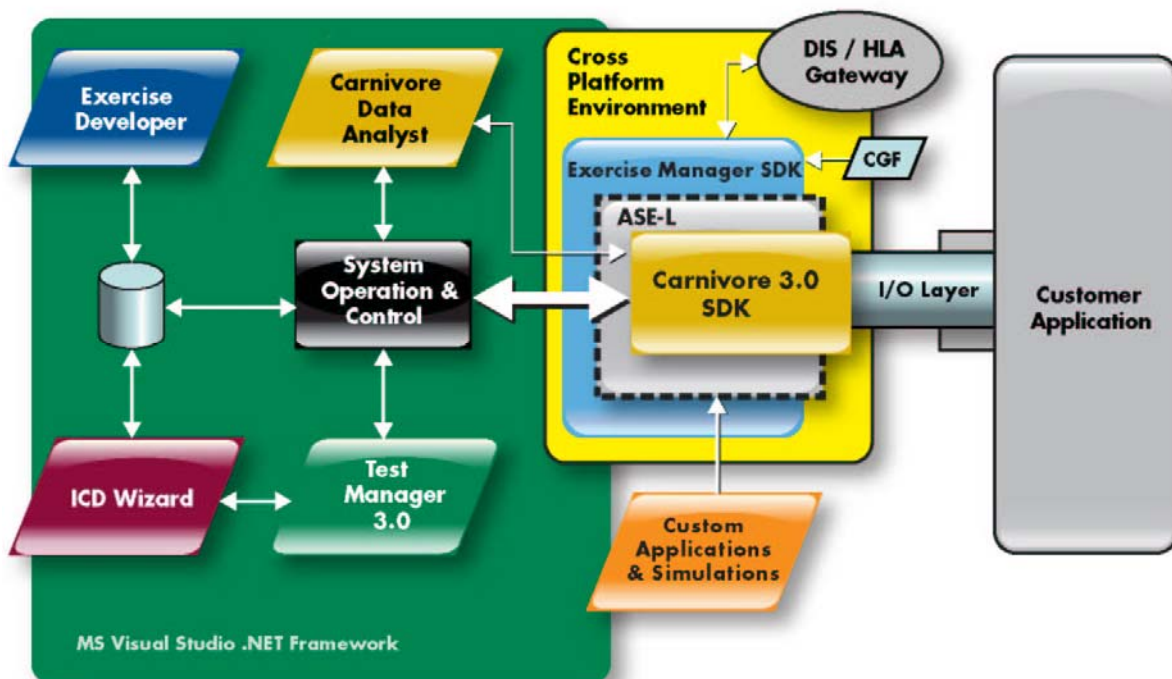




HART Technologies' premiere suite of integrated cross-platform software components delivering enterprise level technical solutions to address development, run-time control, integration, test and validation of distributed real-time computing environments.



Carnivore SDK – The third generation of HART’s discriminating middleware architecture which delivers a structured yet highly flexible interface abstraction technology capable of linking multiple dissimilar computing systems and communication sources to form a homogeneous, data-centric environment with deterministic real-time performance and integrated data recording capabilities. The **Carnivore Data Analyst** tool leverages the distributed data-sharing mechanism to produce unrivaled user visibility into the transfer of system interface data during real-time. Data Analyst is supported by an extensive capability for recording, data mining, plotting and comparative analysis of information.

In conjunction with the Carnivore middleware, the optionally available **Advanced Simulation Library (ASE-L)** delivers a diverse capability enhancement by allowing the selective combination of complementary real-time modeling and simulation techniques to augment performance and/or dynamically stimulate physical aspects of a system and its components. This powerful and dynamic characteristic of the Carnivore architecture provides an inherent basis to embed training and simulation features as an integral component of the prime configuration of operational platform.



Exercise Manager SDK - A suite of inter-active tools used to design, coordinate, and sequence complex interactive scenarios while recording operator performance data and responses to programmed stimulus. Scenarios are typically developed and employed to accomplish task specific qualification training and mission rehearsal events.

The VERIFY architecture and supporting tool suite integrate live, virtual and constructive elements and techniques with the prime mission equipment to realistically produce operating and test conditions which may be difficult or impossible to achieve by other conventional means. Task based training scenarios deliver effective on-demand training in areas such as tactical maneuvering, target engagements, and coordinated operations all produced in a highly realistic and interactive synthetic battle space. Operational scenarios can also be designed to aid in the development, test and training of a target platform by simulating operational conditions under normal, degraded, failure mode and emergency conditions.

Exercise Developer is a graphically oriented component employed by training personnel to define and detail the objectives, steps and performance monitoring tasks to be accomplished during the execution of a scenario. Programmable tactical environments and computer generated force (CGF) behaviors are fully simulated natively or based on external stimulus from DIS and HLA equipped sources. At run time, fully interactive graphical monitoring and control services provided to the instructor include system menus, 2D Maps and 3D Tactical Viewers which combine to deliver efficient and effective management of individual training tasks, crew coordination missions, and multi-platform distributed exercises and rehearsals.

Exercise Manager's **After-Action-Review (AAR)** features include the ability to dynamically replay and review segments of the scenario so as to provide instructional feedback including the review of the operators recorded performance (scores) automatically evaluated with respect to ideal task criteria.



Test Manager 3 - A highly functional and cohesive test tool suite supporting interactive and automated test cases to streamline the design, execution and documentation of the system test process. Test Manager accelerates the verification process from initial planning through final validation and life-cycle support for small, large and enterprise wide programs. Test Manager includes a powerful graphical interface used to record and link design criteria to the relevant testing requirements. This capability allows the user to inter-relate requirement information to the appropriate sequence of test steps and qualifications points necessary to verify the expected performance of the system. The reporting and data mining features of Test Manager provide instant access to a comprehensive set of test planning and performance metrics, based on user defined Meta data including safety critical tags and requirements traceability on a step by step basis. **Automated Test Manager** extends the enterprise level capabilities of Test Manager with the inclusion of automation framework, which provides the capacity to design and implement computer assisted test automation based on the execution of carefully prepared test scenario scripts. At run time, parameters defined in a test scenario are interpreted by the real-time signal framework and converted to the stimuli which cause the integrated system to independently perform a planned sequence of activities and steps while recording selected performance data as the test proceeds. The recorded data is automatically evaluated and displayed using an array display techniques to plot test results with respect to the design criteria and expected results. Test scenarios may be nested and linked in order to produce a fully automated test progression highly useful when performing system certification, re-qualification and regression testing.



ICD Wizard - A powerful tool used to streamline processes for enterprise level Interface Control Document (ICD) development, distribution, and analysis. The tool provides an efficient graphical user interface with a fully integrated data mining, reporting and version control features. The ICD Wizard produces an exportable XML data format with capabilities for automated code generation of C headers, C++ classes and IDL files. Advanced features of the ICD Wizard include user extensible attribute sets which enable the assignment and relational tracking of platform unique meta-attribute descriptors such as power requirements, connector types, signal characteristics, and more.