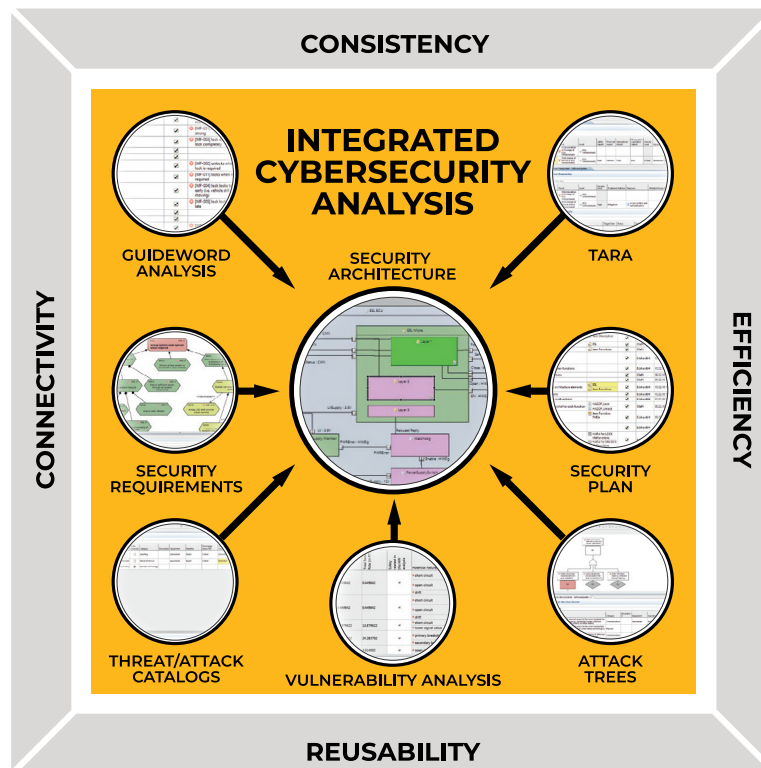


# Ansys medini analyze for Cybersecurity

Cybersecurity Threat Analysis and Risk Assessment

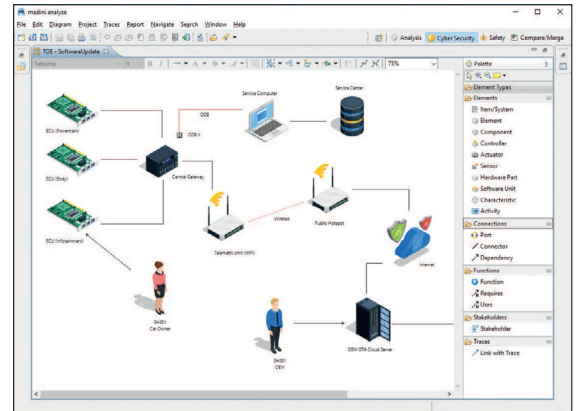


## / Main Features

- Model-based and integrated tool supporting analysis context establishment, asset identification, threat identification, attack trees and threat assessment and treatment
- Cybersecurity analysis and design of cybersecurity related functions and systems according to e.g. ISO 21434, UN-ECE R.155 (WP.29), DO-356a, ISO 27005
- Integration of architectural/functional design models with cybersecurity analysis methods
- Capture and management of cybersecurity requirements
- Support of complete end-to-end traceability
- Customizable work product/document generation
- Teamwork with detailed compare and merge
- Integration with IBM Rational DOORS, PTC Integrity, Jama, MS Office, SVN and others

## / Analysis Context Establishment and Asset Identification

- Graphical editor for system models based on SysML to model the Item Definition or the Target of Evaluation (TOE)
- Structural modelling of system architecture and design using blocks, parts, ports, and connections
- Function and process modelling using activities, actions and dataflows, allocations to design
- Dependency Editor allowing to visualize and edit function nets, allocations, and other relations
- Marking of SysML elements as assets
- Assigning of security attributes (confidentiality, integrity, availability, etc.) to assets
- Import and round-trip of system design models from ANSYS SCADE Architect, IBM® Rational® Rhapsody, Sparx Systems Enterprise Architect, MagicDraw
- Traceability of SysML models to requirements and security analysis such as Threat Analysis and Risk Assessment (TARA) or Attack Trees



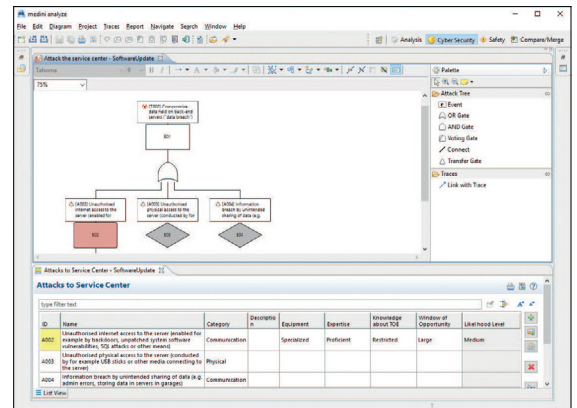
## / Threat Identification

- Threat collections filled automatically with potential threats or threat scenarios that are derived from the assets and their security attributes by applying a mapping to the STRIDE categories
- Selection of threats or threat scenarios for later assessment
- Pre-estimation for the feasibility of potential threats or threat scenarios according to the definitions of the HEAVENS project or of the ISO 21434 (user-defined approaches for feasibility estimation is possible too)

ID	Name	Assets	To be Assessed	Category	Description	Equipment	Expertise	Knowledge about TOE	Window of Opportunity
T001	Spooling of messages over CAN bus by compromised ECU software system		<input type="checkbox"/>	Spooling		Specialized	Expert	Critical	Unlimited
T002	Denial of Service of ECU (Subelement)	ECU (Subelement)	<input type="checkbox"/>	Denial of Service		Specialized	Expert	Critical	Unlimited
T004	Elevation of Privilege of ECU (Subelement)	ECU (Subelement)	<input checked="" type="checkbox"/>	Elevation of Privilege					

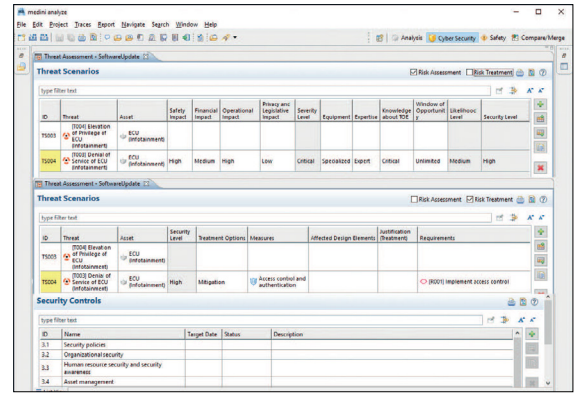
## / Attack Trees and Attack Collections

- Graphical editor to describe attack scenarios that lead to potential threats or threat scenarios
- Automatic layout and support to handle large attack trees by multiple diagrams
- Creation of events and subtrees by drag & drop of attacks, threats, vulnerabilities and other system model elements
- Attack collections to gather the attacks forming the attack scenarios
- Pre-estimation of the feasibility of every single attack in the collection



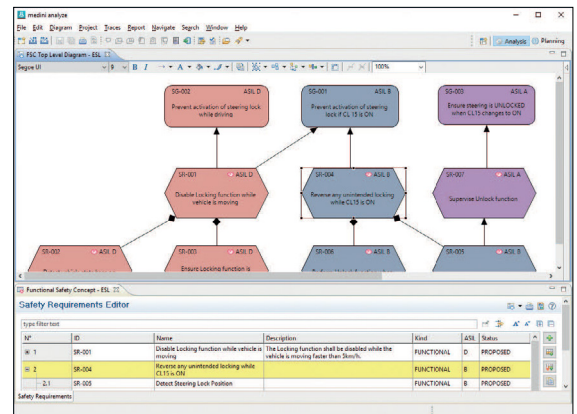
## / Threat Assessment and Treatment

- Customizable table for threat assessment and treatment filled by Drag&Drop from any threat collection
- Estimation of the impact and feasibility levels (user-defined approaches for impact and feasibility estimation is possible too)
- Calculation of an overall security level (risk level)
- Definition of treatment strategies to handle the risk (mitigation, avoidance, acceptance, transfer)
- Description and assignment of security measures and security goals to further detailize the treatment strategies



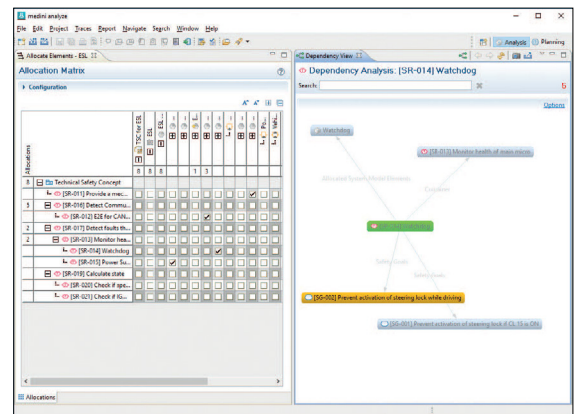
## / Requirement Analysis and Management

- Graphical and table editors for security requirements
- Visualization of requirement hierarchies and traceability using diagrams
- Allocation of requirements to system architecture, HW and SW models and to function models
- Import, export, and round-trip from/to requirements management systems (e.g. IBM® Rational® DOORS®, IBM® Rational® DOORS® Next Generation, PTC Integrity, Jama) including custom attribute mapping
- Support for general requirements exchange via ReqIF/RF



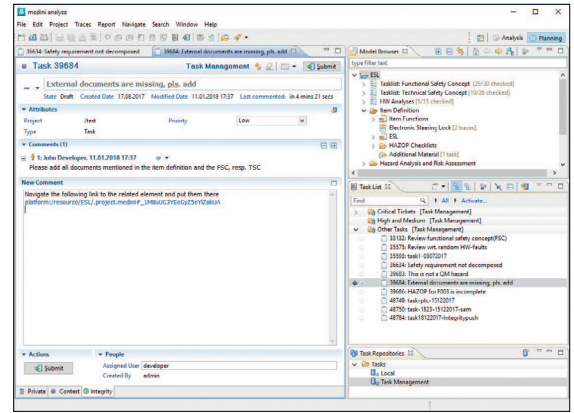
## / Rich Traceability

- Definition of traces between information elements of any type within ANSYS mediini analyze
- Definition of traces using trace-matrix or by quick-trace functionality
- Navigation via traces to related elements in other models
- Visualization of traced elements at any diagram
- Filters and hierarchies to support the usage even of large trace matrices
- Impact analysis by graphical visualization of traces(customizable dependency viewer)



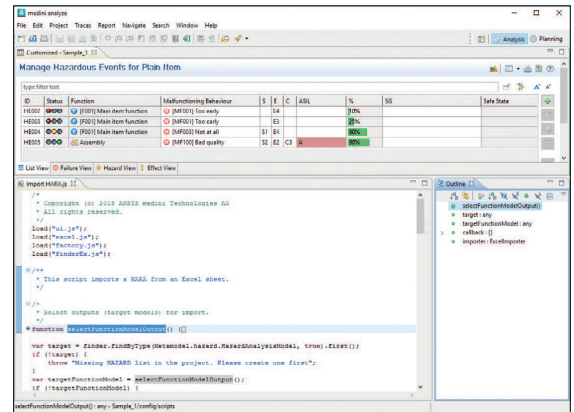
## / Teamwork and Integrated Task Management

- Project compare with 2-way and 3-way difference analysis
- Project merge functionality for team collaboration
- Integration with configuration management systems (TortoiseSVN, IBM® Rational® ClearCase, PTC Integrity etc.)
- Management of model versions, support of team synchronization
- Integration with issue tracking systems (e.g. Bugzilla, Trac, RTC, Redmine, Jira, Mantis, PTC Integrity, Microsoft® Outlook)
- Creation of tasks/comments for arbitrary model elements
- Navigation from tasks to elements and vice versa
- Context visualization for active tasks
- Documentation of all decisions at the tasks
- Scheduling, user assignment, email notification



## / Reporting and Customization

- Reporting functionality to generate PDF, Word, Excel, or HTML documents for all project content
- Default report for the security concept including, TOE, TARA, Attack Trees and security requirements
- Customizable reporting framework to build corporate reports for security related work products
- Profiling mechanism to add custom fields, references, and queries to all models and analyses
- Extensible model validation rules to check consistency across all project data
- Scripting API with integrated JavaScript engine for adding automation features and building tool extensions



## / Licensing

- Attractive product tailoring
- Network floating licenses
- Trial licenses on request

## / System Requirements

- Supported platforms: Microsoft® Windows 8/10 (64-bit version)
- Required disc space: 500 MB
- Recommended memory size: 4GB

**ANSYS, Inc.**  
 Southpointe  
 2600 Ansys Drive  
 Canonsburg, PA 15317  
 U.S.A.  
 724.746.3304  
 ansysinfo@ansys.com

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