

etap[®]

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Expanded to Deliver

Unsurpassed Performance

Intelligence

Reliability

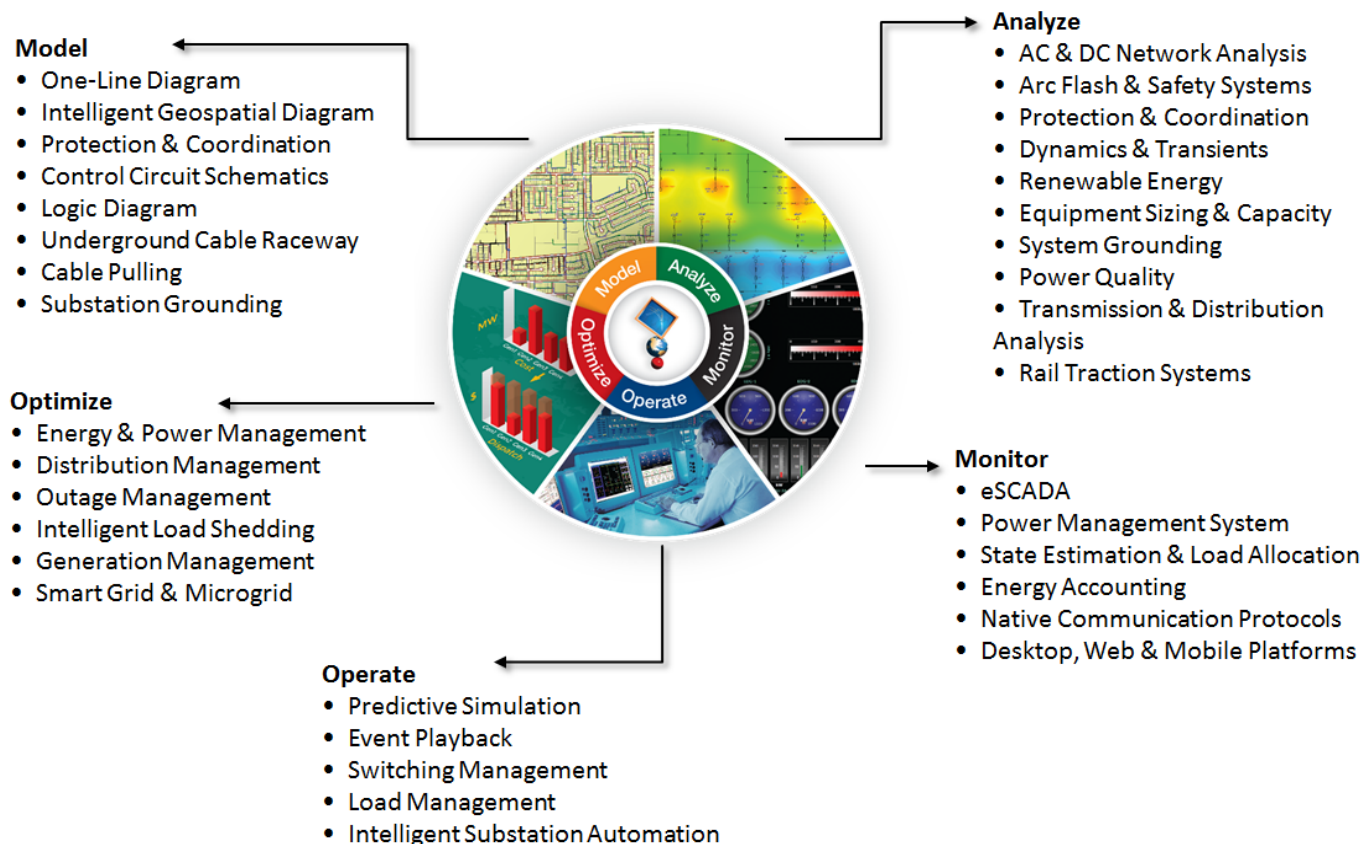
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***Boost Accuracy &
Productivity***

- ✓ Detailed Dynamic Simulation
- ✓ Rule-Based Time-Saving Capabilities
- ✓ Improved Performance
- ✓ 64-Bit Architecture

Generation, Transmission, Distribution, Industrial, Transportation, & Low Voltage Power Systems



Take Advantage of Latest Technologies

- ✓ Entire CPU Memory
- ✓ Video Card Memory
- ✓ Multi-CPU Cores
- ✓ View & Analyze Millions of Components



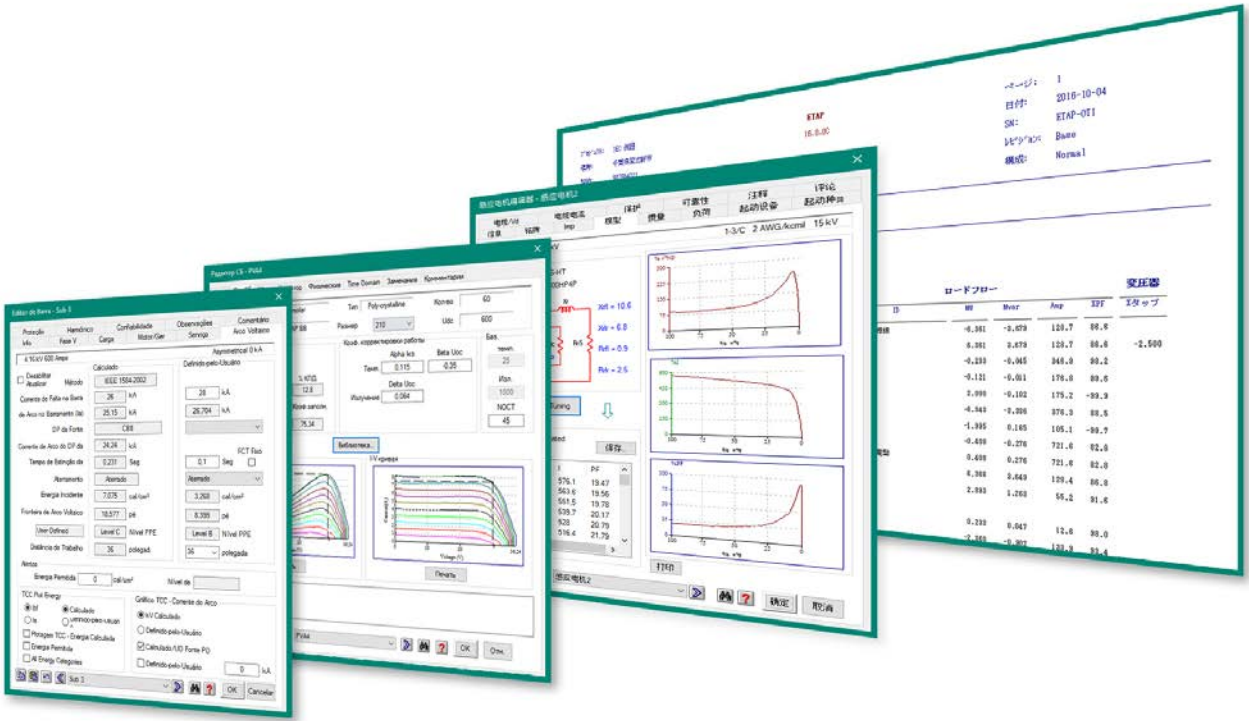
- ✓ New User-Defined Dynamic Modeling & Simulation Capabilities *new*
- ✓ IEC 60092 - Cable Capacity Sizing for Ships & Marine Vessels *new*
- ✓ Datablock for Protective Device Settings *new*
- ✓ One-Line Diagram Enhancements
- ✓ Transient Stability Module
- ✓ Enhanced Short Circuit Module
- ✓ Expanded Protective Device Libraries
- ✓ Multi-Language Edition



Localized Releases

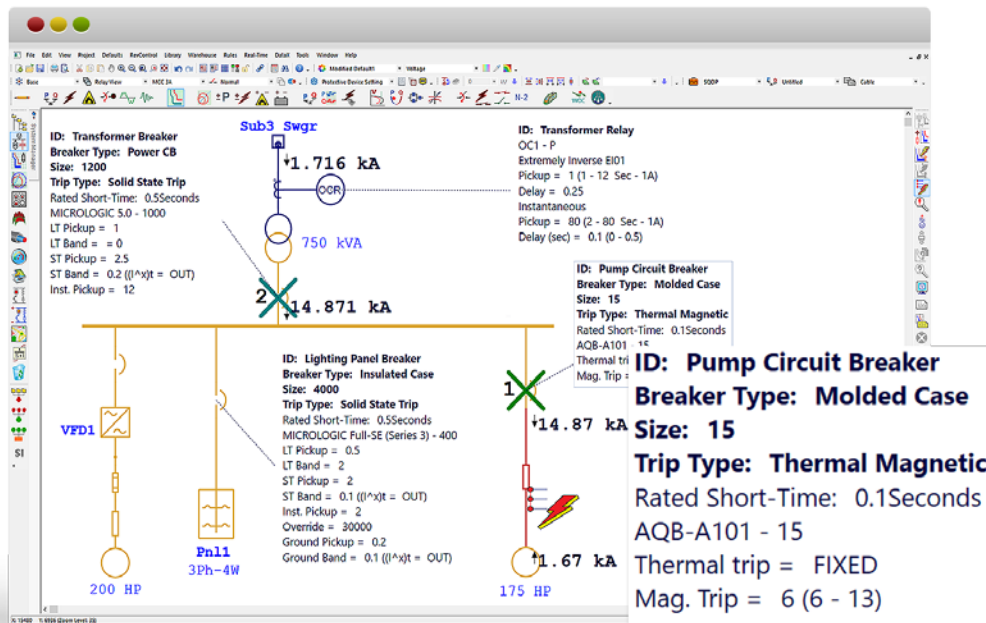
- ✓ English
- ✓ Chinese
- ✓ Japanese
- ✓ Korean
- ✓ Russian
- ✓ Spanish
- ✓ Portuguese
- ✓ Italian*
- ✓ Turkish*

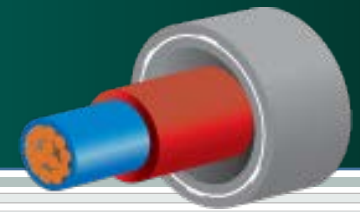
* Output reports



Arc Flash Labels are available in all Localized Releases including French and German

- ✓ Intelligent Protective Device Settings
- ✓ Adapt DataBlock Based on Device Model & Functions
- ✓ Export to AutoCAD™ DXF Drawing Files





IEC Standard 60092

Electrical Installation for Ships & Marine Vessels

- ✓ Line conductor sizing
- ✓ Short-time duty consideration
- ✓ Selectable Annex B for general installations previous to 2003
- ✓ Enhanced reports and cable manager

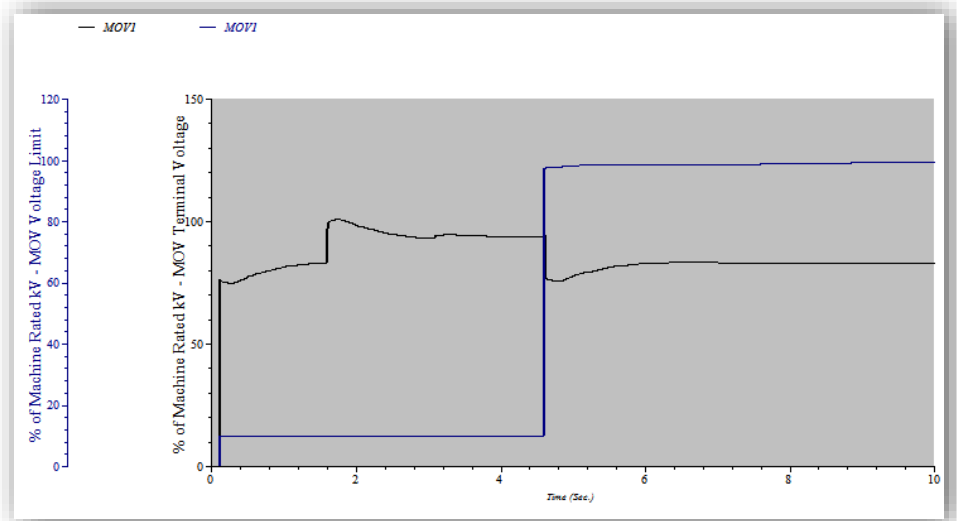


Enhanced Generator Excitation Systems

Dynamic Modeling for Motor Operated Valve

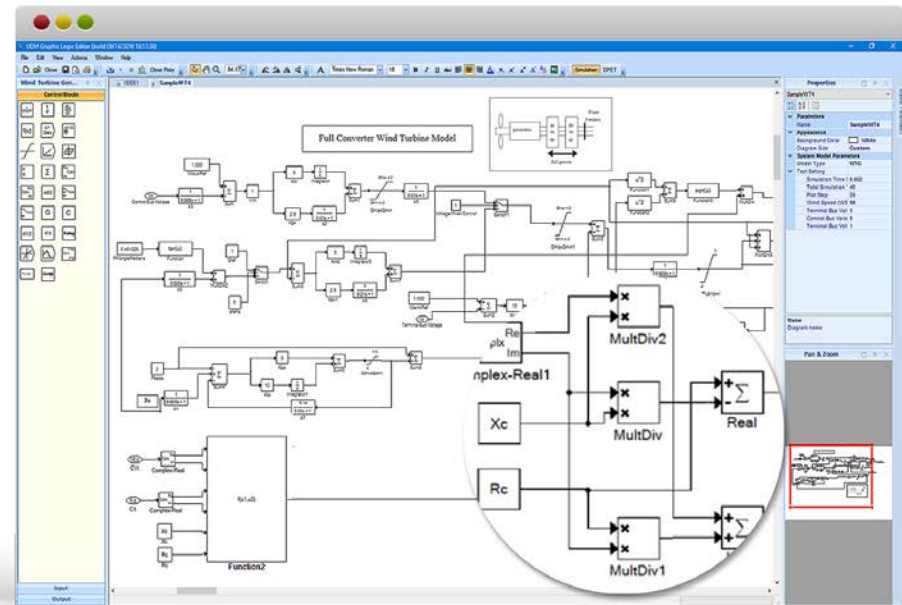
- ✓ Voltage and Frequency Dependent Modeling
- ✓ Dynamic Modeling with Voltage Limit Curves
- ✓ Voltage Alerts

% Voltage Limit		Freq. Correction Factor	
Start	<input type="text" value="10"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
Seating/Unseating	<input type="text" value="100"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
Travel	<input type="text" value="10"/>	<input type="text" value="2"/>	<input type="text" value="2"/>



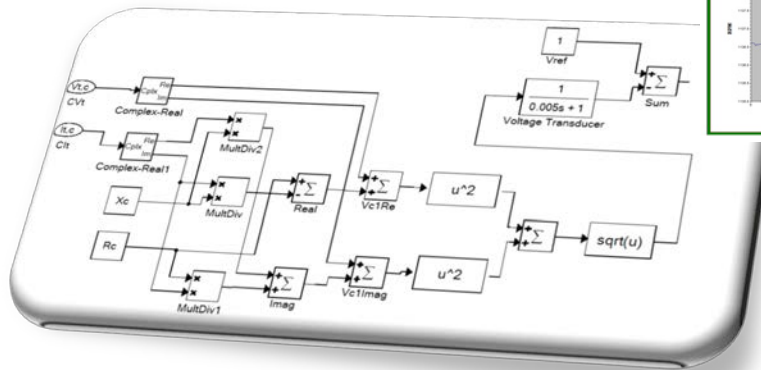
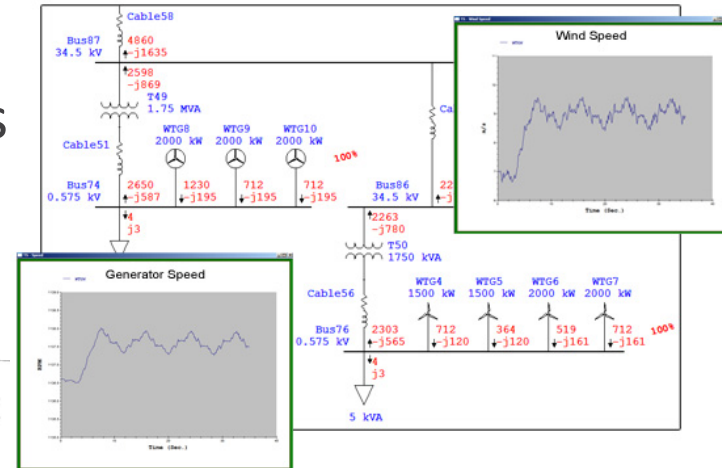
Blazing Performance – Up to 50 x Faster

- ✓ Enhanced Result Visualization with Multi-Scope Support
- ✓ Enhanced Timer Integration
- ✓ Enhanced Test Routines with Customizable Test Events
- ✓ Go-To Blocks for Internal or External UDM Communication
- ✓ MIMO User-Defined Function Blocks with C# Support



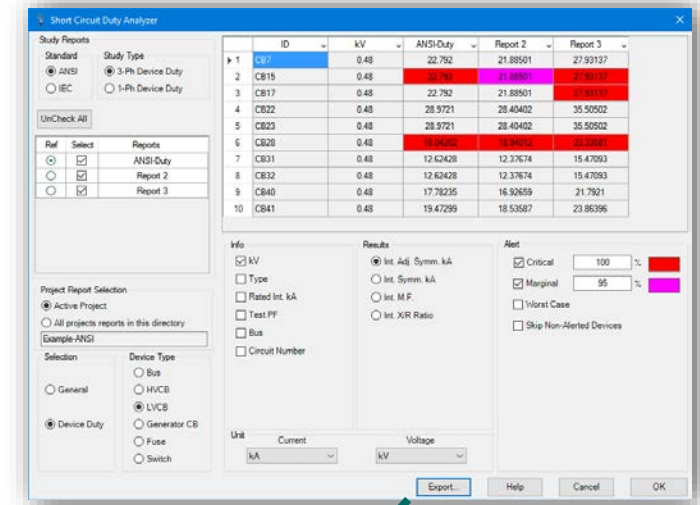
Wind Turbine Generator

- ✓ Complex terminal voltage input blocks
- ✓ Complex terminal current output blocks
- ✓ New Wind Turbine Generator Load Tests
- ✓ Math functions with multiple inputs



View & Export Results of Multiple Studies in One Glance

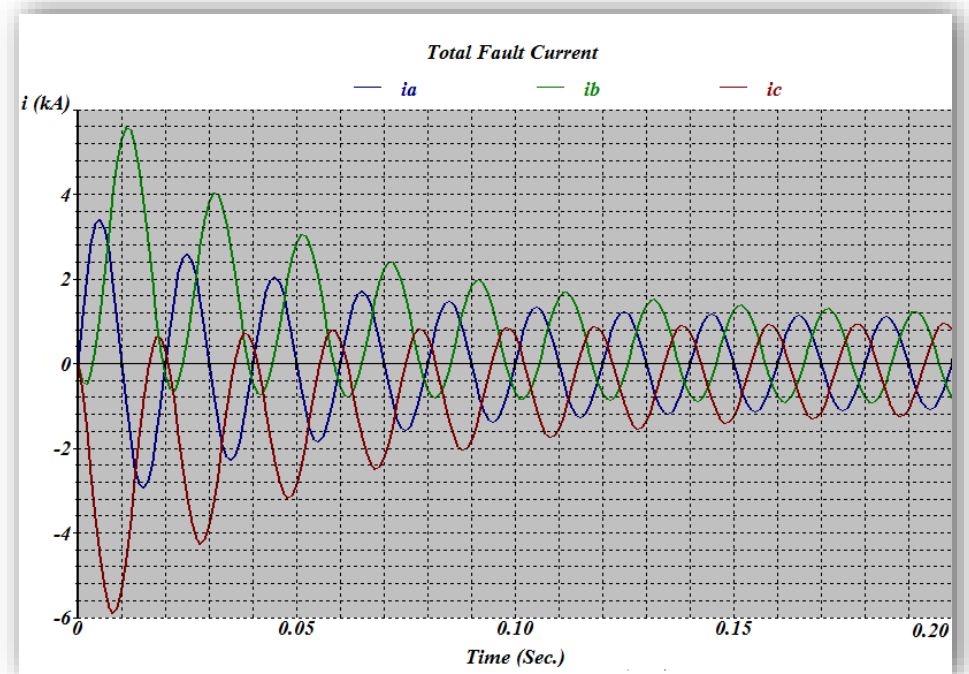
- ✓ Compare & Analyze Study Results
- ✓ User-Defined Base-Line / Reference
- ✓ Easily Identify Over Duty Devices
- ✓ Worst-Case Fault Scenarios



	A	B	C	D	E	F	G
	ID	kV	ANSI-Duty	Report 2	Report 3		
1	CB7	0.48	22.792	21.88501	27.93137		
2	CB15	0.48	22.792	21.88501	27.93137		
3	CB17	0.48	22.792	21.88501	27.93137		
4	CB22	0.48	28.9721	28.40402	35.50502		
5	CB23	0.48	28.9721	28.40402	35.50502		
6	CB28	0.48	19.04202	18.94012	23.33681		
7	CB31	0.48	12.62428	12.37674	15.47093		
8	CB32	0.48	12.62428	12.37674	15.47093		
9	CB40	0.48	17.78235	16.92659	21.7921		
10	CB41	0.48	19.47299	18.53587	23.86396		

Transient Short-Circuit Behavior

- ✓ 3-Phase Transient Fault IEC-61363
- ✓ User-Defined Fuse Test PF & X/R
- ✓ Thermal Withstand Trip, Break & Close Times



Customizable Universal Mapping & Interface

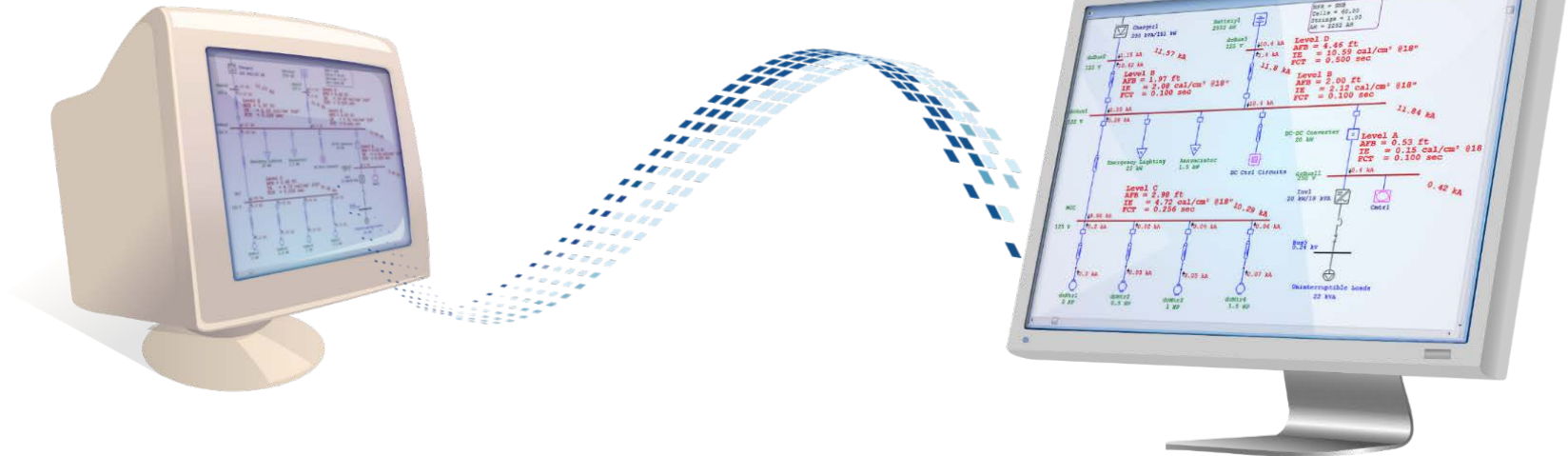
- ✓ Excel®
- ✓ ESRI ArcGIS®
- ✓ Intergraph SmartPlant® Electrical
- ✓ AVEVA® Electrical
- ✓ EMTP-RV®
- ✓ PSCAD® / EMTDC®



Built-in Data Conversion

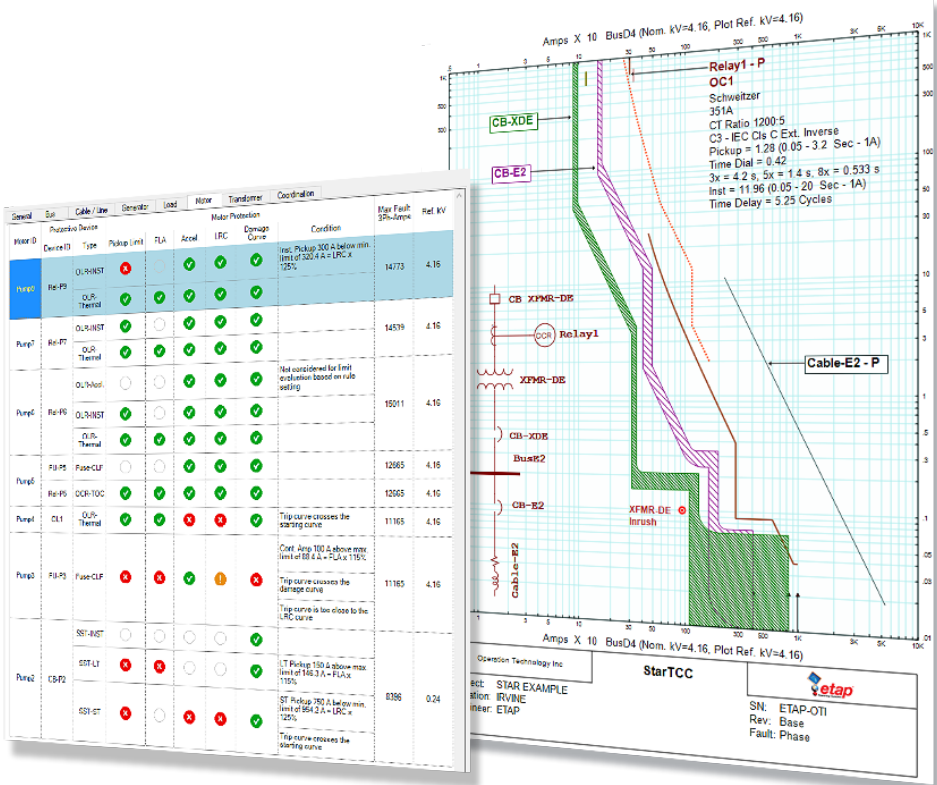
- ✓ SKM PowerTools®
- ✓ PSA EasyPower®
- ✓ PSS/E® (RAW, SEQ, DYR)

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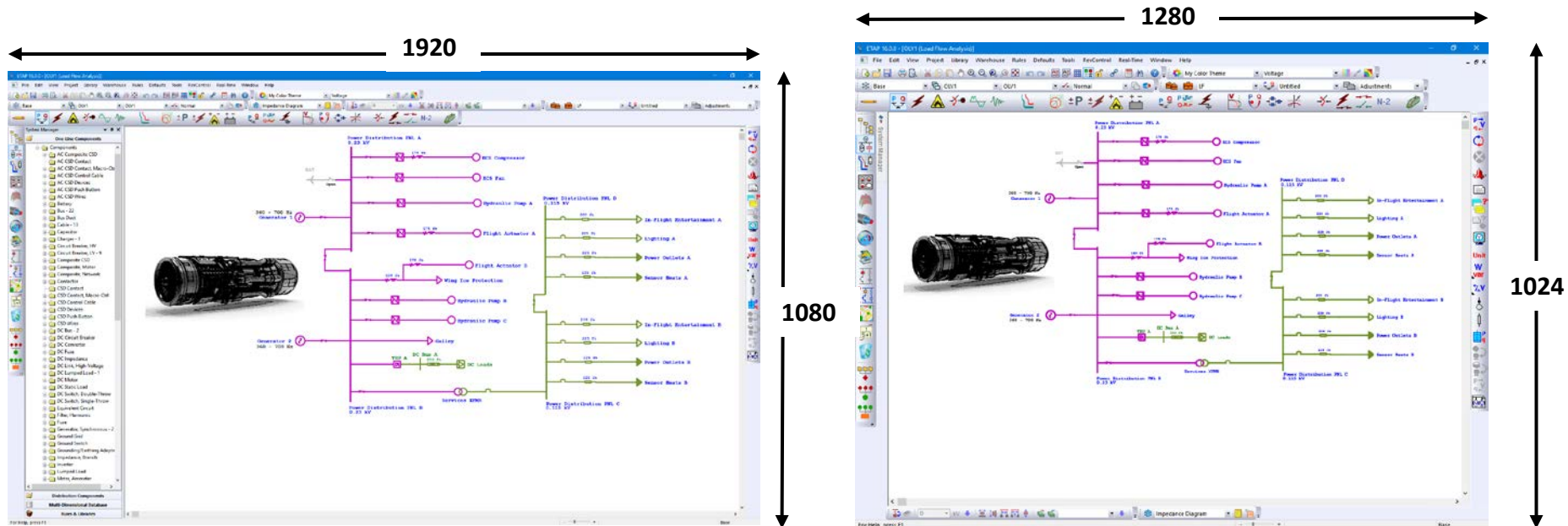
Newly Added Verified & Validated Libraries

- ✓ Low Voltage Breakers
- ✓ Multi-Function Relays
- ✓ Fuses
- ✓ Reclosers
- ✓ Cables



Toolbar Auto-Layout & Reset

- ✓ Automatic Toolbar Layout & Best-Fit based on Screen Resolution
- ✓ Customize & Save Analysis Mode Toolbar Buttons
- ✓ Reset Toolbar location based on Defaults



Analysis Module & Capabilities Enhancements

- ✓ Underground Raceway Cable Thermal Analysis
- ✓ Dynamic Parameter Estimation & Tuning
- ✓ Hexagon SmartPlant Electrical™ - Data Exchange
- ✓ Project Merge
- ✓ Print Compatibility

PC Configuration Requirements

- Microsoft Windows® 10 Pro
- Microsoft Windows® 8 & 8.1 (Standard, Professional)
- Microsoft Windows 7 (Home Premium, Professional, Ultimate) (SP1)
- Microsoft® Server 2012 & 2012 R2 (Standard)
- Microsoft Server 2008 R2 (Standard) (SP1)

PC Configuration Requirements

- 64-bit hardware
- USB port
- Ethernet port w/ network access (if network licensing required)
- DVD Drive 10 to 80 GB hard disk space (based on project size, number of buses)
- Min. Monitor display resolution -1920 X 1080

Software Requirements

- Internet Explorer® 10 or higher (or minimum version level specified by the Operating System)
- Microsoft .NET Framework v3.5 (SP1)
- Microsoft .NET Framework v4.0
- Microsoft .NET Framework v4.5
- Microsoft SQL Server Compact 3.5 (SP2)
- Microsoft Windows Update (KB2670838)
- Microsoft SQL Server 2012 Express LocalDB (x64)
- Microsoft SQL Server 2012 Native Client (x64)
- Microsoft SQL Management Studio 2012 (x64)