

Systems Engineering Disciplines

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Requirements Management: Requirements Development Analysis and Validation (RDAV) Tool

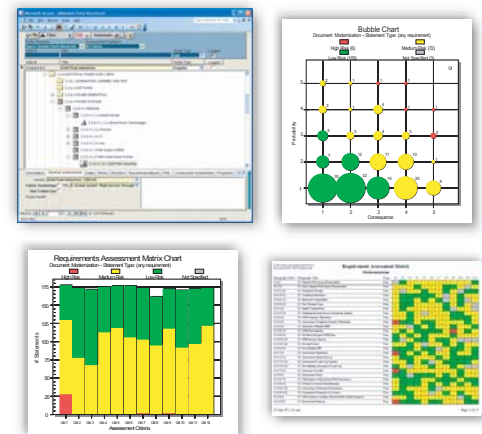
RDAV provides accurate, usable systems engineering functions to enhance program acquisition and development. During the development of system and operational architectures, our tool assists systems engineers and other technical specialists with requirements development and management, requirements verification and validation, risk management, and industrial base management.

About the RDAV Tool

RDAV provides an environment to systematically develop and validate operational and system requirements by performing requirements analysis, functional analysis, requirements traceability, and requirements verification. RDAV can be used across the full acquisition spectrum, from design to sustainment to final disposal.

RDAV satisfies the need for a low-cost, non-proprietary, easy-to-use tool for performing Systems Requirements Analysis (SRA.) RDAV has been applied to several large space systems development programs including the GPS program, the National Polar-orbiting Operational Environmental Satellite System (NPOESS), and NASA's James Webb Space Telescope (JWST).

Designed for ease of use, RDAV organizes all data within a GUI and hierarchical tree structures and is built on a cost-efficient Microsoft Access™ distributable program. Small groups of users can access the same RDAV database simultaneously.



RDAV enables efficient, well-documented requirements development and maturation, early identification and mitigation of risk elements, and easy-to-analyze reports.

Key Features

- Engineering environment to systematically draft and mature all requirement levels.
- Capabilities for functional analysis and requirements/allocations.
- Full traceability of source and higher-level system requirements to decomposed/allocated requirements and traceability between requirements and associated functions.
- Decision and reference databases to trace all requirements to their associated analyses, trades, and other justifications.
- Verification database to specify verification methods and track verification status.
- Quick, easy entry of source documents through the Import/Parsing module.
- Cost Analysis Requirements Document (CARD) support. Traces CARD components to requirements and physical architecture.
- Exportation of requirements and CARD to Microsoft Word™, including graphics.
- Requirements Risk Management support through the Air Force standard 5 by 5 matrix—correlates probability of occurrence to consequence of occurrence for performance, cost, and schedule if requirement is not met.
- Requirements Maturation supported via the Requirements Assessment Matrix (RAM), which assesses each requirement to determine the maturity of the requirements document.
- RDAV's Work Breakdown Structure (WBS) capabilities support a full industrial base database capability from data repository to analysis of parts technology, vendor and processing facilities, evaluate financials, technical health, and other factors.
- History support capabilities show previous versions of requirements, paragraphs, and documents and produce version difference reports.
- RDAV evaluations module allows users to perform any type of structured assessment (e.g. design reviews and independent readiness reviews) on any portion of the physical architecture of the program.
- Flexible reporting allows many reports to be filtered by several criteria. The same report can be used for both regular reporting purposes and for various analyses.
- Creation and export of graphical representations of document trees, requirements trees, and physical architecture.

About bd Systems

bd Systems is a woman-owned small business that provides engineering and information technology services for government and private industry. Based in Torrance, California, bd Systems has over 20 operating locations nationwide.

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