

Masterthesis

Automatic analysis of Wide-Area-Measurement Data of the Austrian transmission system

Introduction

In the Austrian transmission system a wide area measurement system (WAMS) is installed. Several phasor measurement units, distributed in the grid, record in a GPS synchronized way the actual grid frequency as well as the complex voltage phasors in selected substations. The measurement results are stored on a central server.

Task description

Development of an automatic offline analysis of the recorded data with the goal to identify

- disturbances (tripping of large generation units, faults in the transmission system),
- inter-area-oscillations (determination of frequency and damping, identification of oscillation modes).

The tool shall be developed in Matlab environment, combining basic knowledge of power system dynamics with efficient signal processing methods. In addition, the visualisation of the results should be implemented. This call also addresses students of information and communication technology.

Organisatorisches

Immediate start of the work is possible.

Contact person/supervisor

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