

GoalArt Training, Wednesday June 4<sup>th</sup> 2008

REAL-TIME ALARM REDUCTION AND ROOT CAUSE ANALYSIS FOR CONTROL ROOMS

GoalArt has developed a number of strategies and algorithms for alarm reduction and pinpointing of root causes in power grids. The aim is to help the operator to know what happened in a complex fault situation, and thus, setting the stage for an efficient restoration of the grid. The training will focus on the following topics:

- Different types of alarm problems and their different solutions.
- Alarm philosophy: what functions does an alarm have?
- Nuisance alarms and how to get rid of them.
- Knowing what happened in real time: on-line root cause analysis.
- Multilevel flow models and the MFM-based root cause algorithm.
- Hands-on modeling of active and reactive power in MFM.
- Discussion: how to include the GoalArt algorithm in operations.

The participants will receive a copy of the GoalArt publication “A Small Book on Alarms,” which is a crash course in all types of alarm management.

During the day, we will study the algorithms and modeling, using a small grid example. Please bring your own laptop with Windows XP, if you want to be able to run the demo examples yourself.

The (tentative) training day schedule is as follows:

08:00-09:00	Different alarms and solutions, GoalArt’s alarm philosophy
09:00-10:00	Nuisance alarms and alarm tuning, “clean it up yourself”
10:00-10:15	Break
10:15-11:15	Introduction to multilevel flow models (MFM)
11:15-12:00	Introduction to root cause analysis
12:00-13:00	Lunch break
13:00-14:00	Intro to MFM modeling tools
14:00-14:45	Hands-on modeling session, a mini power grid system
14:45-15:00	Break
15:00-16:00	Testing and evaluation of the hands-on example
16:00-17:00	Discussion, feedback, and wrap-up

This training is held as a parallel track during the ABB User’s Group Meeting for Network Manager, in Albuquerque, New Mexico. Please sign up via the UGM page.

For questions, please contact Jan Eric Larsson, e-mail: [janeric@goalart.com](mailto:janeric@goalart.com)

Welcome!

*Jan Eric Larsson*

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President & CEO of GoalArt