

Warayuth Phramthong 2014: A Combined Method of K-Means and Self-Organizing Map based Region-Growing Technique for Electric Load Profile Clustering.  
Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering,  
Department of Electrical Engineering. Thesis Advisor: Mr. Pisut Raphisak, Ph.D.  
53 pages.

This thesis proposes a combined clustering method to generate typical daily load profile. The process analysis starts with K-means in order to provide the cluster centers for selecting the suitable neurons for forming clusters by the Region-Growing technique based on neighborhood relation achieved by Self-Organizing Map. In addition, for the cluster validation process, the compactness of the obtained clusters and the separation between clusters have been used to measure and compare results from different methods: the proposed method, K-means and traditional Region-Growing respectively. After comparison, the result of the proposed method has a better performance.

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Thesis Advisor's signature