

Application of ECO-CBR Tool for Sustainability Product Design

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Highlights: The objective of this research is to provide a decision tool based on one of many Artificial Intelligent (AI) called Case-based Reasoning (CBR). ECO-CBR tool is specifically use to solve a problem that facing by product designer at the early stage of product design. It have a capability to provide an environmental impact solution constitute of carbon footprint, energy consumption, air acidification and water eutrophication by calculate the similarity based on existing case store in the library. This solution can be revised and retained into the library. This approach will benefit product designers particularly to come up with a more sustainable product design process when they create a product with a new design in future.

Key words: *CBR, product design, eco-design, environmental impact*

Introduction

Every product in this world has within its lifecycle an environmental impact. The implementation of eco-design strategies at an early design phase will improve the sustainability for a product. Eco-design is also used to balance the economic, environmental and social impact while making a product smarter and safer during its entire lifecycle. The product supposedly to be examined at an early stage to obtain better results in the final stage of the product. CBR application is seen as

