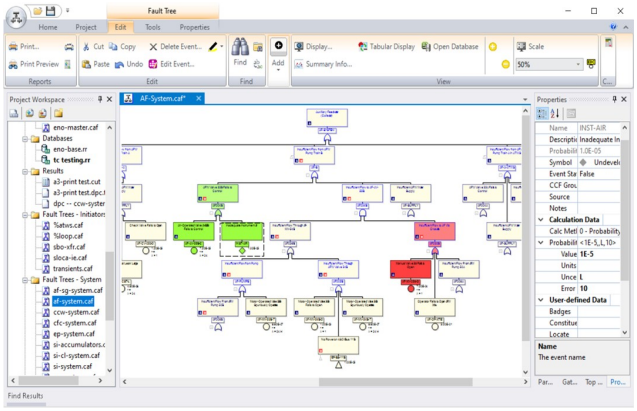
CAFTA Technology Package
V 10 - Phoenix Architect

CAFTA is the industry leader in fault tree analysis for large, complicated, or multi-user collaborative projects. CAFTA allows you to build, quantify, and analyze fault tree models of any size or complexity.



CAFTA BENEFITS:

⇒ Unique and powerful capability to build, review, and quantify big fault trees, upwards of >10k gates

⇒ Easy to use, from single analysts to project teams

⇒ User friendly tree browsing. Navigating tree logic is easy, in a continuous scroll from top to bottom, making it the most intuitive tree-browsing tool available

⇒ Includes powerful tools for complex model-management jobs: inserting common-cause failure (CCF) events, circular logic checks, checking for independence, pruning modules, quantification, and filtering cutsets

⇒ CAFTA is flexible and adaptable, can import models from other COTS products, and run quantification engines supplied by third party vendors such as *FTRex* and program add-ins from 3rd party developers

⇒ CAFTA models provide a foundation for use with several other applications and specialist tools, such as fire, flood, and seismic risk analysis with *FRANX*, uncertainty analysis with *UNCERT*, and maintenance risk monitoring with *Phoenix Risk Monitor*

CAFTA users spend less time building models and more time interpreting results

CAFTA FEATURES:

- Four standard risk importance measures
- Quantifies with both Direct Probability Calculation (*DPC)* and min-cut upper bound methods
- Cutset post-processing with *QRecover*
- Common-cause failure event modeling support with both Alpha factor and multiple-Greek letter methods
- Software developers kit for adding CAFTA technology to other applications
- Cutset filtering and side-by-side difference views
- Project-level searching
- Adjustable model-building environment with “pinnable” property panes.
- Windows clipboard data exchange in multiple formats: fault tree logic, graphic images, tabular data.

CAFTA is a global product, widely used to address the complex needs of customers who design and operate the large engineered systems found in power generation, communications, transportation, aviation, and space applications. Its use has been instrumental in transforming the US nuclear power regulatory environment into one of “risk-informed regulation.” The CAFTA products use EPRI technology.

HOW TO REACH US

Phone: 1.509.578.1028 Email: IRT_SALES@polestartechnicalservices.com

For more information about us visit: www.polestartechnicalservices.com

CAFTA TECHNOLOGY PACKAGE

Powerful tools when you need them

PRAQuant *Accident Sequence Quantification Tool*

In performing a fault-tree based analysis it is often necessary to solve the fault tree several times, using different subtrees, boundary conditions, truncations or other assumptions about the model. These solutions can be performed manually in the CAFTA software, but it is often difficult to track and document the numerous results. PRAQuant is used to configure several fault tree analysis solutions in advance, and to track the completion and results from each run. PRAQuant allows you to:

- Automate the accident sequence quantification process
- Employs the fault tree linking approach
- Work with other EPRI software components to complete the quantification process

DPC *Direct Probability Calculator*

DPC is a tool for calculating an exact top event probability (or frequency) of a fault tree logic model without employing cutset-based methods. DPC allows you to:

- Calculate the exact probability of the gates in most fault trees
- Avoid problems inherent in quantifying fault tree via cutsets, including the rare-event approximation and the approximations associated with negated logic
- Estimates the exact top event probability of the fault tree by calculating lower and upper bounds- useful for large and complex fault trees, improving the speed of the calculation, while still obtaining useful results
- Use with frequency-based fault tree models to correctly calculate the frequency of the top event

UNCERT *Uncertainty Evaluation Tool*

UNCERT reads the cutset or sequence data created from CAFTA, and calculates the uncertainty of the cutset result. UNCERT allows you to:

- Evaluate uncertainty of the top result for a given set of cutsets
- Calculate the uncertainty of various importance measures
- Report the result to other tools, applications or reports

ACUBE *Advanced Cutset Upper Bound Estimator*

The Advanced Cutset Upper Bound Estimator is used to calculate the probability or frequency of a Boolean function that is expressed by minimal cutsets. Minimal cutsets are typically developed and manipulated from a CAFTA fault tree model. Using ACUBE, a more accurate probability of a Boolean function and importance measures can be calculated. ACUBE is particularly useful in refining the results when the probabilities in the model violate the rare-event approximation.

Our North American Industry Classification System (NAICS) Codes:

423430 – Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
511210 – Software Publishers
541330 – Engineering Services
541511 – Custom Computer Programming Services
541611 – Administrative Mgmt. + General Mgmt. Consulting Svcs.
541618 – Other Management Consulting Services
561320 – Temporary Help Services
541620 – Environmental Consulting Services
541690 – Other Scientific and Technical Consulting Services
541990 – All Other Professional, Scientific & Technical services
562910 – Remediation Services
611430 – Professional & Management Development Training

Polestar is registered with the SBA as a Woman Owned Small Business (WOSB) headquartered in Richland, WA