Software Engineering AG

Intercompro AG

ISPEN / IPFA

Instant **S**ecurity **P**robing of **E**lectrical **N**etworks
Interactive **P**ower **F**low **A**nalyser

by Intercompro.

ISPEN/IPFA complements the kernel with a comprehensive user shell that allows using the same algorithms in an offline planning and analysing environment. With this powerful simulator tool box, there is no limit to the analytical power of the user's staff.

Data input are UCTE formatted files as with the ISPEN/OCD. With IPFA, these files can now be edited to adapt both the load estimation and the network model.
Among possible applications are:

- Day ahead congestions forecasts (DACF)
- Forecasting/Planning of trade solutions
- Sensitivity analysis
- Differential analysis (compare cases)
- Simulation of counter measures against contingencies
- Operational analysis
- Scanning a network for critical elements
- Simulation of future elements and their benefits
- to the current network
- Investigation and re-play of critical situations

ISPEN / IPFA
Simulation of planned actions

Introduction

How will your planned actions influence the security of your network? ISPEN/IPFA is an interactive power flow analyzer and enables you to simulate your planned actions. This ensures the security of your system after carrying out the action.

What are the Effects of Planned Actions?

The effect of planned actions is not always predictable. So, will the network be secure? ISPEN/IPFA gives you the answer by calculating the state of your network after having carried out the planned action.

Interactive Analyzing

ISPEN/IPFA is an interactive analyzing tool based on the powerful ISPEN/OCD. It is applied for power flow analysis and contingency analysis and offers unique features:

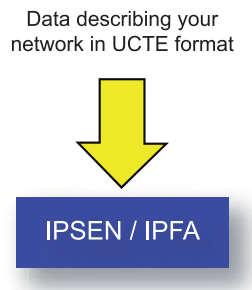
- Very fast response time
- Accurate results due to advanced algorithms
- Models of the newest types of transformers
- Differential load flow analysis
- Evaluation of cascading risk and impact
- Calculation of very large networks (up to 16'000 lines, 12'600 nodes, 10'000 substations, 5000 transformers)
- Calculation of up to 4'600 outages
- Calculation time only proportional to size of network (and not exponential)
- Input data describing your network in UCTE format (all versions: 0, 1, 2)

Applications with ISPEN/IPFA

- Power flow analysis
- Contingency analysis, based on predefined or individual contingency lists
- Analysis of DACF files
- Checking DACF files
- Simulation of the impact of planned actions
- Congestion diagnosis
- Support in planning and forecasting
- Differential analysis of two cases
- Operational analysis
- Network scan for critical elements
- Simulation of changes in your network
- Investigation and re-play of critical situations
- Scientific research

Input to ISPEN/IPFA

ISPEN/IPFA uses files in UCTE format as input. All versions of the UCTE format (0, 1 and 2) are supported. This means that ISPEN/IPFA can check the quality of a DACF file, for example.



Platforms

ISPEN/IPFA runs on windows based computers (Windows XP)

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