

**APPLICATION OF BEZIER CURVE AND CUBIC  
TRIGONOMETRIC BEZIER WITH A SHAPE PARAMETER IN  
DESIGNING 3-DIMENSIONAL OBJECTS USING ROTATION  
SWEEP SURFACE METHOD**


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## DECLARATION BY CANDIDATE

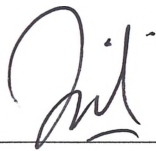
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## ABSTRACT

Computer-aided Geometric Design or CAGD is from in order to developed curves and surface modelling. CAGD makes much better in creation, modification, analysis and optimization design. A specific surface section can be designed in separately part and fitted together to display the total object. This study was focused on designing symmetrical 3 dimensional object which is a bottle. The shape and design are very important for marketing strategies. According to a study on the design of consumer, packaging looking at the effects of manipulations of shape orientation, curve, and alignment of graphical forms on consumer's assessments. The shape, size, and colour of the bottle also affecting to marketing strategies. In this study manipulation of the design was make based on the properties of the control point at the curves in two dimensional by using two methods Cubic Bezier Curve and Trigonometry Bezier a shape parameters method using Wolfram Mathematica software. The properties of the design of this study taken by nearest from real design properties and converted to two-dimensional design. After the manipulation stage, the two-dimensional design of two methods converted to three-dimensional design using the Sweep Surface Rotation method. After that, the best design will be chosen after the manipulated stage. The properties of the best design were choosing based on the properties of easier to manipulate the curves that satisfied the consume needs and volume of the design that was nearest to the real design. Based on the result, it is shown that Trigonometry Bezier a shape parameter is the best method than Cubic Bezier Curve.

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