

Grid Layout Interface for Model Preview and System Exploration

Grid Layout Interface for Model Preview and System Exploration (GLIMPSE) is a graph-based visualization capability for designers, developers, and policymakers to get insight into the topology and measurements of a power grid network. It is an intuitive and interactive application deployed across operating systems to support search, highlight, and navigate power grid objects, such as generators, inverter-based systems, loads, and feeder models



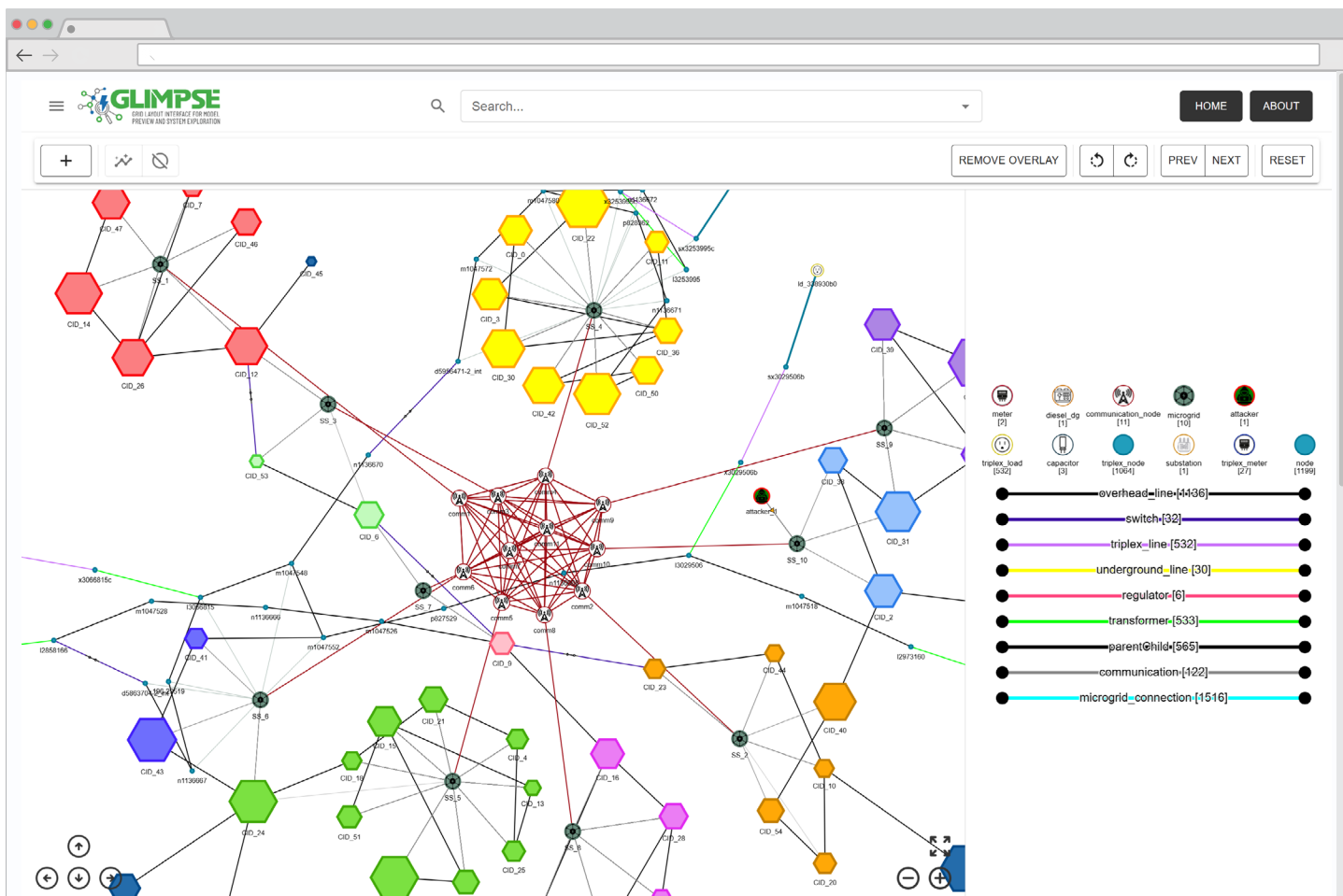
**RESILIENCE THROUGH
DATA-DRIVEN, INTELLIGENTLY
DESIGNED CONTROL (RD2C)**
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The power grid is one of the critical national infrastructures with social, economic, and national security impacts. Besides advancements in modeling and computing, there is an essential need for intuitive and scalable visualization capabilities to assist power grid stakeholders in quickly gaining insights into the grid's design and structure.

GLIMPSE is a cross-platform, dynamic, label property graph-based visual analytics tool designed to develop and update power grid distribution models. Unlike other tools offering static visualizations, GLIMPSE supports navigational and model editing features that allow users to highlight groups of nodes and edges, search by identifier, obtain statistics, make object modifications, and export updated models.

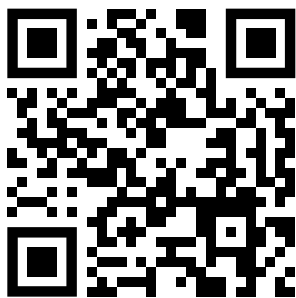
GLIMPSE introduces advanced features such as schema-based validation, overlaying multiple graph layers, multi-feeder visualization, domain-specific themes, and an event-based application programming interface (API) for simulating topology and measurement changes over time. GLIMPSE is extensible to other domains and used to visualize knowledge graphs representing human activities and cybersecurity concepts. The tool is open-source, and the latest release provides improved usability, extensibility, and customization.





Code Available at:

<https://github.com/pnnl/GLIMPSE>



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www.pnnl.gov/projects/rd2c-initiative



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