



Digital dictation devices for doctors: innovative all-rounders

It can often take a long time for a patient to receive his medical report. Once the diagnosis has been made, the report still has to be dictated and then typed up. Digital dictation technology aims to streamline this workflow, although there is a lot more to it than simply recording a dictation: digital dictation devices are specifically designed to meet the demands of the relevant working environment. They can read in the patient information, automatically assign the data to the relevant report and are even capable of interpreting human speech. Because analog cassette-based devices have been superseded by digital technology, patients are now receiving their reports much more quickly.

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Shaping the market

Philips Dictation Systems launched the world's first analog dictation device in 1954, breaking new technical ground. For the first time, doctors were able to work independently of a secretary and simply dictate onto tapes, allowing the dictation to be later transcribed by typists. Because the process made life so much easier, it quickly became standard practice. To this day, half of the European medical profession continues to work in this way. However, in a hectic medical environment, cassettes fall somewhat short of the ideal data carrier: they are easily lost and once damaged are unusable.

Generally, only full tapes are sent for transcription, which means there is automatically a delay before the majority of dictations arrive in the typing pool. Consequently, not only is the patient forced to wait for his reports, but there can also be a delay in treatment from his GP, for example.

Increasing cost pressure in the healthcare sector requires patients to be treated quickly, however, with significant emphasis now being placed on the reduction of patient rest periods in hospitals to an absolute minimum. The introduction of a fee-per-case payment system (DRGs) has consolidated this trend. Medical insurance now covers a flat treatment fee determined by the diagnosis. If the patient stays in hospital for longer than is necessary, the hospital is obliged to cover the extra costs itself.

Thus efficient and fast dictation workflows are now more important than ever. Philips Dictation Systems, the world's largest producer of dictation devices, is expecting significant growth on the dictation market. "On the one hand, analog devices will be replaced by digital devices. On the other hand, more and more users will be switching to digital dictation given the scarce resources available in the healthcare sector and the increase in productivity that doctors can achieve through dictation. As an additional benefit, administrative costs can also be reduced," explains Viktor Aquina, Managing Director of Philips Dictation Systems.

Digital dictation: the way forward

Digital dictation devices solve many of the problems of their analog predecessors. Rather than dictating onto cassettes, the user dictates directly onto the PC or saves the dictations on an SD memory card. This means that each dictation is available digitally in audio file format. The audio file is thus available to the typing pool for transcription immediately after recording. Because dictations recorded in crystal-clear, digital sound quality are much easier to understand, the number of errors and therefore the number of corrections the secretaries have to make are significantly reduced.

Digital dictation devices also offer a number of additional user benefits. The SpeechMike from Philips, for example, is a microphone, barcode scanner, speaker and mouse in one. It is connected directly to the computer via USB interface and allows the doctor to record and play back dictations, to navigate through PC applications and to read in patient data electronically.

The combination of dictation device and barcode scanner has already become extremely popular in the medical profession, given the importance of being able to assign the correct medical report to the correct patient with 100% accuracy. Until now, doctors have had to carefully dictate the patient number, name, sex, age, address etc. Using a barcode scanner, this information can now be read in from the patient record automatically. This represents a huge time saving for both the doctor and the typists, while minimising the risk of incorrect data assignment.

The healthcare industry also places considerable importance on data protection. And digital dictation devices provide optimum data security: by dictating directly onto the computer, patient information is protected against unauthorised access, unlike data recorded on cassettes that often have to be transported a considerable distance between the doctor and the typing pool.

Greater efficiency through alternative workflows

The traditional workflow for creating medical reports is two-tier: the doctor dictates and the secretary types. Digital dictation has opened up a whole new range of workflows that can be implemented to suit individual requirements. For example, if dictation volumes peak, then external typists can be used on a temporary basis. The dictations can be sent via secure internet connection and the finished document returned to the doctor in the same way.

Because digital dictations can be accessed at any time and from anywhere, work is not tied down to any specific geographic location. As Dr. Lobodasch, senior consultant at the women's clinic of the DRK Krankenhaus-Chemnitz-Rabenstein, explains: "I am able to create all surgical or discharge reports, medical and professional reports promptly and from wherever I am at the time. I simply save the dictation as a digital file and send it as an e-mail attachment to my secretary. Even if I am attending a conference in Central America, I can easily send a dictation to my secretary for transcription."

Switching to digital dictation also allows speech recognition technology to be used, providing yet another alternative for report creation. In addition to the audio file, the typists receive the automatically generated text. All they then have to do is compare both sources and simply correct any recognition errors. Alternatively, the doctor can correct the recognised text

himself, which can accelerate report turnaround time especially at weekends and outside of regular working hours.

Flexible working

The Digital-Pocket-Memo-9450-VC is a world first. "VC" stands for Voice Control - a dictation device that can be controlled using voice commands. Voice control is highly practical during patient visits, where the doctor might quickly record several short dictations that he will want to review later. Prior to each dictation, the user simply says the patient number or type of document. Rather than simply capturing this information, the device recognises the content and is thus able to automatically append the relevant information from the Electronic Patient Record (EPR). Once the doctor is back at his desk, he transfers the files to his own computer or sends them to his secretary over a network. Demographic data such as the patient's name, age or sex or information such as the type of report are already contained in the document. The benefits are twofold: the doctor is able to assign dictations quickly and easily and send them for transcription, while the secretary benefits from the automatic inclusion of key data that she no longer needs to add to the report manually.

The seamless collaboration between doctors and typists is critical to the optimisation of medical documentation processes.

"This is why we are focusing increasingly on Workflow Management Software in order to ensure efficient collaboration between both parties, given the increasing dictation workloads faced by hospitals," says Victor-Aquina. Integrated network solutions such as these offer major benefits to typists. They allocate pending dictations according to the available number of employees and the current workload. The software automatically assigns difficult files to typists with the relevant experience. The workload can therefore be spread evenly, preventing individual employees from becoming overloaded with work.

Rapid success

The Leipzig University Hospital decided to invest in digital dictation systems in order to facilitate organisational work and to maintain the high quality standards strived for by the round-the-clock institution. Doctors can dictate correspondence and reports quickly and easily, while making the dictations accessible to authorised persons immediately. This method has already paid dividends. In only a short time, reporting efficiency had been increased by 40-60%. "This was a clear indication that our investment had also paid off in a matter of weeks," says Dr. Bootz, head of the ENT clinic. "Digital dictation technology has enabled us to make considerable progress. We are working more flexibly, under less pressure and are capable of achieving much more in a shorter time."

Vienna-based Philips Dictation Systems is a pioneer and a driving force in the dictation industry. By continually pushing the boundaries of sound recording, data storage and data compression technologies, it has positioned itself as a leader on the dictation market. The breakthrough of digital dictation technology marks a milestone in the company's more than 50-year history.

Philips has secured a 25% share of the global dictation market with the products it develops and produces in Europe. In addition to hardware, the SpeechExec and SpeechFlow workflow solutions available from Philips are also used by several hospitals and doctors' surgeries worldwide.

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