



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Krista C. Drechsler</b>	<b>Project Number</b> <b>J1204</b>
<b>Project Title</b> <b>Accuracy of Voice Recognition Software</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this project was to study the accuracy learning curve using Dragon Naturally Speaking 6 voice recognition software and from the information learned develop a training plan to optimize training time so that voice recognition accuracy is obtained in the least amount of time. <b>Methods/Materials</b> Users dictated to Dragon Naturally Speaking 6 Voice Recognition Software into Microsoft Word, using a microphone, which came with the software, to find the accuracy of the program. Procedurally, equipment settings and speech characteristics were optimized first followed by Dragon initial mandatory training for all users. Then, 100 words from a phonetically balanced passage were read ten times with subsequent training focusing on most commonly missed vocabulary. The number of words correctly recorded out of 100 determined the accuracy percentage. <b>Results</b> Test data showed that initial accuracy percentages were in the mid 70's to mid 80's, increasing to peak accuracies in the mid 90's, with overall averages in the high 80's to low 90's. <b>Conclusions/Discussion</b> According to the data, accuracy generally increased with training time, however, some users improved more quickly and consistently than others. Accuracy can be accelerated by immediately correcting and training the words voice recognition misses. One can expect to experience accuracy percentages in the low 90's after about 10 minutes using this method of training. A lesson learned from this experiment is that it is very important to pronounce words and phrases clearly, consistently, and at an even rate. With this kind of program, many jobs can be accomplished at once. For example, a surgeon in an operating room can use voice recognition to direct surgical tables, cameras, light sources, and pumps. In the future, I envision our world where business meetings are recorded in detail using voice recognition; and when it gets hot, someone can just shout, "Open! Window!"	
<b>Summary Statement</b> I studied the accuracy of Dragon Naturally Speaking 6 voice recognition software.	
<b>Help Received</b> My teacher (Ms. Garza) helped me stay on track and complete the project in an organized way on time. My dad helped me understand the more difficult concepts.	