Chapter VI

Conclusion and Recommendations

Conclusion

Given only less than three months and occurrence of inevitable problems in hardware design, some of the scopes of the study were not realized by the proponents particularly on the software part. These concerns validation of moves and capturing chess pieces. Some features such as K-S5's ability to accept inputs through Speech Recognition (Voice Command) and K-S5's ability to interact with the user through Speech Synthesis were also not realized. Nevertheless, the proponents concluded that K-S5 can contribute in the development of human-machine interaction. Because of the accuracy, consistency and reliability of the machine, the concepts and theories covered by the study can be adopted or implemented to other applications beneficial to the different field of the industry. Having the stability and reliability of modern application platform and programming languages, the functionality of hardware components are fully maximize.

Recommendations

Due to the limited financial resources, time constraints and experimental designs failures, the proponents failed to include certain features and components to make the project a complete success. If further studies are to be conducted regarding the proponents' study, the following are some

recommendations that the proponents think will improve the performance of the K-S5:

- Use larger permanent magnet for the chess pieces for easier piece detection.
- Instead of using the InpOut32.dll to access the parallel port, it is better develop a device driver for the machine using the Windows Driver Development Kit.
- Use microcontrollers with more I/O ports and higher memory capacity to simplify design so that only one microcontroller will be used to control all the actuators.
- Use better, more uniform chess pieces for weight and height consistency and proper handling of the machine.
- Include other features such as the ability to accept inputs through Speech Recognition (Voice Command) and ability to interact with the user through Speech Synthesis.
- Improve the software part of the K-S5 to fully optimize the validation of moves and capturing chess pieces.

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