



Context Based Configuration Management System

NASA has developed a new technology to track the status of, and changes to, enterprise level programmatic operations. Enterprise decision making and operations rely on management of non-traditional configuration management (CM) components like estimates, agreements, goals, policies, strategies, plans, values, priorities, options, beliefs, etc. Additionally, enterprise operations have unique and diverse contexts/ environments such as reviews, workshops, fire drills, Office of Management and Budget (OMB) and Congressional actions, procurements, demonstrations, experiments, etc. NASA's innovation Context-Based Configuration Management (CBCM) system integrates decision history and decision-map systems to commercial configuration management systems, and adds intelligence and Knowledge Management (KM) to the CM components to improve enterprise-level assessments and forecasting. This web-based interactivity allows significant and unobtrusive communications and context enhancements. This, in turn, permits greater individual and organization inputs/comments to a given enterprise strategic decision-making activity. This invention is available for licensing from NASA's space program to benefit U.S. industry.

Patent

This technology has been patented. U.S. Patent No. 7,672,969 (Reference No. ARC-15312-1)

Benefits

- Improves enterprise level assessment and forecasting
- Automatic analysis, forecasts, and reports
- Robust query and reporting tools
- Analyzes and supports past and current decisions
- Tracks the enterprise baseline and future potential vectors
- User friendly GUI interface
- Customized icons/object libraries and configurable KM
- Easy to deploy and maintain
- Middleware connections to other enterprise systems
- Multi-dimensional linking of hierarchy

Technology Details

Context Based Configuration Management (CBCM) is a hybrid tool-suite that directly supports the dynamic, distributed strategic planning and decision making environment. The CBCM system marries Decision Map technology with Commercial Off-the-Shelf (COTS) configuration management work flow (Xerox Docushare), embedded component models (events models, configuration item models, and feedback models) all on top of a web based online collaboration technology (e.g., NASA/Xerox Netmark middleware engine). CBCM drives an enterprise management configuration system with built-in analysis functions, tightly interoperable with other enterprise management systems (through middleware connections) that deliver integrated reports and enable enterprise-wide inputs on decisions/actions/events, and present context-based query-driven views on configuration management information. The theory of operation flows from the most senior level of decision making and creates a master Configuration Decision Map. This map track events, configuration objects, and contexts. Additional Configuration Decision Maps can be created independently and/or as a result of the Master Configuration Decision Map by successive organizations and/or individuals in the entire enterprise. The integrated icon-objects have intelligent triggers embedded within them configurable by the users to provide automatic analysis, forecasts, and reports. All information is stored in an object-relational database that provides robust query and reporting tools to help analyze and support past and current decisions as well as track the enterprise baseline and future potential vectors.

Commercial Applications

- Large organizations with distributive operations, and complex product deliverables
- Budgeting program/Project management
- Risk Management
- Configuration management
- Schedule Management

