To expedite this process, I post vendor responses and commentary on our community website at paperlessdentistry.com.

Wise investing in expensive dental technologies is a skill most of us were not taught in school. We need to ask for all the help we can get from our vendors. But we must also clar-

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ify our needs and expectations so we can all pull in the same direction. Removing blind spots helps everyone—dentists, vendors, staff, and especially our patients. It helps us all drive more safely!♦

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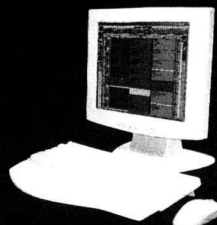
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