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| **Thesis title** | Network Observability Determination for PEA and EGAT Systems Using Artificial Neural Networks |
| **Student** | Mr.Pornthep Tanprasert |
| **Student ID.** | 46060318 |
| **Degree** | Master of Engineering |
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| **Thesis Advisor** | Assist.Prof.Dr. Somchat Jiriwibhakorn |


## ABSTRACT

This thesis presents its readers a method for the determination of network observability of the Provincial Electricity Authority (PEA)'s 8 bus, 115kV power system and the Electricity Generation Authority of Thailand (EGAT)'s 14 bus, 230kV power system by using the artificial neural networks (ANNs). This thesis uses the results from the Measurement Jacobian Matrix Reduction as training and testing data for two types of the artificial neural networks which are the back – propagation (BP) neural network and the generalized regression neural network (GRNN). Then both results are compared to find out which one can determine the network observability more effectively with less training time. Using the artificial neural networks in analysis can solve the problem on using other complex procedures and time consuming calculations.