



SpeechMagic Solution Builder

Speech-driven clinical document creation

CHALLENGE

Speech recognition helps hospitals, clinics and practices decrease operating costs, enhance patient service and maximise reimbursement. In addition, as pointed out by the European Commission, speech recognition can benefit the adoption of electronic health records (EHR), seen as a critical technology leading to sustainable and safe healthcare. National healthcare systems are implementing drastic changes in order to provide higher-quality care. Speech recognition is the cost-effective way of capturing medical information – described as ‘the most profitable IT implementation ever’¹. As hospitals can realise significant cost savings² and an increase of productivity, the technology will be at the heart of preparing healthcare systems for future challenges.

NEEDS

A fast, accurate and easy to use document creation solution that can be used in conjunction with the hospital’s existing IT infrastructure to save time and transcription costs.

SOLUTION

Easy to integrate, adaptable and scalable, SpeechMagic Solution Builder is the logical way forward to optimise your processes. SpeechMagic Solution Builder meets the evergrowing demand for solutions that both improve the performance and allow savings on administrative costs.

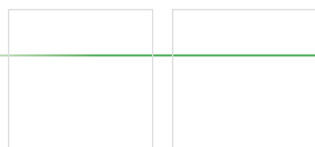
Speech recognition powered by SpeechMagic™



SpeechMagic is the market leader in industrial-grade healthcare applications. Covering 25 recognition languages, based on specialised ConTexts (professional vocabularies), the system learns and adapts to each user’s dictation style automatically. Recognition accuracy is high right from the start and the user’s speech profile is continually refined.

¹ VEJLE HOSPITAL DENMARK ACHIEVED A 7% OVERALL PRODUCTIVITY INCREASE VIA THE HOSPITAL-WIDE IMPLEMENTATION OF SPEECH RECOGNITION.

² TELEMARKE HOSPITAL IN OSLO SAVES 900,000 € PER YEAR VIA RADIOLOGY SPEECH RECOGNITION.



ENHANCE YOUR PRODUCTIVITY

Auto-texts and templates add to the efficiency gains brought by frontend speech recognition. Doctors can insert pre-defined text blocks into their reports and pull-up dictation templates simply by voice commands. This speeds up medical reporting through frontend speech recognition by up to 20%. In addition standardised templates and text blocks ensure reporting consistency across a department or organization and significantly ease documentation management (ready-to-print reports).

Auto-texts (macros) are pre-defined text blocks which can be inserted into a medical report via voice command to speed up the reporting of standard situations. For example, by saying “insert negative findings”, the standard paragraph for no abnormal findings is inserted into the report immediately. The auto-text can include placeholders for variable parameters.

Command & Control features support navigation within and between your templates and auto-texts (for example “go to blood pressure”).

Document templates allow standardised medical reports in both content and layout. They can be designed in line with an organisation’s identity and include named fields. Smart fields are populated automatically with data from the database, for example the patient’s name. Information in named fields is inserted by voice.

ADMINISTER CENTRALLY

Auto-texts and templates are administered centrally, in line with the hierarchical department concept of SpeechMagic Solution Builder; reducing administration efforts and helping to standardise the reports.

Highlights of SpeechMagic Solution Builder’s auto-texts and document templates:

- They can be defined and administered per department, organisation or hospital group to allow for a high level of standardisation
- They support dictation fields to input values such as blood-pressure or medication. These fields can be navigated by voice command
- Result are available faster due to advanced management and recognition of voice commands

KEY BENEFITS

Patient treatment is expedited	The right information is available to the right clinician without losing valuable time
Improved document quality	Accurate speech recognition enhances the reliability, completeness and correctness of the report
Efficient transfer of report between different users	Eliminates user downtime, no waiting times
Easy for users to work with	Choose the way that best fits your needs (digital dictation, backend or frontend recognition or mobile dictation)
Easy integration with existing IT infrastructure	Easy-to-integrate API; ready-to-use functionality; standardised document creation approach
Improved deployment speed	Client/server architecture; reporting framework controllable by third party application through high level SDK; data security sensitive
Highest recognition rate based on latest speech recognition technology	Based on SpeechMagic core technology
Fast return on investment	Ask our team for a ROI calculation
Better management of resources	Free your staff from its documentation burden and dedicate them to patient care

THE WAY YOU WORK!

SpeechMagic Solution Builder enables you to quickly deploy within your existing IT infrastructure.

Use it as you prefer:

- Level I: Independent report management solution
- Level II: Seamlessly interfaced with your IT system
- Level III: Deeply integrated and making speech recognition a natural part of your IT infrastructure

SpeechMagic Solution Builder supports all reporting use cases.

Optimised towards high end-user productivity it is interoperable with virtually any medical information systems, working the way you want:

- Digital dictation
- Frontend recognition (with self correction or deferred)
- Backend recognition and correction (immediate or deferred)
- Mobile dictation
- "Shuttle" mode (for non-integrated use cases): dictate while navigating through other applications; when you are ready, paste your dictation wherever you decide.

SIMPLE, FLEXIBLE, FAST

SpeechMagic Solution Builder is based on the market-leading SpeechMagic speech recognition platform. It can be integrated into your existing IT infrastructure; utilising a variety of workflows for the benefit of clinical staff, hospital administrators and patients.

Due to its automatic adaptation features, workflow flexibility and ease of maintenance, SpeechMagic Solution Builder reaches a very high acceptance rate among users. Authors quickly feel comfortable using the product and improve their productivity.

SpeechMagic Solution Builder is the ideal solution to quickly integrate and deploy advanced document creation workflows featuring high quality, ready-made dictation and speech recognition functionalities.

What backs up the CEO

- Save money due to faster processes
- Save interest due to earlier billing
- More cases within the same budget
- Improve patient quality and satisfaction

What improves the CFO's budget

- Earlier billing
- Reduced transcription costs
- Free capacity and less administrative costs
- Less overtime payments for staff

What makes the CIO happy

- Quick roll out and deployment
- Low maintenance effort
- Fits into the infrastructure strategy (Citrix)
- Scalable system from department to chain

What comforts the CMO

- Faster turnaround times
- Less overtime
- Better working environment and less administrative pressure
- Hire and retain talent more easily

What eases a doctor's life

- Faster report creation
- Fewer enquiries from other departments
- Less administrative work
- More time for the patient

How does the patient benefit

- Report available faster
- Increased report accuracy
- Accelerated treatment process
- Improved patient care

SpeechMagic™
Solution Builder

MAIN INTEGRATION ASPECTS:

Short time-to-market

- Easy to integrate API, low effort, easy to deploy and upgrade
- Ready-to-use functionality (recording, correction)
- Encapsulates complexity of speech recognition technology

Optimised for medical documentation efforts

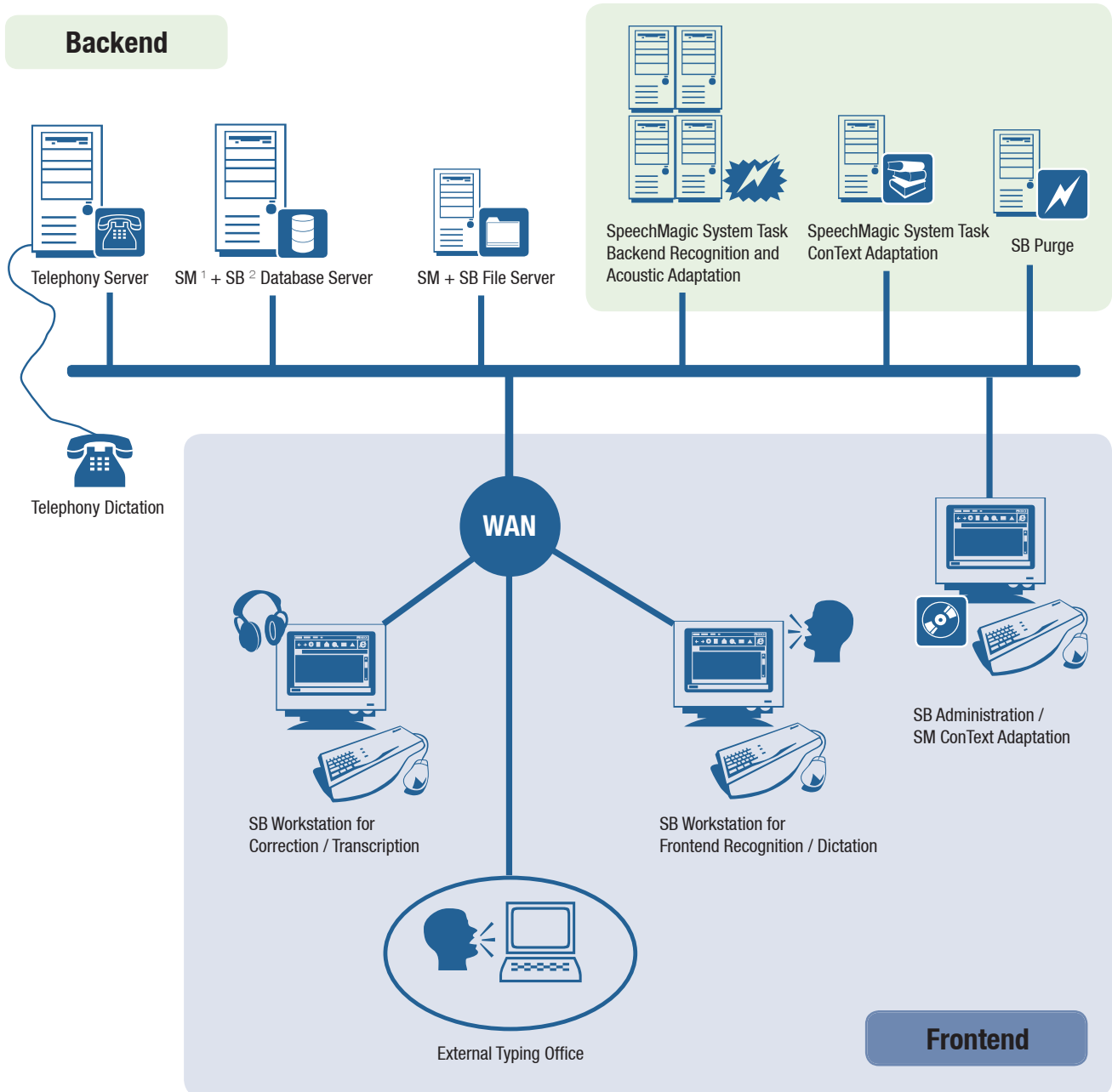
- Standardised document creation approach
- Optimised document creation support
- Targeted for hospital-wide deployment scenarios

State-of-the-art and future proof

- Supports a wide range of medical reporting use cases
- Optimised for high end-user productivity
- Based on SpeechMagic Software Development Kit (SDK) core technology

Industrial-grade and administration friendly

- Client/server architecture
- Reporting framework controllable by third party application through high level SDK
- Data security sensitive



¹ SM = SpeechMagic

² SB = SpeechMagic Solution Builder

TECHNICAL DIVERSITY



- Tested for Citrix
- Compatible with Linux thin clients
- Centralised administration
- Designed for large installations
- Supports different document creation workflows

KEY FEATURES

- Advanced document creation and information capturing functionalities
- Powered by the industry-standard speech recognition technology SpeechMagic
- Reporting application framework which can be controlled by other medical applications through a high-level SDK
- Allows efficient, central system administration and supports client/server based architecture
- Immediate and continuous adaptation: automatically and continuously adapts to the way you dictate
- Tailored for hospital-wide installations
- Workflow flexibility and freedom of choice for the user
- Security proven workflow and user rights distribution
- Advanced Auto-text and Template Editor
- Optimised for large-scale semi-structured reporting

User acceptance

SpeechMagic Solution Builder adapts to your preferred way of working. Start by maintaining the traditional workflows and phase over to the most efficient online-mode when convenient

Automatic learning and recognition rate improvement

Based on the industrial-grade SpeechMagic SDK, SpeechMagic Solution Builder features a unique learning and automatic adaptation process. The system adapts to the user's voice, style and vocabulary automatically.

Change the way you work at any time

The same user can switch conveniently between any of the available workflows at any time. Frontend recognition and self-edit, frontend recognition with deferred correction, backend recognition or mobile use case.

SYSTEM AND HARDWARE REQUIREMENTS

The following values are based on experience and define recommended requirements for the hardware to be used in a SpeechMagic Solution Builder system. We do not recommend that you use hardware which does not meet these requirements if you want the system to perform well.

Workstations

- CPU: >2.4 GHz // RAM: 2 GB (in addition to any other requirements) // Hard disk space: 800 MB // Network: 100 MBit/s connection with the server
- Operating system: Windows XP Pro with SP2 (recommended) // Windows Vista Business with SP1
- Additional: Microsoft Network Client installed and activated // Microsoft .NET Framework 2.0 installed // File and Printer Sharing service installed // 2 free USB ports

Server

- CPU: 2.4 GHz or higher // RAM: >3 GB (in addition to any other requirements) // Hard disk space: RAID system with 1 GB + 600 MB per author
- Operating system: Windows 2003 Server with SP 2 (recommended)
- Database: Microsoft SQL Server 2000 // MSDE 2000 // Microsoft SQL Server 2005 or 2005 Express (recommended)

SPEECHMAGIC SOLUTION BUILDER

Speech-driven clinical information capturing and documentation solution.

Easy integration. Quick roll out. Flexible workflows.

Accuracy, convenience and efficiency – these are the qualities we emphasise in our products. SpeechMagic Solution Builder offers doctors and clinical staff a safe and future-proof solution for the creation and administration of reports and discharge letters. Nuance's technology and consulting services will help you achieve your goals and capture medical information completely and reliably.

NUANCE HEALTHCARE

Nuance Healthcare is the world's leading provider of speech recognition, dictation, transcription solutions and transcription services that simplify and enhance the production and management of electronic patient documentation. Today, thousands of hospitals, clinics, group practices and healthcare providers use professional speech recognition for healthcare by Nuance to transform the high cost of medical reporting to a low cost high-quality process, for increased doctor productivity and better care, through easier, more immediate access to electronic patient information.

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