

Example of business plan on speech recognition software

[Business](#), [Company](#)



SPEECH RECOGNITION SOFTWARE

Part 1: Proposal

Software is becoming more and more advanced by the day. With this advancement, comes new and exciting ways that enable effective and efficient tackling of everyday problems. Speech recognition software is one such software. Researching in the speech recognition software will provide an avenue to uncover in what situations the speech recognition software would come in handy in the business. This could range from reducing the number of hours and manpower used to do routine typing to the production of urgently needed reports faster. Researching on the Speech Recognition Software will research the means in which the computer software can be employed to cut on cost. Such benefits of employing the software can only be brought forth by extensive research supported by figures and facts. The cost-benefit analysis can only be determined by collection and analysis of relevant data. Such benefits range from direct to indirect, short term as well as long term benefits. It will also be worth exploring the future of the Speech Recognition Software to determine how adaptable the business will be to future changes.

Spending time researching on the speech recognition software will be worthwhile because it will help in establishing key elements of the Speech Recognition Software. One such element is the accuracy of modern speech recognition software compared to traditional typing approach. This can be determined by examining the frequency with which the software needs human intervention. Again, examining how reliable the software is in

supporting changing business needs that are forecast in the foreseeable future will help determine its adaptability. Determining the levels of noise that the software can withstand will also help determine its suitability in different contexts. Different speech recognition software can operate on the same environments and surroundings to varying effects.

Part 2: Report

Speech recognition software increases convenience and efficiency in a number of ways. It increases flexibility in doing typing work. The software allows writers who spend lengthy periods of time typing an opportunity to take a deserved break from traditional typing. This can have positive health implications because of reduced cases of repetitive motion injury. Healthier workers mean the company can achieve more productivity and profitability. An individual can perform their activities in the evening, as well as during the weekends. The elimination of manual typing translates to increased productivity in the generation of reports. This means that whenever there is an urgent report that needs typing, using the software would reduce the amount of time needed to produce the report. This is because one can type with the same speed as he/she thinks. An average person types about 40 words per minute. The use of speech recognition software can enable one to dictate up to 120 words per minute¹.

An individual in the office can use the software to get work accomplished within a shorter time than previously. This can enable the business to save on cost. Although Speech Recognition Software has a lower accuracy of 98.5% compared to 99.7% of traditional transcription services, it is more cost

effective. These statistics are captured in the table below from the report by Zick and Olsen.

Speech recognition software provides quite some considerable flexibility in doing typing work. It can allow users to type into word processing software by just dictating to their computer. It can also allow users to type into e-mail documents. The power of speech recognition software goes beyond just dictating as it allows access to commands such as accessing menus and opening files. For executives who need to get personal e-mails typed fast to save time, this tool will be handy. Typists can also get their work done easily as well as do more work within a short time than using manual typing. This software would, therefore, increase the efficiency with which routine business activities are carried out. It is this convenience that would make the acquisition of the software necessary. 2

Speech recognition software can be used to answer routine queries in offices. This cuts on cost by replacing people in such office tasks. It is common practice these days to have an automated voice recording answer calls. It also instructs one to make a key press to select specific menu options or actions. Companies have moved beyond this option. More and more companies are now requiring one to speak certain word (which is instructed by a recorded voice) for one to interact with the system. This is made possible by the use of an automated phone system powered by speech recognition software. The use of speech recognition gives a company the ability to increase the speed of serving its customers. This is because speaking is easy and takes less time compared to selecting options from the

keypad. This means that there is increased number of individuals who can be served by such automated systems within a specific period. The increased efficiency provides a competitive edge or just a means of survival for business in cases where the competitors have acquired the software too. 3

Speech recognition software has limitations which introduce inefficiencies in certain scenarios, in its use in an office. These shortcomings result from the very nature of human speech. Dialects, accents and mannerisms, vary across different geographical locations, race and age. This increases the range in which certain phrases or words are pronounced vastly. Earlier speech recognition software had more difficult telling apart some words due to these variations than current systems. This signifies that it may not be efficient to use speech recognition software purely to do office work. Some individuals in the office who may not be native English speakers may find it harder to use these systems. This difficult may result in high frustration or such individuals leading to less productivity than when doing manual typing.

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Today's speech recognition software uses statistical modeling systems that use mathematical functions to figure out the most probable consequence in any given situation. John Garofulo, the National Institute of Standards and Technology Speech Group Manager says that the most commonly used models in the development of speech recognition software are neural networks and the Hidden Markov Model. The mathematical functions used in such systems allow the software to use the data recognized by the system to determine the data concealed from it. This field of research is still work in progress. This means that there is still some ground to cover before such

systems can totally replace the keyboard in typing.

Current speech recognition software makes use of some form of intelligence. For the software to perform optimally in any given scenario, it needs to have been trained with similar data. This requires tens of thousands of hours' work in order to feed sufficient data required to make the system good enough to process varied speeches. This training data includes thousands of bytes of text and hundreds (Sometimes thousands) of hours of transcribed human speech. The training data acts as a reference point for the system as it allows it to figure out what an individual says during dictation. 5

Apart from the data that the developers put into training the system initially, for the end users to reap maximum efficiency from using the system, they must also spend a sizeable amount of time training it. This is because different business settings make use of different speech patterns. The training of the system ought to be carried out by the primary users of the system in any organizational setting. The training of the system, when it is first introduced into the business setting, allows it to get accustomed to the particular terms and acronyms of the business or company. Alternatively, the company can acquire speech recognition software that has the commonly used terms in that field already fed into it. Fields such as medicine and law are some of the popular ones that have specialized speech recognition software already trained on the basic vocabulary in that field.

The effectiveness of speech recognition software increases with increasing use. This means that it will be less effective when one begins using the product and increase in accuracy with continued use. This effect is achieved by the creation of a voice profile. Such a system can allow for the program to

adapt to the voices of the user, his/her verbal idiosyncrasies and accent. This adaptation makes it better understand what one says. Modern Speech Recognition software comes with the ability to create different profiles for different users. This allows optimization of each user as each profile is built around the user's speech style and habits. Despite the fact that the efficiency of the software increases with increasing use, there is no significant variation between the accuracy of an advanced user and a basic user. The statistics stand at 99. 6% for the basic user and 99. 7% for the advanced user. This is depicted by the table below.

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