

Project x



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Topic: Project X Risk assessment is very crucial component of risk management strategy. It involves the process of identifying and evaluating programs and important technical risks, measuring them in performance, schedule and cost value.

Risk assessment of the Automated Mobile Defense System (AMDS), developed by our company for the Department of Defense RFP should be based on Standard Operating Procedure (SOP). The probability and severity of the risk should be up to an agreed suitable program management level. The probability component of risk is decided by qualitative and quantitative methods. For the success of our project X, whose goal is to create a defense mechanism to save major important cities of the US from enemy missile attack, it is of utmost importance that we consider these methods and identify the potential risks for project X.

Quantitative Risk Assessment System (QRAS) is a personal computer (PC)-based software tool for performing Probabilistic risk assessment (PRA) supporting decision on funding -- cost-estimation steps. QRAS is designed to bridge the gap between professional risk analyst and the design engineer. It is a user-friendly, graphical interface design, used by managers and engineers with minimal specialized risk assessment training. Its front-end is a graphical point-and click tree system model, combined with elements, subsystems, and sub-systems – the system hierarchy used to attach known accident initiators or failure modes. This hierarchical feature helps in making a Master Logic Diagram. Mission profiles can be set on sub system run times – a Mission Timeline module feature. The potential risks of failure probabilities can be calculated with the Timing data in other parts of the QRAS. This tool helps in constructing Event Sequence Diagrams (ESDs),

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explaining the scenarios leading to catastrophic failures or success of pivotal events showing fail-safe design or even emergency procedures and reasons of failures. Fault trees are built with graphical interfaces, which are joined to ESD models. The different features of QRAS are quantified to check failure probabilities in physical variables, providing fast and exact solutions. This software tool generates conventional event tree, minimum cut sets of system fault trees and ESD end states automatically for the risk scenarios. The software tool QRAS can identify the potential best estimate of catastrophic failure probability of a mission like the loss of Mobile Housing Unit (MHU). It would calculate a system's top-level and intermediate subsystem-level catastrophic failure probabilities and their uncertainty bounds, based on the current mission's timeline. It would identify the subsystem failure modes putting up the most risk to an engineered system, resulting in identification of possible system upgrades.

RELIASOFT Suite of Tools, another risk assessment method, has QRA utility, facilitating Failure Modes and Effects Analysis (FMEA) and Failure Modes and Effects Criticality Analysis (FMECA) process that provide easy data management and reporting capabilities. It offers in-depth customized capabilities to put together the interface and reports.

Block Simulator is modeled to support complex system reliability, maintenance, access, output and optimization analysis. It is a complete platform for system analysis with the help of Reliability Block Diagram (RBD) and Fault tree Analysis (FTA) methodology to get system results on component data. It can calculate life cycle costs and output analysis. These software tools are good methods of identifying potential risks for Project X.

References:

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Acquisition Safety Risk Assessment, Final QRA Review Report, March 2004 [Acquisition Community Connection]. htm Retrieved Thursday, January 25, 2007.

Acquisition Safety Risk Assessment: Policies and Methodologies, Task 4 -- Final QRA Review

Report, 29 March 2004. Retrieved Thursday, January 25, 2007 from ODUSD_ASRA_QRA Final Report 040331a. pdf

Robinette & Marshall. (2000). Integrated risk management. Engineering and acquisition cost: OSD Business Managers' Conference. Retrieved Thursday, January 25, 2007 from [http://www. dau.](http://www.dau.mil/conferences/presentations/2000/presentations/intgriskmgmt-robinette.pdf)

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