PEAK LOAD FORECASTING
USING ANALYZABLE STRUCTURED NEURAL NETWORK

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This paper presents a peak load forecasting using an analyzable structured neural network. Recently, a number of neural network approaches for peak load forecasting methods have been proposed. The purpose of these studies is accurate forecasting to construct a nonlinear model using multilayer neural networks. However, conventional multilayer neural networks are said to be a black box. Namely, it is difficult to explain the reason of forecasting results. This paper proposes a peak load forecasting method using an analyzable structured neural network. The proposed neural network has two types of hidden units. First one has connecting weights between only one group of related input units. This feature allows to analyze independent relations between input and output units. Another one has connecting weights between all input units. The effectiveness of the proposed method is shown by a comparison with actual correlation and extracted correlation from the trained neural network.