An implementation and test platform for wide area stability assessment methods - DTU Orbit (25/12/2018)

An implementation and test platform for wide area stability assessment methods

This paper presents a software platform developed in MatLab with the purpose of supporting research, Development and testing of wide area algorithms for stability assessment and control. The development and testing process of algorithms exploiting real time wide area data from Phasor Measurement Units (PMU) can be very time consuming, especially if the testing procedure is not carried out in a systematic and automatic manner. The test platform overcomes this problem by automatically importing system model parameters, topology and simulation output from a time domain simulation of an instability scenario and automatically generating synthetic PMU snapshots of the system conditions. To demonstrate the platform's potential for supporting research and development of wide area algorithms, a method to detect voltage instability is implemented and tested, giving results consistent with results from literature.

General information
State: Published
Organisations: Department of Electrical Engineering, Center for Electric Power and Energy
Contributors: Wittrock, M. L., Jóhannsson, H.
Number of pages: 5
Publication date: 2013

Host publication information
Title of host publication: Proceedings of the 2013 IEEE PES Innovative Smart Grid Technologies Conference
Publisher: IEEE
ISBN (Print): 9781479929849
DOI(s): 10.1109/ISGTEurope.2013.6695424
Source: dtu
Source-ID: u::8539
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013