



AUTOMATED MODELING OF PROTECTION FUNCTIONS IN SHORT-CIRCUIT SIMULATION PLATFORMS

CORE[®] Automated Data Import

Quanta Technology's Automated Data Import (ADI) application provides Protection and Control engineers with a data transformation solution that efficiently creates simulation-ready protection representation in short-circuit simulation models.

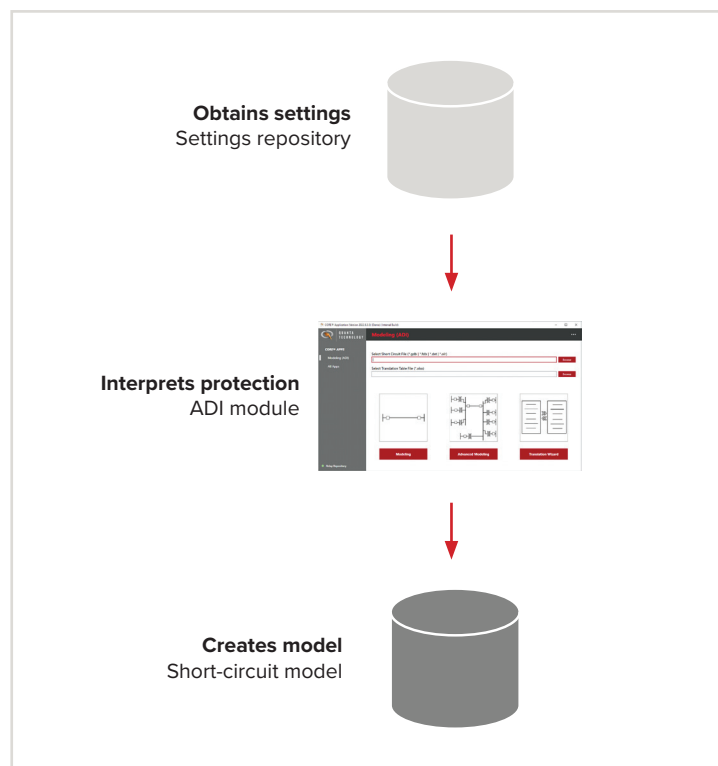
This process integration application opens the door to advanced protection performance studies that can assist utilities in meeting the reliability, operational, and regulatory challenges of the modern power systems industry.

ADI addresses the difficulties in maintaining simulation-ready protection representation in simulation platforms through an automated process that bridges the gap between relay settings and the short-circuit model. The application connects to both the relay settings repository and the short-circuit model to obtain the protection data, interpret the protection functions, and create the appropriate representation. The output from ADI is simulation-ready, so engineers can immediately start applying fault events to determine protection response. Each implementation of ADI may be configured to accommodate specific conventions (including naming, modeling, and protection practices) to ensure smooth deployment to the utility environment.

ADI is built on years of experience in database applications and protection modeling by our experts who work alongside our utility partners to address their specific needs and those of the power systems industry. Our software solutions, including ADI, are used by multiple utilities across North America and have demonstrated dramatic improvements in efficiency across multiple efforts.

ADI Features

- Compatible with major industry-standard repository and simulation applications and can be adapted for folder structures or custom platforms.
- Configured for each utility client to accommodate their own naming conventions, repository and modeling structures, and protection practices.
- Supports flexible modeling applications, including guided step-by-step modeling of a single line and batch modeling for multiple equipment.
- Features extensive built-in intelligence for automated determination of: appropriate settings revision, tripping elements and settings for applicable functions (including support for custom logic schemes and variables), and communications-based protection schemes.
- Creates simulation-ready protection representation in the short-circuit model, including configuration and supporting data.
- Provisions for workflow management and process integration.



PICTURED: ADI serves as a bridge between the settings repository and simulation platforms

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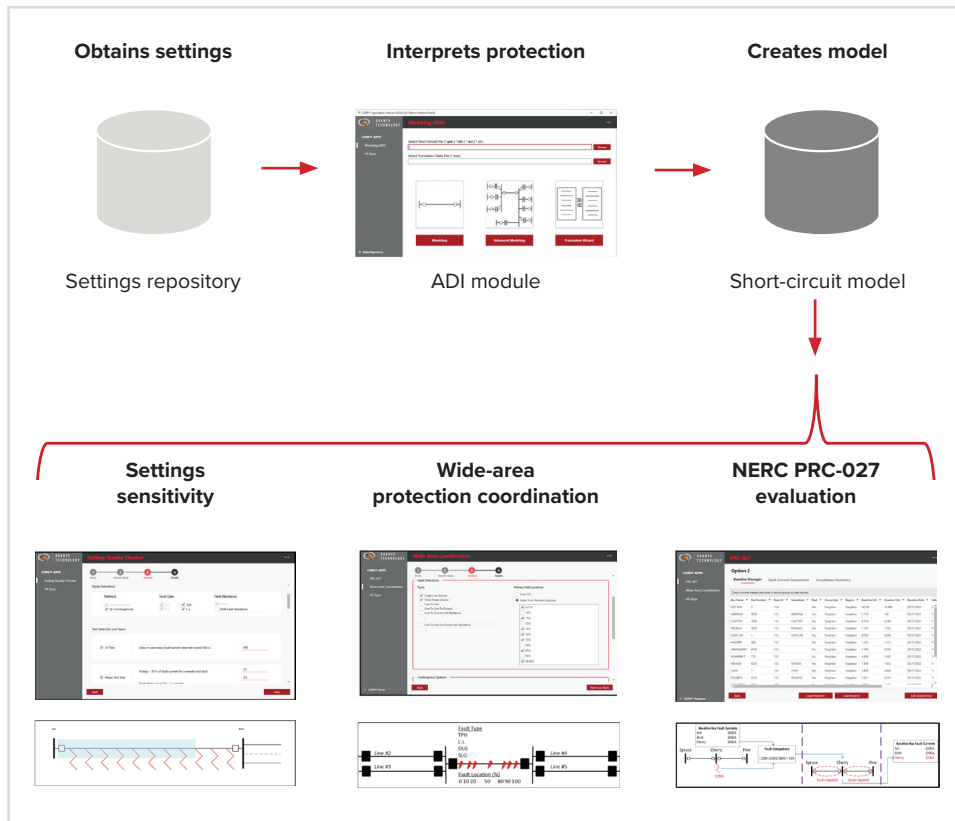
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Protection Performance Studies

ADI serves as a gateway to enable protection performance simulation capabilities, which may further be automated. These capabilities can help engineers improve the reliability of their system and meet new operating and compliance requirements.



PICTURED: ADI enables advanced protection performance studies to be run on the simulation platform

Further Information

For more information, please visit our website to see a video demonstration.



CORE Automated Data Import (ADI)

ADI is part of a holistic digital transformation program to implement automation-based solutions.



Engineering Automation Drives Decision Making (2020 T&D World Magazine) *Reprinted with permission from T&D World magazine.*

Enjoy our publications covering the ADI module:



Automated Modeling of Power System Protective Devices for Advanced Analysis of Protection System Performance (2019 Texas A&M Conference for Protective Relay Engineers)

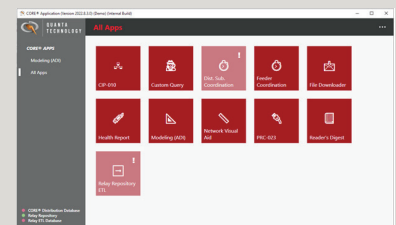


Application and Integration of Automation-based Tools for Efficient and Accurate Modeling of Transmission System Protection (2021 Texas A&M Conference for Protective Relay Engineers)

CORE Suite

ADI is a module within the CORE (Compliance, Operations, Reliability, Engineering) suite of automation tools. CORE is Quanta Technology's platform for automation-based solutions to address digital transformation needs, covering aspects of data, simulation, compliance evaluation, and reporting.

Modules within CORE can access detailed libraries of protection logic functions, such as the Relay catalog that enables interpretation of device configurations. The CORE platform enables seamless sharing of data and integration of processes across modules and applications.



PICTURED: CORE is a unified platform for digital transformation applications

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