A CAD Paradigm to Produce Zillij Style of Geometrical Patterns for Wooden Carvings

Abstract

This work presents a CAD paradigm to produce traditional zillij style of geometrical patterns using ubiquitous polygonal technique. This method makes use of a grid generated from diagonals of n-sided regular polygon. The grids are in the form of a mesh of having large number of irregular polygons. The vertex of any irregular polygon in the grid is viewed as the point of intersection of two diagonals. These irregular polygons, when located in radial symmetry, generate a zillij style of pattern. The design possibilities increase by increasing the diagonals elements and endless variations of patterns on an isometric grid can be created. These geometrical patterns are ideally suited to computer-controlled manufacturing, so can be executed on a flat wooden surface to produce carvings.

Reference


Index Terms

Computer Science
Computer Aided Design

Key words

CAD
Zillij patterns

Wooden carving
Polygonal technique