Speech recognition when working from home.

Increase productivity,
Increase employee satisfaction.

NUANCE

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when working from home.

Increase productivity, improve employee satisfaction.

Speech recognition provides significant productivity and employee satisfaction advantages. These advantages are felt regardless of where people are working, and can be especially important when people are working from home for extended periods. Careful selection of a speech recognition solution will both provide the optimum support for home-based employees and reduce the administrative burden on those who provide technical support. The ideal speech recognition solutions are flexible, scalable and secure, and can be deployed as a centrally managed infrastructure on corporate servers or in the cloud.

During the Covid-19 pandemic the number of people working from home in the UK has risen sharply.

According to the UK Office for National Statistics in 2019 1.7 million of the UK's active workforce of 32.6 million people considered home as their main workplace[1].

The picture has changed rapidly with the arrival of Covid-19, and the UK Government guidance is very clear that businesses and workplaces should make every possible effort to enable working from home as a first option.

To help facilitate this, in the UK all the major broadband providers have removed data caps[2], making it easier for people to use their home broadband for work. This is good news, as access to the internet for emails and keeping in touch via video calls is vital for many of those needing to be productive at the current time, as is the need to access many different cloud based applications and services.

To work effectively from home people also need access to appropriate equipment, and this means:

- laptops, monitors, tablets and phones which are technically capable of work-level workloads
- Webcams, headsets, keyboards, mice and other devices which are fit for purpose for a home working environment
- appropriate software and resources from corporate email to cloud based applications
- secure communications channels to protect data security and ensure compliance with the range of regulatory and compliance frameworks

As the number of people working from home during the current crisis has grown, demand for the equipment to do so has risen. At the same time, movement restrictions designed to stop the spread of the pandemic have reduced both manufacturing and air traffic to a near standstill, causing drastic shortages in supply of this equipment. Inevitably, this means that many people newly working from home may be struggling with older equipment, and employers may therefore need to think laterally about providing solutions which are not reliant on their workforce having access to up to the minute computer power.

One solution to the problem of people working with older equipment at home is for employers to facilitate access to more service by cloud. This is because cloud based services can make minimal requirements of local computers. Cloud services also have other advantages, including easy deployment from a central location, centralised updating and patching, and strong data security.

The role of the Cloud Office in the crisis.

The current crisis may present challenges for businesses equipping people to work from home full time for the first time, but it also shows how quickly such hurdles can be overcome when it counts, and how resilient both employers and their people can be when faced with challenges.

Technology is playing a very enabling role in the current crisis. Today it is relatively easy to provide people with the software services they need to work from home or on the road thanks to the cloud.

Office productivity software, communications tools and collaboration platforms have all long been available as cloud services, usable from anywhere with an internet connection and a web browser.

As a server-based speech recognition application Dragon Professional Anywhere is an ideal complement to such solutions. It can be run in the cloud which means it requires minimal computing power at the user end, helping employers cope with the fact that at the present time some of their people may be working with older, less capable computers.

Dragon Professional Anywhere isn't the only Dragon application that runs in the cloud. Dragon Anywhere Mobile, our standalone smartphone application, also runs in the cloud, and will synchronise transcriptions with Dragon Professional Anywhere, so that it is possible to start a transcription on one device, in one location, and work on it later on another device in another location.

In more usual everyday working environments someone might start a document while they are on a train platform, using Dragon Anywhere Mobile on their smartphone, then work on it later in the office using Dragon Professional Anywhere. In the current situation, this flexibility could be particularly valuable for home workers. There may be times when dictation using a smartphone is more convenient than using a laptop because it doesn't require a desk, and can be used in a more flexible way around the home. For example, using a smartphone to create documents might allow more flexibility to spend time supervising children, or might suit people without the space to set up a permanent home office.

But Dragon Professional Anywhere is not just a technical solution. It can help improve efficiency too. Using it to dictate text and control applications by voice is at least three times faster than typing or using a mouse. For many people communication in the home office is primarily achieved by email and chat messaging. Where this is the case, a powerful speech recognition solution makes collaborative working much easier and faster. The speed benefit also applies to document production.

There is another way Dragon Professional Anywhere and Dragon Anywhere Mobile can help organisations provision people working from home at the current time, and that is its scalability. It is easy for administrators to grow seats as the workforce requires it with a minimum of intervention on devices being used by workers, making administration easy and flexible at this difficult time.

Security and data protection in the Home office.

Regardless of whether people are working from home or in their normal office, organisations need to meet their security and data protection obligations.

When people are working from home, it is important to establish a secure connection to the company network. A Virtual Private Network (VPN) should always be used to achieve this. It allows sensitive information to be encrypted as a safeguard against interception.

Two technologies are available – OpenVPN and IPsec. Both can be configured and administered by tech support teams. OpenVPN relies on a software client installed on each device while IPsec is supported by many desktop PCs, laptops, tablets and smartphones and in most cases does not require any additional software.

Home workers also need strong security protection on their devices, such as virus scanning and protection against malicious websites and phishing attacks. Employers need to pay particular attention to security matters at the current time because many people are using their personal computers for work, and these may not be secured to the same

rigorous standard that equipment provided by the employer would be.

For example, a laptop intended for home user might be running a range of software with potential security flaws that would not be sanctioned in the office. If such software allowed malicious agents to target corporate information held locally, or to access the corporate servers, an organisation could be vulnerable to a malware attack, loss of commercially sensitive information or contravention of data protection regulations.

To consider just one regulation that could cause significant difficulties, breaking the EU's General Data Protection Regulation can result in a fine of €20 million or 4% of worldwide annual turnover[1].

Dragon Professional Anywhere can be hosted within your own organisational infrastructure or accessed as a cloud managed service.

This means commercially sensitive information is not saved locally. Dragon supports 256-bit encryption both when data is in transit between the worker and the server and when it is 'at rest' (when it is not being actively used).

(1) https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-law-enforcement-processing/penalties

Selection criteria for a Speech recognition software.

A speech recognition solution must be flexible, scalable and secure.

Flexible

- Dragon Professional Anywhere users can easily synchronise their voice profile with the Dragon Anywhere Mobile, regardless of whether they are using a workstation, desktop, server-based or cloud based version of Dragon Professional Anywhere.

- People can start dictating without the need to train the software first. Dictation is up to 99 percent accurate right from the start, and deep learning technology helps improve accuracy further over time as the speech recognition capability learns more about each individual's speech patterns.

- Organisations and individuals can set up specific vocabulary, personalised word lists and template documents, so document production is fast and efficient. If Dragon Anywhere Mobile is used these are available on a smartphone, improving efficiency further.

Secure

- All files and data created using Dragon Professional Anywhere and Dragon Anywhere Mobile are secured with 256-bit AES encryption both in transit and in storage.

- The servers of the cloud option are available in data centres in the UK and meet all GDPR requirements.

Scalable

- It is easy to add new users with the managed server or cloud variants of Dragon Professional Anywhere, so that existing employees who are not yet Dragon users can be quickly and easily introduced to its benefits, and any organisation that needs to scale up rapidly can do so with the minimum of fuss.

- Since intelligent speech processing is run on the server, hardware and bandwidth requirements are very low, so Dragon can be used by home workers relying on low-bandwidth broadband and home user grade or older laptops.

Bandwidth requirements

Dragon Professional Anywhere needs just 10 kbps upload and 6 kbps download to communicate with the server. These data rates can be achieved with virtually any standard PC or laptop and any DSL, fibre, cable or LTE connection.

The UK telecommunications regulator OFCOM reports[1] that 80% of UK households have a home broadband connection. The average download speed is 64 Mbit/s and just 13% of households have a download speed of 10 Mbit/s or less. The average upload speed 14 Mbit/s.

(1) https://www.ofcom.org.uk/__data/assets/pdf_file/0038/194897/uk-home-broadband-performance.pdf

Sector-specific use of speech recognition.

Dragon offers a broad range of advantages that benefit any industry of any size or scale where document production is an important part of working life.

Document types

Dragon's document creation capabilities run from creating emails to filling forms, creating large, complex reports and everything in between.

Business size

According to the UK Federation of Small Businesses there were 5.8 million small businesses in the UK at the start of 2019[1]. For many of these there will be some element of document creation that is crucial to their work productivity, and doing this most efficiently will be very important.

Because Dragon Professional Anywhere in the cloud is scalable and flexible it can be as efficient for a small business as it is for a large multinational organisation.

Some specific business types that benefit significantly from Dragon include legal, financial/insurance and the public sector.

The legal sector

Lawyers can find working from home an extraordinarily difficult challenge. A large part of their work consists of drafting confidential, legally binding briefs. Traditionally, lawyers use a dictation device for this purpose and pass recordings to paralegal assistants or other support services for transcription.

Even under normal circumstances this procedure is inconvenient, time-consuming and subject to delays. At the current time, when direct contact between people should be avoided as far as possible, it is even more difficult to accomplish in a timely manner.

(1) https://www.fsb.org.uk/uk-small-business-statistics.html

Along with the general benefits of being able to produce documents more quickly, Dragon speech recognition offers some specific advantages to the legal sector:

- Reduce compliance risk through more accurate, secure and timely documentation.
- Improve client satisfaction through more detailed and accurate meeting reports, delivered faster.
- Gain a better understanding of client motivation through more detailed meeting reports.
- Free up time to spend away from document creation, which can be used to grow the business.
- Improve productivity through mobile working.

The public sector

Local government has had to change and adapt fast as priorities shift and staff are redeployed to new roles in order to meet community responsibilities in helping citizens during the Covid-19 pandemic. As in the broader landscape there has also been a significant shift to staff working from home.

A secure, centrally managed speech recognition solution like Dragon Professional Anywhere comes into its own in these circumstances.

The speed benefits speech to text offers over typing is also useful as local government staff need to adapt to new workloads, and in some cases to exacting time constraints.

The financial services and insurance sectors

In the current climate financial service providers and insurance companies are, like many other businesses, using a work from home strategy.

These sectors have significant obligations around documentation with regard to compliance and regulation beyond the regulations that apply universally, such as meeting MiFID II (Markets in Financial Instruments Directive). All conversations with clients whether written or spoken, made in connection with orders such as the purchase of securities, must be documented and kept for five years and made available to the people concerned on request.

These documents also constitute important evidence in the event of complaints or official investigations.

Such regulatory requirements mean employees spend much time transcribing telephone conversations and writing meeting minutes.

Speech recognition software makes these tasks much easier. Not only is it faster than typing, it saves time as transcription services are not required, freeing up more time to look after customers.

Conclusion.

Dragon Professional Anywhere has proven credentials in the workplace, where it can help organisations improve the speed and qualtity of their documentation.

At the current time, when the Covid-19 pandemic has resulted in a rapid growth of working from home, Dragon continues to provide these benefits, but brings additional advantages.

For organisations that need to deploy solutions to staff teams who are suddenly working from home and using technology that can't be provisioned through personal access (such as applying software or patches to laptops), using Dragon Professional Anywhere in the cloud allows for easy provisioning, with patches and updates administered at the cloud end. It is also easy to add new users thanks to its scalable nature.

Dragon Professional Anywhere in the cloud makes minimal requirements on local technology, so that people newly working from home can use existing computing equipment rather than needing to upgrade.

Dragon Professional Anywhere in the cloud uses 256-bit AES encryption to help organisations meet their data security and compliance obligations.

In addition, Dragon Anywhere Mobile brings advantages to those working from home. In usual times Dragon Anywhere Mobile allows people to be more productive on the move by using their phone to work on documents when it is difficult to use a laptop.

In current circumstances, people can use Dragon Anywhere Mobile to assist with the need for a flexible approach to working in the home where it might not be possible to set up a permanent office space. Documents can be worked on using a phone when desk space for a laptop is unavailable.

Checklist for choosing a speech recognition solution.

When considering a speech recognition solution, ask potential providers these questions:

- [X] What deployment models are there?

- [X] Do I have to install and manage the software myself or can I get it as a service?

- [X] How many users can work with the software at the same time? What scaling options are there?

- [X] How is the software structured? Does it have to be installed on every client or is there a central server component?

- [X] Can the solution be installed on a local server without the cloud?

- [X] How long does the installation take? How costly is maintenance?

- [X] How accurate is speech recognition? Can the software adapt to individual speakers?

- [X] Can the speech recognition dictate directly at my cursor in my case management systems?

- [X] How quickly can the software learn subject-specific vocabulary?

- [X] Can the software be integrated into existing workflows? How complex is the integration?

- [X] Can the speech recognition software automate repetitive tasks by the creation of voice commands?

- [X] How secure is the software? Are transmissions and storage encrypted?

- [X] Are all data privacy issues observed? What certifications and evidence are there for this?

- [X] If the software is provided as a service (SaaS) from a public cloud, what certifications can the cloud provider provide? Is the data encrypted during transmission and storage? Are the data centres in the European judicial area?

Glossary.

Important terms for working in the home office.

Cloud computing:

According to the definition of the National Institute of Standards and Technology (NIST), cloud computing is characterised by the following five characteristics:

On demand self-service:
Users can access resources directly at any time.

Broad network access:
Access via network infrastructure. Standardised protocols are used, which enable access through all common client platforms (PC, smartphone, thin clients).

Resource pooling:
Resources are shared and are dynamically available to users according to their requirements.

Rapid Elasticity:
Resources are allocated quickly and elastically. Users can take advantage of all services available at any time without having to worry about scaling.

Measured Service:
The cloud operator monitors the systems automatically and continuously, thus ensuring service quality.

Cloud Office:

All office solutions, which can be accessed via a public cloud. The most common solutions are Office 365 and the Google G Suite.

Endpoint security:

Protects devices such as PCs, laptops, tablets and smartphones from threats. Endpoint Security includes much more than just a virus scanner. It also includes data leakage and phishing protection. Endpoint security solutions also prevent the execution of unsafe applications by checking the security status of a device before it is connected to the company network. If the test is not successful, for example because the operating system or virus scanner signatures are not up to date, access is denied.

Thin client infrastructure:

Spread out infrastructure in which the main functions are in the central server component. Only a browser is required for the client, through which the user can access the server components. The thin-client-approach enables hardware-independent work, since all essential work stages are performed on the server can be executed. It also facilitates the deployment of applications and reduces maintenance.

VPN (Virtual Private Network):

VPNs enable secure communication between remote workstations and company networks via the public Internet. Solutions like OpenVPN or IPsec establish a tunnel between the two end points, through which the data is then transmitted in encrypted form.

Nuance Communications (NASDAQ: NUAN) is the pioneer and leader in conversational AI innovations that bring intelligence to everyday work and life. The company delivers solutions that understand, analyse, and respond to people – amplifying human intelligence to increase productivity and security.

With decades of domain and AI expertise, Nuance works with thousands of organisations globally across healthcare, financial services, telecommunications, government and retail – to empower a smarter, more connected world.

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