

Digital twin and its impact on product design and shelf life

Assist.Prof.Dr.Haitham Muhammad Jalal Muhammad

Assistant Professor, Department of Industrial Design, Faculty of Applied Arts, Helwan University

haitham_Kamal@a-arts.helwan.edu.eg

Abstract

(The importance of) is the research to highlight a new technology that increases the life-long life of the products, which is the 'Digital twin' technology. Reducing the cost of design, testing, product samples, and reducing operating cost. Predicting the product breakdowns before it happens and reduces the cost of its maintenance. Protect the worker when using some dangerous machines. Monitor the product or the system remotely without the need to be next to it.

One of the (goals) was the research to develop the method of maintenance of products to the digital technology 'digital twin' because of its great impact on prolonging the life of the product, maintaining its safety and improving its performance and protecting the user, reducing the costs of both (design, production, maintenance). Achieving safety in all product tests. Teaching that technology for students of industrial design for their experience that helps them to understand that technology, and implement it in a simplified, uncomplicated manner.

As for the most important (results), it was an explanation of a new technology for the industrial designer that appeared in the world that would develop the method of maintenance of products to digital maintenance first, and to clarify the importance of that technology in prolonging the default life of the product, reducing design costs, production, maintenance, and getting rid of the problem of sudden stopping of the product during the work. Access to a methodology.

Keywords

digital twin, design, shelf life