

ARISA VILAIKRUAD : ANALYSIS OF THE MOST INFLUENTIAL
FACTOR ON QUALITY OF EXPERIENCE IN MOBILE NETWORK.
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QoS/QoE/ANN/MAD/MAPE

It is well known that communication on the mobile network is very important because there are many subscribers. Consequently, the performance of the network is always changed according to the usage behavior. As a result, the service providers have to improve the quality of signal on the mobile network to satisfy customers. Therefore, the service providers focused on adjusting parameters of network quality but they did not consider the real satisfaction of the customer.

In this work, researcher has recognized the importance of quality of service (QoS) of network and quality of experience (QoE) of customers, which is based on the ITU-T standard. The study has investigated the relationship between two factors (QoS and QoE) with feed-forward backpropagation neural network. The data of two factors are collected from QoS parameters and opinion score of users in different situations, In term of data collection, researcher utilizes 3 main applications. It includes the video viewing on YouTube application, news awareness from web browser application and data sending via Line application. The relationships of QoS parameters that affect the differentiation of QoE models based Neural Network are presented and then the calculation of the difference between QoE models using the Mean Absolute Deviation (MAD) method and the Mean Absolute Percentage Error (MAPE) is illustrated. The outcome of this research is the analysis method to find the most influential factor on

QoE of mobile network. The benefit of this research is that the service provider can utilize the analysis to manage the QoS parameters to effectively meet the customer's satisfaction.



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