Fast Braille: Multi-Function Printer to Assist the Writing of the Visually Impaired II

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The present research involves the areas of mechanical engineering and assistive technology. It is a technological study on the feasibility of building an electromechanical device with several functions to assist the writing and reading of the visually impaired. This was done at the Technical School Liberato Salzano Vieira da Cunha, in the laboratories of the mechanical and electronics technical courses, in partnership with the Assistive Technology Laboratory (LTA). The project translates into the following question: how to facilitate the use of Braille by proposing assistive technology? In this way, I have aimed to create a lightweight machine, easy to transport and that automatically grafe Braille letters. In order to build such a prototype, studies were done on the various machines on the market (of writing, printers, fuser machines and among others) that encompass Braille. Topics such as machine sizing, electronic prototyping boards and C/C++ programming were researched. I developed the research from six stages: projection, sizing, construction, electronics, programming and tests. I obtained satisfactory results, because I was able to build a machine with all the features already mentioned and also because it can be controlled via an USB keyboard. Finally, I continue developing the research to further improve the system with the possibility of joining more functions such as voice recognition and communication between the machine and android/iOS or computerized systems, via bluetooth, to send text files to be printed automatically. Keywords: Assisted technology. Braille language. Braille printer.

Awards Won:
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