The Effect of Parametric Modeling in the Design of glass blocks For architecture

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Abstract:

In the beginning, the use of computer programs was limited to drawing the idea that was designed by the designer (sketch) before, and then to the digital design to show it But with the development of the impact of digital techniques and The appearance of parametric design and the term- algorithms have affected the design process itself, now most of the architects and internal- designers are using computer programs to develop ideas and not only drew, but the work of their own prototypes, and these programs can connect between several different types of information that provides the program to be forms streamlines.

As we know, the characteristic of the parametric model is not the output but the need to build and maintain the relationships associated with the model. Some researchers develop this approach, such as creating a continuous interactive process of design instead of developing the basic product. All this led to Ideas Generate ideas and new patterns of designs that never existed before, such as Digital design, Folding, Parametric, and Topology.

There are many computer programs that have been used to control design, development and modification to obtain multiple results and to obtain unexpected and unpredictable results such as 3D Max and 3D Rhinoceros plug in Grasshopper.

It is possible to rely on the digital and Parametric design in the modern architectural design through which the design of the architectural units, partitions and glass partitions can be drawn from the stage of the first sketch until the execution and the work of the first model and then the final product whether the final product is a unit or a glass partition or a glass separator full of The tiles are not typical but can be moved and calculated method of installation and theoretical experiment and ensure the validity of their implementation in practice on the final glass product.

Modeling of parametric geometry is a process and advanced science in architectural design, a field in which algorithms is taught in complex geometry calculations on the computer and everything related to it.

Research problem:

The problem of the research is to answer the following question: Does the use of the parametric system affect the generation of ideas and design in the field of interior design and design of glass partitions and partitions and how to use it as a new tool to produce many different ideas and alternatives?

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Search Goal:

- The research aims to study the parametric design and how it affects the generation of ideas in the field of interior design and design of glass partitions and glass separations.
- Demonstrating the effect of parametric modeling and algorithm supported by digital design on the computer on some modern architectural techniques such as aerodynamic architecture.

Research importance:

- The importance of research is due to the need to make a spot on and study the tools of digital- technologies, because they have a great impact on the design process of the solutions, and it offered by a variety of sophisticated and ability to choose the best.

Keywords: Parametric design - Digital design - algorithms