VALADOR®

CMMI DEV /3 SM
Exp. 2017-10-03 / Appraisal #22395

ISO 9001
BUREAU VERITAS
Certification
N° US008800-1

ISO 27001
CERTIFICATION
Intertek

BSI
ISO20000
ITMS 549749

SDVOSB
Service Disabled Veteran Owned Small Business
cVE

Risk and Reliability Modeling and Simulation

Assessing Complex System Risks Efficiently and Accurately by Focusing on Differences That Make a Difference

Combining decades of experience in risk analysis and systems engineering for spacecraft, nuclear, and offshore applications, Valador's highly experienced analysts apply a top-down approach to risk and reliability modeling, focusing on "differences that make a difference" to support rapid trade space exploration and produce actionable assessments of system risk. Services include:

♦ Decision Support for Program Management
♦ System Risk Forecasting
♦ Reliability Analyses for Existing Systems & Components
♦ Physics Simulation to Characterize Hazard Environment & Success Criteria
♦ Risk & Reliability Training Courses

Decision Support for Program Management

Relationships between different elements in a program manager's decision portfolio (risk, cost, and performance metrics) are illuminated through Valador's synergistic risk analyses to identify optimal design configurations.

♦ Conduct top-down analyses providing a framework for understanding relationships between variables enabling decision makers to develop a feel for local changes.
♦ Consult on projects at various levels in the design process, demonstrating an ability to make the most of available information and support discrimination at the top level as well as with detailed data analysis at the subcomponent level.
♦ Customize reliability models containing thousands of objects to replicate processing infrastructures, supply chain elements, and associated cost information.

System Risk Forecasting

Valador's maturity growth analyses techniques use Bayesian predictive models to correlate the number of tests/flights necessary to reach a given reliability.

♦ Valador's unparalleled database and years of experience provide an educated point of departure for analysis.
♦ Classify historical data sets into "same class" systems, predicting upper and lower reliability bounds of conceptual designs of the same class.
♦ Discriminate between different configurations during the design phase by consulting a detailed risk forecast.

Reliability Analyses for Existing Systems & Components

Valador performs sophisticated reliability analyses of complex mission architectures, multiple system configurations, and individual components using its state-of-the-art suite of tools, modeling techniques, and acquired expertise.

- ◆ Discrete event simulation techniques
- ◆ Monte Carlo simulation techniques applied to mission architectures down to specific unique processes
- ◆ Event Sequence Diagrams and Fault-Tree Analyses integrated with top-down analyses utilizing heritage data and physical simulations

Physics Simulation to Characterize Hazard Environment & Success Criteria
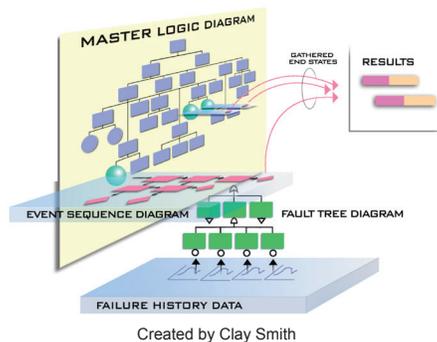
Identifying worst-case hazards through heritage-based analysis and expert judgment, Valador uses physics modeling techniques to gain insight into a system's response and robustness to provide quick turnaround/real-time analyses facilitating risk based design of complex engineering systems.

- ◆ Tapping an impressive cadre of consultants with specialized expertise in a variety of subject areas, Valador is able to thoroughly address unusually complex modeling tasks
- ◆ Physical fidelity tailored to the requirements of specific decisions, meaningful discrimination between alternative system concepts is enabled

Risk & Reliability Training Courses

Valador senior scientists have developed training courses on the following subjects:

- ◆ Risk Based Design
- ◆ Reliability Analysis
- ◆ Methodologies
- ◆ Human Reliability

Created by Clay Smith

Contract Vehicles

GSA FSS MOBIS: GS-10F-0182N
GSA FSS Group 70 IT: GS-35F-135AA
NASA MOSSES BPA: NNH12CD13Z
FAA eFAST MOA: DTFAWA10A-00107
SeaPort-e: N00178-10-D6379
USDA FSIS BPA: AG-3A94-B-09-0013
USAID: AID-OAA-C-15-00097
VA T4 IDIQ (Subcontract)
VA T4NG IDIQ (Subcontract)
IRS TIPSS 4 Small Business-MBOSS (Subcontract)
DHS EAGLE II (Subcontract)
DISA ENCORE II (Subcontract)
HHS COOP/DR BPA (Subcontract)
NETCENTS - 2 (Subcontract)

NAICS Codes

541511, 541512, 541513, 541519, 541712, 611512

DUNS Number

03-2042827

CAGE Code

1U9D5

Let Valador show you how our M&S-based solutions can ease your decision-making process.

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