The impact of using Voronoi diagrams on the contemporary interior design. Dr. Ahmed El-Shakhs assistant professor Abu Dhabi University, Abu Dhabi, UAE.

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Abstract:

Design is a process that requires an advanced stage of thinking in order to find suitable problems solutions. Consequently, Designers are no longer relaying their creations on ordinary resources, but are always looking for unconventional ideas. The interior design depends on the previous designer experience through which he generates new ideas and inventions. Contemporaneity is a term that reflects the rapid changes that the design world faces each day. Accordingly, the designer must cross the barrier of everything traditional in his designs, using all the disciplines that directly or indirectly serve his field. Moreover, computer applications, which are developing rapidly, have a pivotal role in stepping up vision and design horizons. Many applications allow 2D and 3D modulation, which positively affects both the output and the design process. This paper investigates the impact of using Voronoi Diagram -as one of the mathematics methods in space and surface dividing- on the interior and furniture design. Voronoi Diagram used to divide two-dimensional surfaces through specified points. This application result is used recently in interior and architecture drawings without relaying these forms to the mathematical rules and fundamentals. The lack of the foundations and principles of the Voronoi diagram for many designers, consequent, contemporary design insufficiency. Interior designer's perception of the foundations and the basic rules of that counterpart will positively reflect on the design outputs in that it can develop in the governing ratios of the building and not only the formal benefit. The computer also has applications associated with the Voronoi scheme that helps the designer to form surfaces effectively.

Keywords:

Interior Space, Futuristic Design, Voronoi Diagram, Biotical engineering ,Computational Geometry.