

Features Section

Editorial

“Technological Advances, Informatics and Orthodontics” —A ‘Voiced’ Editorial.

Certainly, this editorial is a first for me and possibly also for the Journal. The reason is that the first draft was dictated. This in itself may not be unusual but, in this instance, the piece has been dictated directly to the computer, this being possible through recent developments in voice recognition software.

I am often accused of being a “techno-freak” or a “software junkie”. I would not deny either of these labels and would see my interest in this area as being of some advantage, from time to time, to both my department and the journal. Having such interests has helped to keep me in touch with developments in both Information Technology (IT) and Informatics.

However, in this particular instance the question that needs to be asked is whether voice recognition software is just a toy (gimmick!) with which people with similar interests to myself can play? I would say no!

As IT continues to advance some serious applications to both orthodontics and dentistry as a whole become apparent. One of the reasons that I’ve examined voice recognition software is to find a simple method for the generation of letters/correspondence for those clinicians working in the community clinics within my directorate. Such clinicians are isolated and there is often no simple mechanism for secretarial support. A further application might be to provide an easy method of keeping a written record during patient treatment sessions. Such an approach could minimise the need to change gloves to write notes and help in making the application of current cross infection protocols more valid.

Certainly, such developments in software can make computers more accessible to people with limited keyboard skills and it is easy to use. I collected this software yesterday morning from a local PC store. It took me one hour to install. Then, in a process not dissimilar to the learning of speech by ‘HAL’ in the film ‘2001’, I spent a morning reading standard phrases to the computer so that it could learn my voice patterns and pronunciation. At the moment it has a vocabulary of 30,000 words but it is learning all of the time and every time it comes across a new word it stores both the word and my pronunciation in its memory for future reference.

As it learns, it becomes easier and easier to use—so whilst this may be the first article I have dictated directly to my computer for publication—certainly it will not be the last! It is a significant advantage to be able to rapidly store ideas as a written record without breaking the flow of thought.

The 1980’s and early 1990’s saw rapid advances in computer hardware, software and in information

technology generally. I’m sure that we are about to see another acceleration in this area and orthodontics will continue to be influenced. Another illustration of how these developments can have an impact is in the field of Informatics, or more specifically Telematics. Many Orthodontic departments in the UK have started looking at telematic systems to assist in distant diagnosis and post-graduate education. As an example, I know of units that have Telemedicine (or Teledentistry) projects specifically looking at the medium of Video Conferencing to assist in postgraduate continuing education. Such an approach is important since, in the future, all dental clinicians will have to be able to demonstrate that they have collected a minimum number of continuing medical education units per year to remain on the appropriate register. In North America, and many other countries, this is nothing new! Certainly, the application of videoconferencing systems through the medium of the PC Computer and ISDN telephone lines will make the process of distance learning and education more accessible.

Another application of Teledentistry is in the area of remote diagnosis and treatment support. This is an area in which my own unit has been working for the last year. We are not alone, and are aware of other units (usually in rural areas) where similar ideas are being pursued. The concept is that clinicians need not be isolated and that diagnostic specialist advice can be only a ‘call’ away! I’m sure that many reading this editorial might see a local application for such technology which, with large reductions in the cost of hardware, software and line rental, is now a more viable option than previously. In particular, there are opportunities to apply this technology further afield. My unit, like many around Europe, is often requested to assist in giving courses overseas and I feel it important that we should help whenever possible. Teledentistry doesn’t eliminate the need for these locally provided educational courses but it does facilitate ongoing support afterwards and, as such, could be an important aid in the future. Such IT systems have many applications and it doesn’t take much imagination to see that this type of approach could be used closer to home in the expansion of speciality training, whilst working within current teaching staff constraints, and thus start to address the chronic national manpower shortages in orthodontics!

In the United Kingdom ‘Telemedicine’ is part of an ‘explosion’ in the area of health informatics that has occurred over the last few years. However, as with any explosion, it can cause a mess and in an attempt to tidy up the area, organise national priorities and facilitate more collaboration—a national ‘Virtual Institute for Healthcare

Informatics' has been proposed. Consortium bids for regional members of this Institute are being considered currently. It could provide much needed leadership in an area that will have increasing impact on all of us that work in the healthcare business.

This short editorial started as an opportunity for me to practise 'voice recognition' with my computer. However, it has given me the opportunity to bring to the attention of the readership how rapidly things are changing in the field of information technology and informatics. Such developments shouldn't be a 'closed book' or be seen as a threat—and I am aware that there are as many 'techno-phobes' as there are 'techno-freaks'! Examples of this type of technology are becoming simpler to use, cheaper to purchase and is straightforward to run on relatively cheap 'home' PC computers.

I'm sure that the readers of this editorial are wondering

if it has taken me any longer to complete than usual. The answer is . . . yes!

The difficulty is in the human user and not in the computer software. The computer has learnt my voice patterns and pronunciation very rapidly and is reliable about 90 per cent of the time. The difficulty is that I have had to re-learn the skill of dictation, thus I have had to spend some extra time at conventional editing with a keyboard.

To conclude, I guess that I should apologise if this editorial seems less fluent than usual (or maybe it isn't!) the responsibility doesn't lie with the computer as usual blame the Editor!

MALCOLM JONES.
January, 1998.