

“SimCIP: a federated network simulation environment for critical infrastructures”

CRITIS 2008

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FhG-IAIS

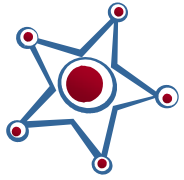


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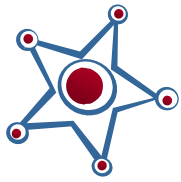




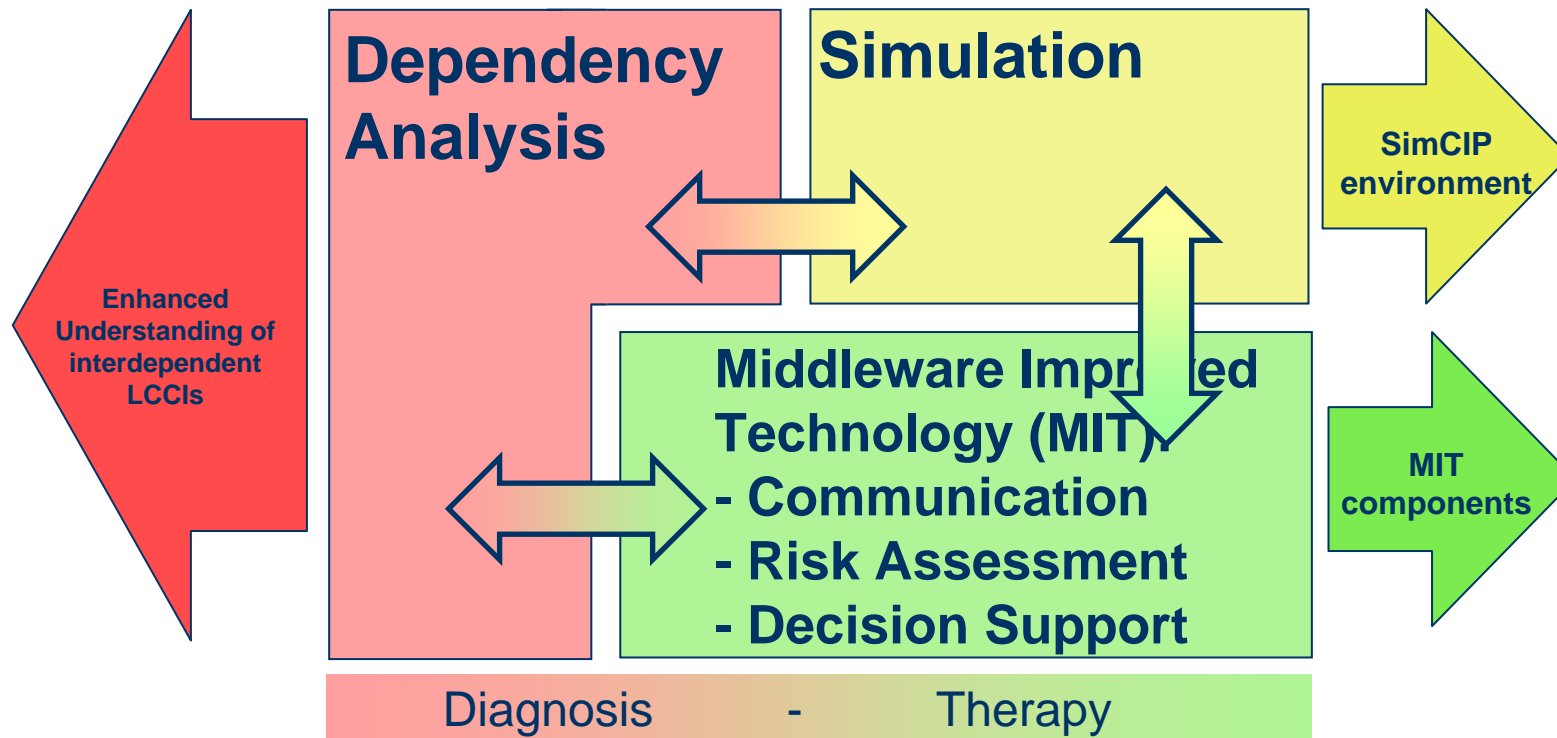
Outline

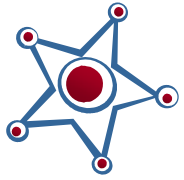
- SimCIP in the IRRIS Framework
- Goals of SimCIP
- Federated simulation of power and telecommunication infrastructures using SimCIP
- An example scenario of SimCIP
- Light SimCIP demo





SimCIP in the IRRIS Framework

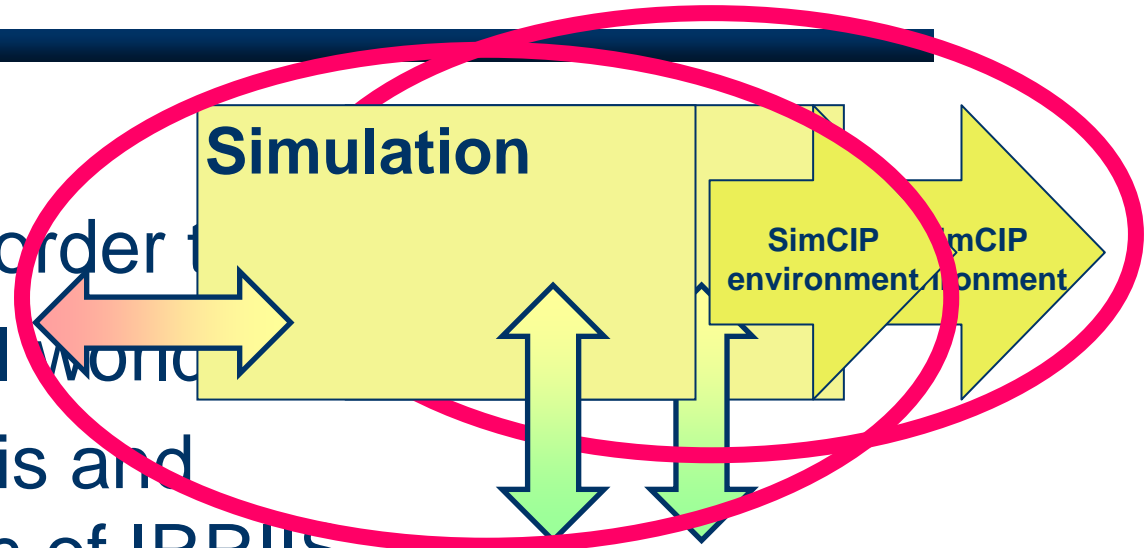


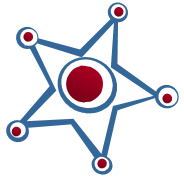


Goals of SimCIP

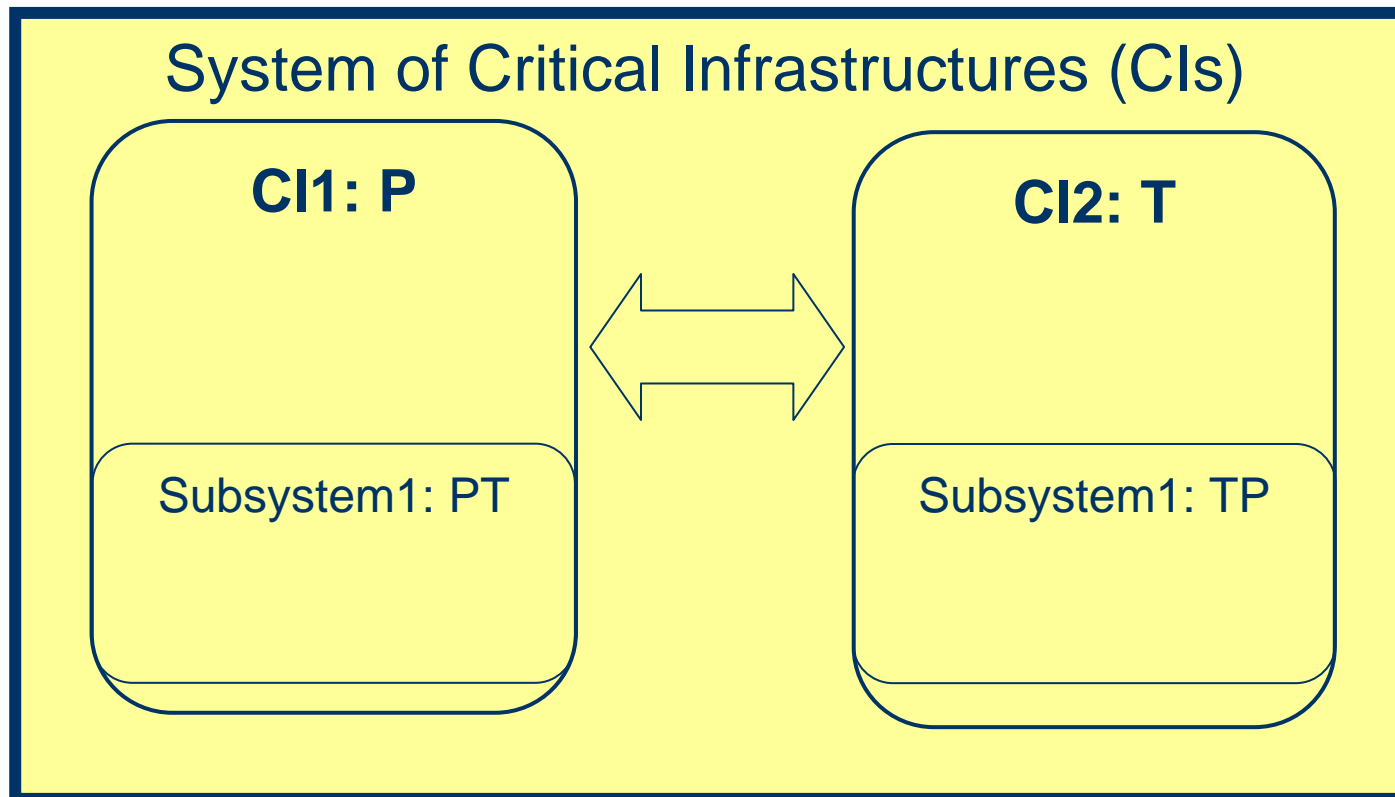
Create virtual CI-
environments in order to

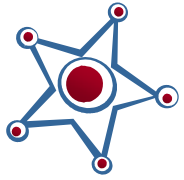
- Replace the „real world“
- Test the diagnosis and therapy approach of IRRIS
- Serve as a test environment for the MIT concepts





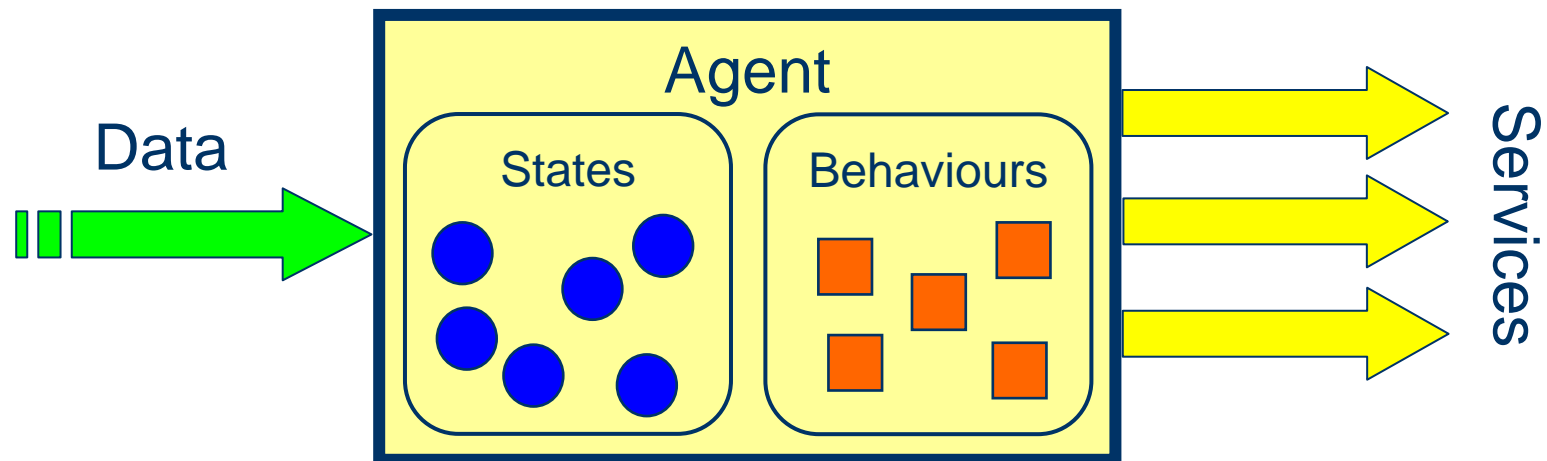
SimCIP for modelling CIs

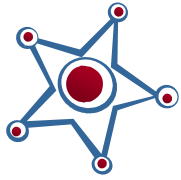




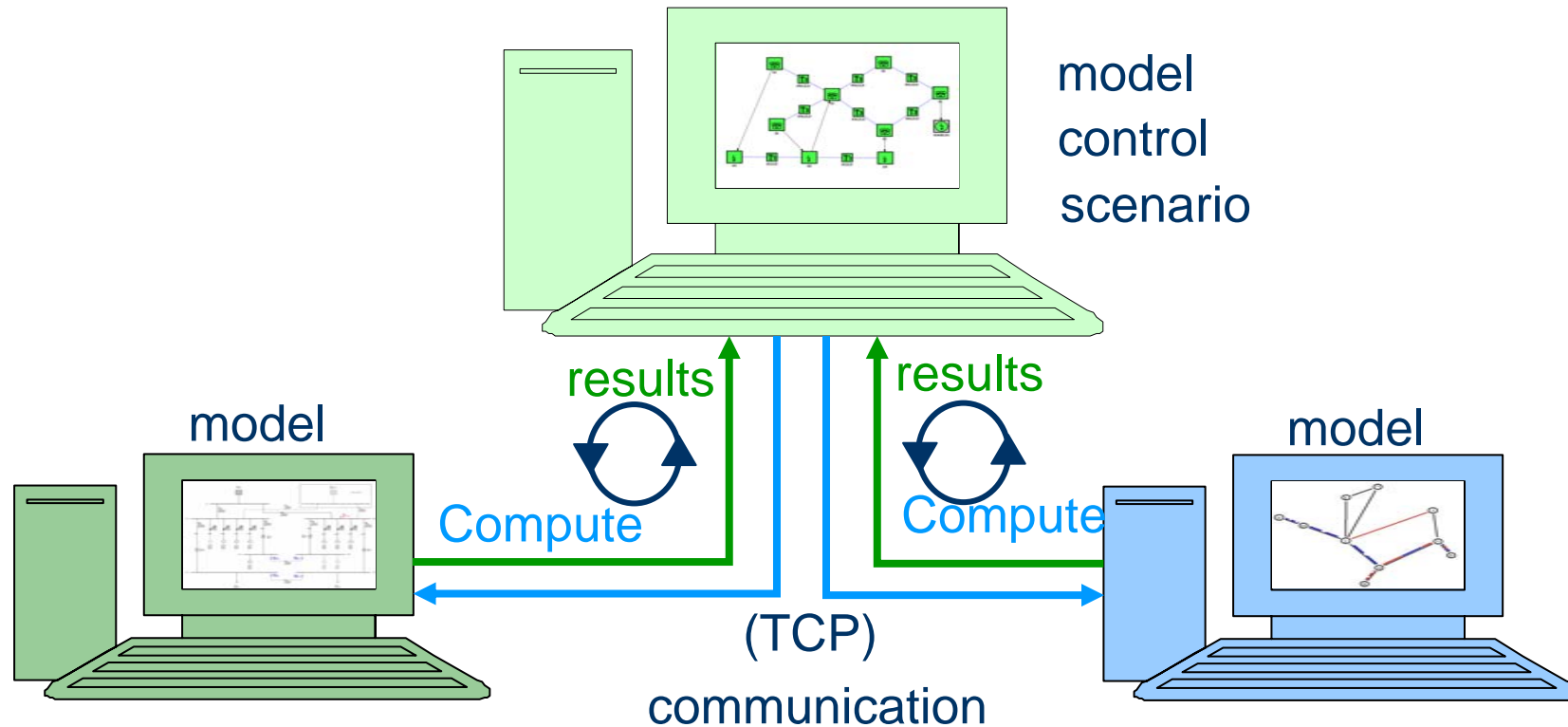
SimCIP is an agent-based system

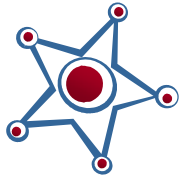
SimCIP is an agent-based where agents are autonomous and pro-active entities.



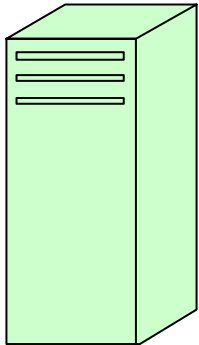


Federated simulation of power and telecommunication



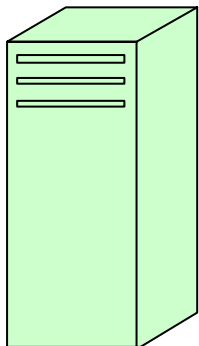


External Simulators



Power

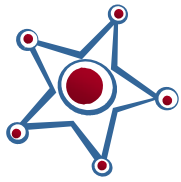
- **Computation** → Sincal application
- **Model** → pre-defined Sincal database
- **Results** → physical parameters of network elements



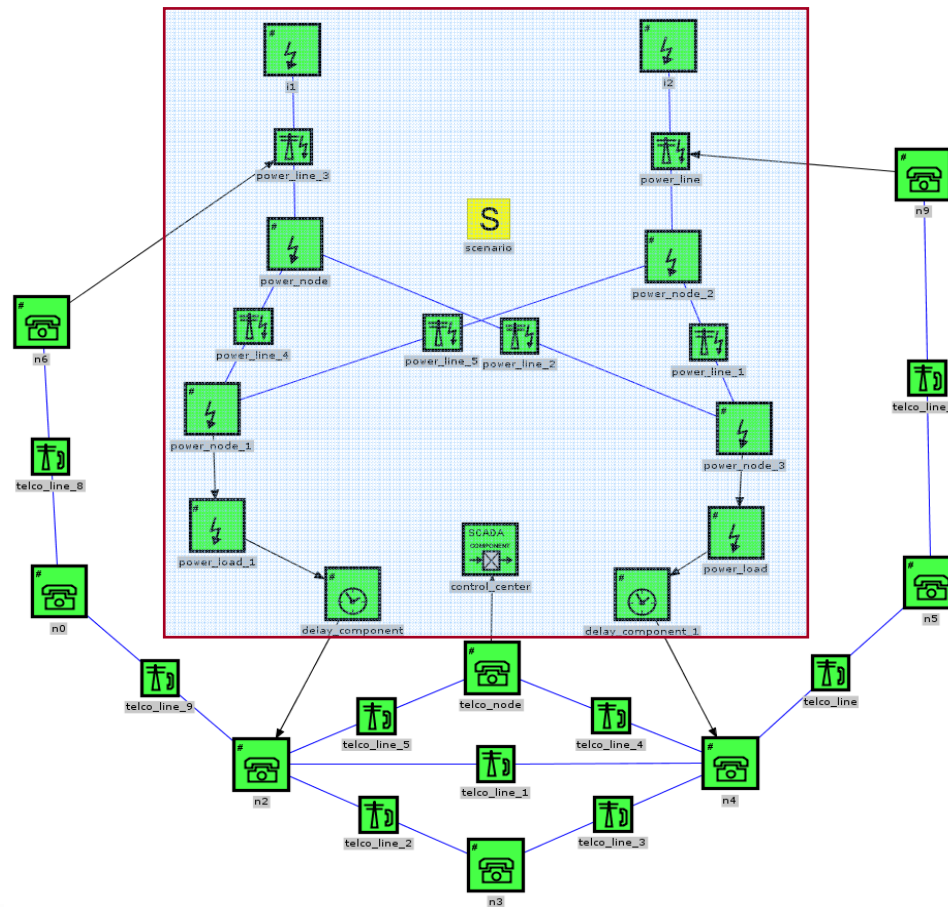
Telco

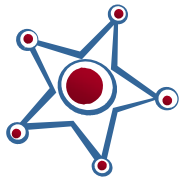
- **Computation** → NS2 application OR routing algorithms
- **Model** → dynamically created by SimCIP
- **Results** → currently: node reachability information





An example scenario of SimCIP





SimCIP Light Demo