Course 603

Transient Security Assessment Using TSAT

Course objectives	To provide the necessary background and technical skills for applications of TSAT
Material covered	• The basic concepts of power system stability and security • Modeling, computational techniques, and analysis methods • Operation of TSAT • Result analysis
Who should attend	Engineers involved in power system stability studies using TSAT
Background required	• Basic knowledge of power system modelling, dynamics, and stability analysis • Recommended prerequisite: Course 601 – powerflow analysis using PSAT
Duration	2 days (extendable upon request)

Part 1: Transient Security Assessment (TSA) Basics

1. Introduction to transient security assessment (TSA)
2. Transient stability
   - Modeling requirements
   - Solution methods
3. Scope of TSA and TSAT solutions
   - Core technologies used
   - Main analysis features
4. TSAT application examples

Part 2: Using TSAT

1. Introduction to TSAT
2. Data requirements
3. Modeling features
4. Input/output data formats
5. Program customization and operation
6. Result examination
7. Other features
8. Help sources

Part 3: Hands-on Exercises

1. Test case descriptions

2. Hands-on exercises including the following topics:

   - Perform a no-fault simulation
   - Create a practical TSAT case
   - Work with the output analysis module DSAOA
   - Use security analysis options
   - Work with multiple scenarios
   - Analyze transfer limits
   - Use data handling features of TSAT
   - Perform other analyses
   - Create user-defined models with UDM Editor

Note: the actual contents of the course may be customized based on user requests; please refer to the course announcement for details.