KSC's Integrated Design & Assurance System, IDAS

IDAS

INL's SAPHIRE s/w and Item Software's iQRAS s/w
(Both sponsored by NASA HQ's S&MA)

Probabilistic Risk Assessment (PRA)

ARINC's Raptor s/w

Operations Analysis

Text Mining

Search Technology's TechOASIS s/w
(Sponsored by US Army)

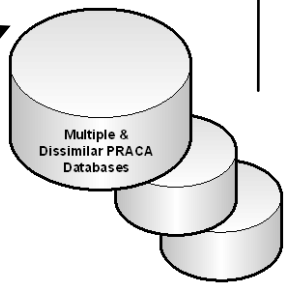
Module User	Design, Systems, Reliability, and Safety Engineers					Systems, Reliability, Maintainability, Supportability (Logistics), Cost, and Industrial Engineers		Reliability Engineers and Statisticians	Quality & Sustaining Engineers	Management	Cost Analyst-Engs.	Reliability Engineers and Statisticians
Module Purpose	Defines System Elements (BOM)[1] & Element Failure Rates	Defines System Structure & Calculates Reliability & Availability[2]	Analyzes Element Failure Modes (Bottoms Up)	Identifies Conditions and Factors that Cause an Undesired Event to Occur (Top-Down)	Evaluates Systems with Multiple States (e.g., up, down, degraded)	Analyzes Cost of Reliability, Availability[2], Maintenance Intervals, & Spares	Calculates System Repair & Maintenance Measures	Analyze Accelerated Life Testing Data to Predict Product Reliability	Provides a Closed-loop Problem Reporting & Corrective Action System	Provides Electronic Reporting & Notification	Calculates Total Cost of Ownership	Uses Field & Test Data to Calculate Probability of Failure
Module Name	Prediction	RBD	FMEA[3]	Event Tree Fault Tree	Markov	OpSim (now included in RBD)	Maintainability	ALT	FRACAS[4] with Audit Feature	Dashboard & Alert Feature	Life-Cycle Cost	Weibull

PTC's Windchill Quality Solutions (formerly Relex) s/w Enterprise Edition-All Modules
(Many NASA Centers and contractors have this software in some form)

Fault Tree Files

EPRI's CAFTA s/w

NASA's Problem Reporting & Corrective Action (PRACA) Data



NASA's PRACA data can be imported via snap shots or live connectors.

Legend: In Work = _____ ; Not Started = _ _ _ _ _ _ _ ; File-Transfer Capability Completed = _____ ; Colored Boxes = Software Modules; Shaded Boxes = Not Active at KSC

Notes: 1 – BOM = Bill of Materials; 2 – Availability applies to repairable systems and is a function of Reliability and Maintainability; 3 – FMEA = Failure Modes & Effects Analysis; 4 – FRACAS = Failure Reporting and Corrective Action System.

Upload IDAS products to **other systems** (e.g., Product data management (PDM) or Product lifecycle management (PLM)

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