

This paper presents efficient data structure management algorithms to reduce the amount of CPU time required during the recomputational process of updating the Jacobian matrix and mismatching vector for power system state estimation. This updating is required after the identification of bad data, such as a parameter error of a line in a power network, in order to remove their influence on the state estimation process. The performance of the proposed algorithms is evaluated using several large power system networks. A considerable reduction in the CPU time is obtained with the proposed algorithms.