

## **ABSTRACT**

*Earth consists of two main components of land and water. Waters have a larger ratio of the plain of 2/3 or 70%. The one form of water that is often found is the river. The river is a large and long flow of water that flows continuously from the upstream (source) to the downstream (estuary) that separates the plains. Indonesia as a tropical country certainly has several large and small islands and has many rivers, so it requires a bridge to connect the area separated by the river. To build bridges required some data one of which is the width of the river.*

*Calculating the size of the river, would be difficult to do if you have to calculate it with conventional media. One application that can be used to make it easier to detect or know a place and a building is Google Earth. Applications produced by Google companies are using satellites to detect a location one of which is a river. Therefore, this research utilizes Google Earth application to make it easier to detect Citarum river in Bandung.*

*In this final project, the research is done by detecting the width of Citarum river which is located by using the image processing google earth. Furthermore, an analysis is conducted using multilevel thresholding method to facilitate the development of the river around by certain parties. Thresholding is one of the image segmentation method in which the process is based on the different degree of gray image. Multilevel thresholding is a method of thresholding image segmentation that uses two or more threshold values. The results obtained from this research is the detection of the width of the river with an accuracy of 90%*

**Keywords:** *Multilevel Thresholding, Google Earth, Citarum River*