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GT ARC
GERMAN TURKISH
ADVANCED RESEARCH CENTRE FOR ICT

Intelligent Solutions for Protecting Interdependent Critical Infrastructures

ILIas

Objectives

ILIas is developed for protecting critical infrastructures, especially in the areas of power provisioning and telecommunication services for the public. These solutions have to be scalable and have to combine quick automated reactions with manual control for correct decisions in high impact infrastructure systems. Simulations have to provide the foundation of analytical data that provides the basis for the development of intelligent power grid and telecommunication network management concepts.

Approach

In order to achieve the objectives a service based multi-agent architecture is employed. This flexible peer to peer based distributed management system provides a robust and fault tolerant foundation for functionalities like network analysis and ensures availability of relevant data, as well as system control in different failure scenarios.

Realization

- Simulation of telecommunication networks and power grids based on real structures in the Berlin Brandenburg area
- Implementation of a federated simulation environment for dependency research
- Multi-agent system for the management of minimum infrastructure services in face of critical failures

PROJECT OVERVIEW

PROJECT TITLE

Intelligent Solutions for Protecting Interdependent Critical Infrastructures

WHAT IS IT ABOUT?

In "ILIas" a software solution for simulating attacks and for evaluating the efficiency of protecting mechanisms in interdependent critical infrastructures is developed. This occurs on the examples of telecommunication and power provisioning networks.

RUN-TIME

09/01/2010 to 08/31/2012

PROJECT MANAGER

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PROJECT-URL

http://www.gt-arc.com/projects/ilias/

BUZZWORDS

Protection of critical infrastructures, simulation of telecommunication and power provisioning networks, reliability on cascade effects

SPONSOR

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