

ACHIEVE FASTER AND MORE **COST-EFFICIENT** MEDICAL DOCUMENTATION



360 | SpeechMagic SDK

Speech Recognition for Evidence-Based Decision Making in Healthcare Administration

CHALLENGE:

How can I optimize my report creation and information capture processes to achieve faster and more cost efficient medical documentation?

SOLUTION:

360 | SpeechMagic™ SDK makes it possible to introduce an electronic speech infrastructure (eSI) whether at the departmental level within a hospital or throughout an entire healthcare region.

360 | SpeechMagic SDK is a robust, scalable speech recognition platform that accompanies the healthcare industry's trend towards large-scale electronic speech infrastructure.

360 | SpeechMagic SDK offers an extensive SDK set to deeply embed state-of-the-art speech recognition capabilities into your application with the utmost flexibility, such as: digital dictation, front-end speech recognition, backend speech recognition, workflow, transcription, correction, command and control.

THE 360 | DEVELOPMENT PLATFORM

This platform is a global, enterprise-class clinical documentation and communication services platform for developers who want to embed advanced speech functionalities. It delivers network-based,

KEY BENEFITS

- Reduces document turnaround times
- Saves on transcription costs
- Increases patient record accuracy and access
- Improves clinician satisfaction and EHR adoption
- Enhances patient care in a demanding environment

KEY FEATURES

- Industrial-grade speech recognition
- Multiple workflow options
- Seamlessly integrated within your IT infrastructure
- Central, low-effort administration & maintenance
- Speech Analytics include Key Performance Indicators (KPI) and KPIviewer
- Supporting recognition in 22 languages

secure speech services and client-side software to support speech-enabled clinical documentation and communication workflows from any application, on any device, at any time. Deployed via an on-demand (cloud) model or as a complete on-premise solution.

KEY COMPONENTS OF THE 360 | DEVELOPMENT PLATFORM:

- 360 | SpeechMagic SDK 7 Release 3
- 360 | SpeechAnywhere Services: A new set of cloud- and network-based web services that brings speech recognition to mobile healthcare IT computing as well as traditional desktop and thin clients
- 360 | Solution Builder: A set of ready-to-deploy applications and high level SDKs for digital dictation, speech recognition and workflow integration in your EHR

AS A PHYSICIAN, YOU WANT TO:

Spend time providing care instead of documenting it; access and deliver accurate and complete information where and when needed; practice personalized, evidence-based medicine; order the right tests and know you are getting the right results; and leave the office on time at the end of the day.

STREAMLINE CLINICAL DOCUMENTATION AND REDUCE TURNAROUND TIME

- **Front-end speech recognition:** Clinicians dictate, self-edit and sign transcription-free, completed reports in one sitting and have full control. Alternatively, you can also delegate the draft to your transcription department.
- **Backend speech recognition:** Clinician dictations are turned into speech-recognized drafts that medical transcriptionists edit, resulting in up to a 100% gain in their productivity when compared to traditional transcription.

"Speech recognition is the only IT solution I have introduced in 20 years that led to measurable cost savings."

— Per Urdahl,
Head of the medical department
Telemark HF hospital (STHF), Norway

- **Remote speech recognition:** Clinicians can access the dictation and speech recognition system outside the central network, on a laptop or tablet PC. When reconnecting the device to the network, the central functions and services are performed.
- **High initial performance:** Physicians using front-end, interactive speech recognition can now easily add and remove words themselves. This enables them to build up their own customized recognition vocabularies in addition to the centralized vocabularies for all users at a site. Together with the expanded out-of-the-box vocabulary and advanced learning algorithms the performance and accuracy of the speech recognition engine has been raised significantly.

WHAT'S NEW IN 360 | SPEECHMAGIC SDK VERSION 7 RELEASE 3

360 | SpeechMagic SDK Version 7 Release 3 is an update of the SpeechMagic 7 Release 2 SDK platform. This third release completes our powerful, robust, multi-user and multi-network speech recognition platform Version 7 and makes it part of the 360 | Development Platform. It comes with an important set of improvements since the last release (January 2011).

WHY UPGRADE?

1. 360 | SpeechAnywhere Services

Support:

Extend your reach to new mobile platforms and widen the availability of speech-based concepts. 360 | SpeechAnywhere Services can be connected to existing and new 360 | SpeechAnywhere SDK installations.

2. Speech Analytics' New KPIviewer:

Shows you how the key performance indicators (KPIs) can be presented in a meaningful and easily accessible way for optimized use of the technology.

3. Improved Speech Accuracy Trainer:

Now enables users to provide a recording of how they pronounce a word or by entering a written representation of the word.

4. New Data Sync Cache Server:

Makes synchronization between remote sites and over the internet easier. Use the cache server to manage your bandwidth consumption and timing.

5. Admin Rights-Free 360 | SpeechMagic SDK Client Installation

6. Remote 360 | SpeechMagic SDK API:

Can now be deployed independent of a 360 | SpeechMagic SDK Workstation. Easy to integrate with .NET languages. Higher number of concurrent clients supported.

7. Improved Linux® Thin Client Support:

Includes Igel UD2/3/5 series Linux thin clients.

8. Record Standby:

Mode default handling.

9. Advanced Resolution Acoustic Reference Files:

In front-end recognition.

10. 360 | SpeechMagic SDK Sample Applications:

Ported to the new 360 | SpeechAnywhere SDK Client.

11. New Supported:

Hardware Olympus® DR and Olympus RS devices in addition to the Nuance PowerMic® II, Philips® SpeechMike, Philips Digital Pocket Memo and Grundig® Digta SonicMic, Grundig Digta CordEx.

12. Additional Operating System Support:

Windows® Embedded Standard 7.

SPEECH ANALYTICS

GET TRANSPARENCY. IMPROVE CONTROL. ENRICH THE PERFORMANCE

The latest version of 360 | SpeechMagic SDK 7 will help healthcare providers achieve faster and more cost-efficient medical documentation. Nuance Healthcare delivers new tools to measure and analyze the clinical reporting in your hospital. CIO's, CFO's and department heads can finally get an exact overview of their documentation volume, costs implied, ROI and turnaround-time.

The new data-centric approach to optimize your speech-enabled information capturing processes includes:

- **Key Performance Indicators:**

Deliver data about return on investment and the efficiency of medical documentation for evidence-based decision making in healthcare administration. Higher initial recognition accuracy and reduced deployment/integration effort positively affects total cost of ownership (TCO).

- **KPIviewer:**

A brand new application that allows care givers, integrators and healthcare IT service specialists to better understand the performance of your system via a powerful visualization tool. This tool helps healthcare organizations using systems powered by Nuance Healthcare's 360 | SpeechMagic SDK to manage system performance and get the most out of it.

SPEECH ACCURACY TRAINER, SUPERIOR ACCURACY FOR INFORMATION CAPTURE

The improved Speech Accuracy Trainer enables doctors to build up a user-specific vocabulary by giving them the capability to easily add and remove words on the client side to further customize the product and improve their recognition level. Low integration effort and synchronized backend adaptation processes guarantee smooth system performance. Improve the speech recognition performance by explicitly training the system.

- Unknown words can be added to/removed from a user's private lexicon.
- Acoustic training of new and existing words.
- Voice training (Acoustic Reference Files)

AS CIO/CFO, YOU'RE LOOKING TO:

Maintain highly reliable clinical and financial systems, maximize the benefits of EHR investments, improve workflow, optimize resources, ensure doctor satisfaction, improve operational efficiencies, improve overall patient care, and work with a partner you can trust.

- Accelerate EHR adoption, maximize system ROI
- Reduce operational costs and optimize system maintenance
- Control costs, improve revenue cycle, and increase medical secretary productivity

360 | SpeechMagic SDK is seamlessly integrated into information systems (IS) or reporting solutions, enabling the end user to efficiently capture information within their familiar working environment.

360 | SpeechMagic SDK captures dictated information and automatically generates formatted and structured medical information, saving valuable time and raising documentation quality. Speech Analytics deliver data about return on investment and the efficiency of medical documentation for evidence-based decision making in healthcare administration.

ELECTRONIC SPEECH INFRASTRUCTURE POWERED BY NUANCE

Speech-based information capturing in health IT systems has gained great momentum over recent years, driven by the digitization of healthcare. 360 | SpeechMagic SDK is used across the healthcare systems of many European regions, like the Basque Country in Spain, the Northumbria NHS Trust in the UK, several provinces in Norway as well as social workers in Denmark, or all major university clinics in Germany. Many of these regions have proven multimillion euro cost savings through their electronic speech infrastructure (eSI).

DIAGNOSTIC REPORTING:

**Fits your workflow and
integrates with your PACS/RIS**

Deeply integrated into your radiology solution, 360 | SpeechMagic SDK is a natural feature of your radiology reporting and communications process, simplifying report completion and communication, reducing turnaround time and transcription cost.

CLINICAL DOCUMENTATION:

**Accelerates productivity
with your EHR**

Studies have shown that EHRs add as much as 90 minutes to a doctor's day. Nuance Healthcare speech recognition helps clinicians document the patient's story through highly accurate software, while reducing turnaround time and dramatically reducing transcription costs.

IMPROVED DEPLOYMENT AND LESS INTEGRATION EFFORT

Reduce investment in implementation and maintenance costs and lead to lower total cost of ownership (TCO).

- **Roll-out:** The one-click deployment concept now better supports integration of browser and/or plugin-based systems to facilitate large-scale roll-outs.
- **Installation and upgrade** concepts include export and import tools that help the smooth transition to the latest version.
- **Wide support of existing IT infrastructure** includes compatibility with Windows 7 (32-bit/64-bit), UTF-8 character encoding for Oracle databases and Microsoft SQL Server Compact Edition (SQL CE). Linux-based thin clients and Citrix Ready certification complete 360 | SpeechMagic SDK unique Citrix offering.
- **Improvements in the Edit Control Adapter** allow better front end recognition support for a variety of edit controls, including .NET and Java environments.
- **“Down-time free”** system updates via enhanced synchronization routines do not interrupt users in their daily work.
- **Native 64-bit support** for client components allows integration with high-memory applications, such as Picture Archiving and Communications Systems (PACS).
- **New Remote SMAPI** to give you more and easier access to backend functionality. Easier management of larger systems, easier deployment.
- **New Data Sync API's** for easier synchronization between remote sites and over the internet. Possibility to use cache server to manage bandwidth consumption.

ABOUT NUANCE HEALTHCARE

Nuance Healthcare, a division of Nuance Communications, is the market leader in providing clinical understanding solutions that accurately capture and transform the patient story into meaningful, actionable information. These solutions are proven to increase clinician satisfaction and HIT adoption, supporting thousands of hospitals and providers to achieve Meaningful Use of EHR systems and transform to the accountable care model.

To learn more about how Nuance Healthcare can help you improve financial performance, raise the quality of care, and increase clinician satisfaction, please contact us at 800-350-4836 or visit www.nuance.com/healthcare.

SYSTEM REQUIREMENTS

OPERATING SYSTEM FOR 360 | SPEECHMAGIC SDK CLIENTS

Microsoft® Windows XP Service Pack 3 or higher // Windows Vista® SP1 or higher // Windows 7; (all 32-bit and 64-bit editions)

Database environment

Microsoft SQL Server 2000 (SP3 or higher) // 2005 // 2008

Oracle® Server - Oracle 9i (9.0.1 or higher) // 10g (10.1 or higher) // 11g (11.1 or higher)

Word processor for online recognition and correction (latest service pack is mandatory):

Microsoft Word 2003, 2007 and 2010 // TX Text Control ActiveX 11.0,12.0, 13.0, 14.0, 15.0, 15.1, 16 // Microsoft .NET Framework RichTextBox // Microsoft Rich Edit Control 2.0 // SpeechMagic Edit Control Adapter API allows integration with a wide range of additional edit controls

Citrix®

Citrix Presentation Server 4.0 and 4.5, Citrix XenApp 5.0 or XenApp 6 (32-bit and 64-bit editions) // Linux-based Fujitsu® Siemens® S400/S450 thin clients // Linux-based Igel UD-2/3/5 clients

Windows Terminal Server

Microsoft Windows Server 2003 or higher (32-bit and 64-bit editions) including Windows 7

Virtualisation support

Tested using the latest version of VMware® Workstation and VMware ESXi 4.0

360 | SpeechMagic SDK

Hard disk space: 6 GB

Frontend recognition

- CPU: Intel® Core or equivalent

RAM: Follow operating system recommendation + 500 MB

Digital dictation

- CPU: Pentium® III 800 MHz

RAM: Follow operating system recommendation

Correction

- CPU: Pentium IV 2 GHz

RAM: Follow operating system recommendation + 256 MB

Dictation devices

Nuance PowerMic II, Philips® SpeechMike LFH2000/3000 series, Philips SpeechMike Air, Grundig® Digta SonicMic, Grundig Digta CordEx, Philips Digital Pocket Memo, Olympus® DR and AS series

For more information, see the SpeechMagic Installation Online Help.