

Industrial Design Strategies Knowledge Engineering in View of Fractal Geometry

Prof. Ragab Helal Abdul Gawad

Professor of Industrial Design Dep. Faculty of applied arts - Helwan University

aboraby_2007@hotmail.com

Assist. Prof. Dr. Hitham Mohamed Galal

Assistant Professor of Industrial Design Dep. Faculty of applied arts - Helwan University

wedesignlife@yahoo.com

Researcher. Ahmed Mostafa Mohamed Lotfy

Researcher at industrial design department -Faculty of applied arts – Helwan University

id.ahmedlotfy@gmail.com

Abstract

- **Phenomenon of Research:**

Nature has had a great share as a major focus of attention for explorers and researchers, and they are still studying the design of nature so that they establish new science bases and scientific theories (Fractal geometry.).

This research is connecting Nature Inspiration with industrial design and architecture by building the suitable knowledge about Fractals (The study of Generative Systems).

- **Claim of Research:**

Claims that the relation of fractal engineering and industrial design strategies and methods, can support industrial designers to be able to find solutions of product designs.

- **Objective of Research:**

Build-up knowledge related to the relationship of industrial design and fractal geometry, in view of the development of industrial design strategies.

- **Problematic of Research:**

There is a relationship between nature and new technology and and between the environment and industrial products this opaque relation need to clarify and prove with evidence, the research raises the question “How the nature can contribute a new addition to industrial design strategies through fractal geometry, based on new technologies in 21th century.”

- **Methodology of Research:**

Exploratory curriculum.

- **Plan of Research:**

To prove the prosecution must follow a plan to reach the goal:

human thinking when faced with problematic, if some information concerning problematic the seeker based on this information, and more may be required to reach the unknown elements in problematic, and pass on this in the language of logic by saying: the thinker Moving from the

introductions to the results, this is inferred. So, the conclusion in General is a mental process which is done by her transition from the unknown to the known, Firstly the research identifies the term “Fractal geometry” then clarify its relation to “industrial design”.

• **Key-words:**

Fractal Geometry - Generative Systems - Three-dimensional printing.