

Calculate Product Carbon Footprint through the Internet of Things from Network Science

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Abstract : To reduce the carbon footprint of mankind and become more sustainable is one of the major challenges in our era. Internet of Things (IoT) mainly resolves three problems: Things to Things (T2T), Human to Things, H2T), and Human to Human (H2H). Borrowing the classification of IoT, we can find carbon prints of industries also can be divided in these three ways. Therefore, monitoring the routes of generation and circulation of products may help calculate product carbon print. This paper does not consider any technique used by IoT itself, but the ideas of it look at the connection of products. Carbon prints are like a gene or mark of a product from raw materials to the final products, which never leave the products. The contribution of this paper is to combine the characteristics of IoT and the methodology of network science to find a way to calculate the product's carbon footprint. Life cycle assessment, LCA is a traditional and main tool to calculate the carbon print of products. LCA is a traditional but main tool, which includes three kinds.

Keywords : product carbon footprint, Internet of Things, network science, life cycle assessment

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