

## **Implicit integration transient stability analysis prototype software.**

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This paper discusses implementation details of the transient stability analysis prototype software based on implicit integration scheme. The main advantages of an implicit integration scheme with separate treatment of differential and algebraic state variables as well as an integration process with discrete events handling are considered. The results of test calculations and their comparison with existing software package RUSTab are presented.

*Key words: transient stability analysis, implicit integration, discontinuous DAE.*