

## **ABSTRACT**

### **IMPLEMENTATION OF VIRTUAL REALITY AS A SIMULATION MEDIUM FOR EARTHQUAKE DISASTER RESPONSE BASED ON 360-DEGREE VIDEO**

**By:  
NESA NUGRAHA**

Indonesia's geographical position between two tectonic plates made it highly prone to earthquakes. One of the main factors contributing to the high number of casualties during earthquakes was the public's lack of knowledge regarding appropriate responses during such disasters. Advances in multimedia technology, particularly in the form of Virtual Reality (VR), had enabled the development of three-dimensional 360-degree videos that closely resembled real-life experiences. Virtual reality was defined as a simulation medium generated through computer technology or a presentation of an environment where users experienced a sense of phenomenological presence or engagement. The implementation of virtual reality as a simulation medium for earthquake disaster response served as a tool to help the public understand and experience the appropriate actions to take during an earthquake. This research utilized a multimedia development method for creating the disaster response simulation media. The development process began with the concept phase, which involved analyzing problems and setting objectives. This was followed by the design phase, then material collecting, assembly, testing, and distribution stages. The results of this study indicated that the use of virtual reality as a simulation medium for earthquake disaster response was categorized as highly effective and therefore served as a useful tool for improving public understanding and preparedness.

**Keywords:** Virtual Reality, Earthquake, 360-Degree Video

