UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

GENERATION OF VASE BY USING BÉZIER AND DEJDUMRONG CURVE

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

Vases have been around the world since the earliest moment of civilization history. But as technology advances, there is not much study and research to modernize vases. Thousands of years of craftmanship and not a single blueprint has been generated for a vase, let alone a modelling technique using Computer-Aided Geometric Design (CAGD). In this research, we attempt to model vases using CAGD by incorporating Bézier curve and Dejdumrong curve, two types of curves that are famously used in CAGD. The research started by selecting a certain type of vase to be modelled, deriving the curve's formula to be used in MATLAB to generate the model and discussing the results obtained. By comparing between these two curves in modelling vases, we had come up with the best option to model a vase based on a few characteristics such as flexibility of cure, symmetricity of vases and complexity of producing the model. This research is significant for the industry of vase or pottery to initially design a vase before traditionally handcrafting it. Future research might lean towards automation of production of vases such as 3-D printing.