ABSTRACT

The Waste Problem in Indonesia has become a serious problem and also affected to social, economic and cultural problems. Almost every cities in Indonesia has problem with managing the waste even though trash cans are provided all around in public places such as on streets, parks, schools, hospitals and etc. But it still cannot be solution that can be a way out for the problem of waste accumulation. People's negligence in not caring about the trash, so they throw the garbage is mix with all the type in place that should be separated by the type.

This is what inspired the author in making smart trash cans that can sort waste according to its type, such as inorganic, metal and non metal. So it is realized by the author by making a trash can that can equipped with solar cell as a power so it can saves electrical energy and can be used in places that didn't provided power sources and with proximity sensor in trash can wich can detect indications of full waste or not, the purpose of this smart trash can it can be expeted to be solution in dealing with recycling waste in easly way, so it can making easier for the surrounding community and the cleaning services to clean and recycle waste.

Using Smart Trash Bin System that designed by the author, that is being able to sort out the types of metal waste using photovoltaic energy, design system has 83% accuracy from the result of experiment, it is quite successful in detecting waste according to its type

Keywords : *wastes, smart trash bin, metallic sensor, glass sensor, solar cell*