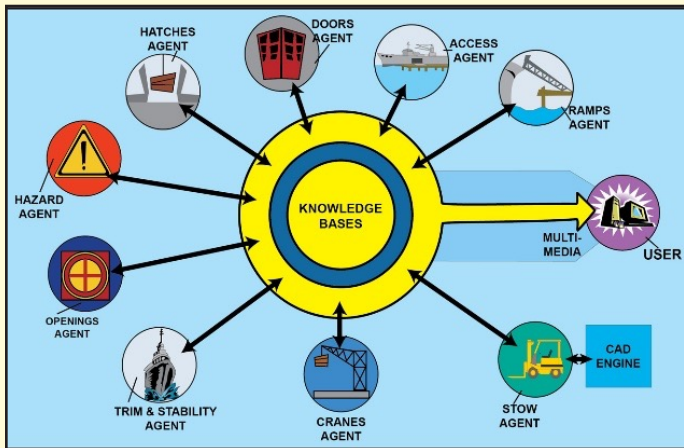# Integrated Computerized Deployment System (ICODES)

ICODES Version 6: Overview

ICODES is the U.S. Department of Defense joint system of record for planning and managin cargo placement within marshalling yards, surface conveyances, such as ships and barges, and aircraft. **ICODES** realizes advanced information-centric, decision-support programming methodologies in which an internal representation of context allows software agents to collaboratively assist human operators with problem solving tasks in complex planning and execution environments. In the context of the **ICODES** Version 5 joint migration system for Ship load-planning, the concept of a Single Load Planning Capability (SLPC) was initiated to address noted issues within the overarching Joint Deployment and Distribution Enterprise (JDDE).

ICODES was selected as the base platform from which to realize the SLPC concept by re-factoring and extending its operationally proven surface load-planning and execution capabilities to support multi-modal (i.e., air, rail, container, and yard) loading operations. SLPC brings the conveyance load planning in support of Deployment and Distribution transportation operations into a single operational and technical paradigm that can be used by load planners across the spectrum of military services and applicable government agencies. It provides planners with a single source for developing conveyance [and yard] load plans, planning for loads, and sharing existing plans and associated data across a variety of user domains, be they operators at the unit level or planners at operational and strategic levels. It provides an enterprise capability utilizing integrated data sources for developing load plans, planning capabilities for secondary loads, and sharing of load plans and associated information with command-and-control activities. This capability allows users to enter their data once and then reuse that data in subsequent planning efforts, eliminating information system redundancies, and standardizing processes.

The **ICODES** Version 6 design realizes the SLPC concept with a globally distributed execution environment, the Collaborative Information Workspace (CIW), and a number of distinct, but complementary, enterprise services collectively named the **ICODES** Global Services (GS). The Single Load Planning service brings the load planning for the primary transportation modes together within a single platform. The Information Repository service provides a distributed operational and historical repository for developing, sharing, and archiving **ICODES** load plans. The Cargo Merge and Translating service allows externally generated u pdates to cargo information to merge with existing load plans without necessitating undue loss of previously produced load planning elements. This service can read and write a variety of cargo data formats and therefore can perform as a cargo data translator. The Data Cleansing service provides intelligent access to dynamic enterprise reference data—a necessity to ensure interoperability with other enterprise services and systems—and implements sophisticated validation and cleansing (i.e., correction assistance) techniques. The Conveyance Estimating service provides estimates of the number of conveyances (e.g., pallets, containers, trucks, aircraft, railcars, and ships) required to transport a given mix of military equipment and supplies. The Conveyance Repository service provides a library of objectified conveyances with which to intelligently develop load plans or conveyance estimates. The Conveyance Building service allows the construction and modification of conveyances within the Conveyance Repository.