

## **ABSTRACT**

Today, competition in business is getting tougher, one of which is caused by the era of globalization. Products require good branding and positioning. One element that can strengthen branding is jingles, and marketing strategies are needed as a tool to compete in the era of globalization. This has triggered advances in technology and knowledge, one of which is neuroscience, especially in neuromarketing. Neuromarketing is used to understand consumer behavior towards markets and their changes. Consumer behaviour is measured using 16 channel electroencephalograph (EEG) signals (Fp1, Fp2, F3, F4, C3, C4, P3, P4, O1, O2, F7, F8, T3, T4, T5, and T6) to determine brain waves that occur in humans when given a stimulus in the form of jingles. Consumer behavior can be measured using questionnaires, polling, surveys, and neuromarketing. According to F. Babiloni, neuromarketing can explain explicitly the reasons why consumers choose the product, while other methods cannot explain it.

Neuromarketing research on EEG signals with jingle-shaped stimulus was conducted to determine the response of consumers who were given stimulus in the form of jingles. This research is divided into two sides, the first is by taking data using EEG directly to measure the signal activity associated with consumers. The second stage is pre-processing with a 4th order butterworth bandpass filter and a cut-off frequency of 8 Hz - 12 Hz.

From data acquisition of six subjects, the relationship between top brands and the answers of the subjects was obtained using a questionnaire. After the filtering stage in pre-processing, brain signal activity is found in the frontal area or short term memory section. The frontal area has a higher energy than the other areas, the highest energy found in channel F4.

Keywords: 16-channel EEG, neuromarketing, branding, jingle, short term memory.