Voice Recognition Systems Essay, Research Paper

“WHAT ARE VOICE RECOGNITION SYSTEMS AND HOW ARE THEY USED?”

Section #

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Voice Recogniton Systems

About twenty years ago voice recognition systems were only see on the science fiction channel of the television and the viewer could only dream of the day when that technology would be possible. I know that when I was younger I would watch Star Trek and see Captain Kirk address the computer by talking to it, and not only did the computer understand his instructions, but it would flawlessly prefom the commands that were spoken. From the little that I knew before setting out on this project, I thought voice recognition systems were still primative, but I found that I was wrong. I have set out to discover the rapidly-changing world of voice recognition systems, and to ask the question, “What is vioce recognition systems and how is it currently used?”.

For many years people have wanted another avenue besides the keyboard to preform data processing. One of the first of these items is the barcode reader which is stronghly in use today. This product revelutionized the data processing industry but has a great number of limitaitons. The wave of the future in data processing is what is known as Voice recognition encoding. Voice recognition encoding has benn around for several years but not until recentallly has it become a viable solution. The main problem with voice recognition systems is that the technology was not available at a reasonable price until recently. A company located in Boston MA nade Dragon systems has created a product caleed NaturallySpeaking which has captured the market and offers a cost effective voice recognition swystem. This product is currently on the market and offers the ability to replace the cumbersome task of keyboarding with direct imputting through human voice.

Dragon Systems

The unprecented leader in voice recognition technology is a company called Dragon Systems. Dragon Systems continues to pursue the natural speech revolution through its reasearch and development efforts. Through the work of this company, voice speech technology has become not only a reality, but a standard part of the computing industry. Dragon Systems was co-founded by Dr. James Baker and Dr. Janet Baker in 1982 and is one of the largest speech recognition organizations in the world. With their team of experts, Dragon Systems builds systems for every aspect of life, from governmental use to student use. The company employees approximately 250 people all across the world. The company is well known for their history, with several patent and technological breakthroughs.

NaturallySpeaking

A breakthrough product that is practical and unique in many ways is NaturallySpeaking. As the name suggests, this program allows the user to speak in a normal and natural pace. This techinique is called “true continuous speech”. In the past, programs required a form of “descrete speech”, which ment users had to pause for a predetermined about of time between each word. NaturallySpeaking allows users to speak over 100 words a minute. This program records your voice in order to learn and recognize the user’s speaking pattern. Many voice recognition systems require long amounts of time dedicated to reading word lists in order t record your voice. NaturallySpeaking includes a form of entertainment in it’s voice programming. The user can choose to read Dave Barry’s book Dave Barry in Cyberspace, or the futuristic novel 3001: The Final Odyssey by Arthur C. Clark.

Another attractive feature of NaturallySpeaking is it’s accuracy rate. With regular use and minimal training, users can receive 95% or even higer accuracy rate. No other company around the world has been able to match this. Other programs confuse the user by assigning each letter of the alphabet a special name. Users would have to memorize these names in order to use the program. NaturallySpeaking assigned the letter “a” to letter “a” and “z “ to letter “z”, making it user friendly. This program also accomodates to any accent, dialect or any personal pronunciation that my be spoken by the individual. NaturallySpeaking has an active vocabulary of 30,000 words. These include the most common words and names of the English language. The Vocabulary Builder Tool allows the user to customize the active vocabulary with the words that are used most often. There is also a back up dictionary that contains more than 240,000 words that can be easily attained by simply typing the first few letters. A new word can always be added by spelling the word and saying it once. The back-up dictionary can be used for more than just a spelling aide. In order to maximize correct recognition, it contains speaker independent language usage and acoustic information.

Two of the many convient editing functions are “select and say” and Dictation Shorthand. The user simply say “select” and then state the phrase or word that needs editing. This eliminates the on screen curser navigation or specific screen direction commands required by otyher speech products. This allows the user to focus on the work at hand, not the PC controls and commands. Other frequently used editing may be achieved by saying the phrases , “Bold that”, “Change font size”, “Change margins”, and “Underline that”. Dictation Shorthand is a tool that allows the user to dictate an abbrevation of a word while the program will type the full text. An example of this would be the spoken phrase “Triple A”. The NatruallySpeaking program would automatically provide the text on screen as “American Automobile Association”.

Applications of NaturallySpeaking

The Dragon NaturallySpeaking’s user-friendly concepts only add to it’s versatility. Any document can be downloaded into most popular writing programs, such as Microsoft Word, Word Perfect or Lotus Notes to name a few. Even more convient is the fact that this program can be used to compose e-mail messages to be sent through the web. Companies can draft letters, create reports, or edit a lengthy proposal quickly and effeicently. Naturally Speaking is also benefital to children who are too young to type or the elderly who may have trouble typing. A lawyer could painlessly form a depostion or a college student can easily dictate a term paper. Disabled children and adults can activly and easily participate in our technilogical society. In our computerized world, the applications of NaturallySpeaking are endless. This program will also save people time. Our hands can be free, allowing us to complete other tasks. With the speed and accuracy of NaturallySpeaking, the user no longer has to spend time on spelling errors. With entrepreneurship growing rapidly in a world full of monopolies, smaller firms can now operate competitively . without having to hire additional people to perform tirival tasks.

Conclusion

The increasinly rapid rate of new computer technology is quite astonishing. The NatruallySpaking Voice Recognition system has the ability to change the world just at the invention of the computer itself. The applicaitaions of this program are as endless as the imigination.