ANALYSIS AND DESIGN OF ENERGY INDEPENDENT AUTOMATIC SMART TRASH

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Abstract

Indonesia is one of the countries that has problems with the environment, especially the problem of waste. Indonesia still has many people who do not have the awareness of disposing of garbage in its place, this can make garbage everywhere and can cause various negative things. Smart trash cans are an alternative that can be used for waste management to be more effective in dealing with waste buildup. The design of this smart trash can aims to detect and sort the types of metal and non-metallic waste, so that the waste can later be recycled more easily. In addition, this trash can detect if the trash can is full and can notify the cleaning staff where the trash can is located using the Android user interface. This trash can is equipped with a solar cell that can turn on the device and can be used to charge cellphone batteries. The results of this study indicate that this smart trash can can detect the type of waste according to its type, accuracy in sorting is considered good even though it has the disadvantage of not being able to sort out the types of trash that are small in size.

Keywords: Trash, Smart Trash, Solar Cell.