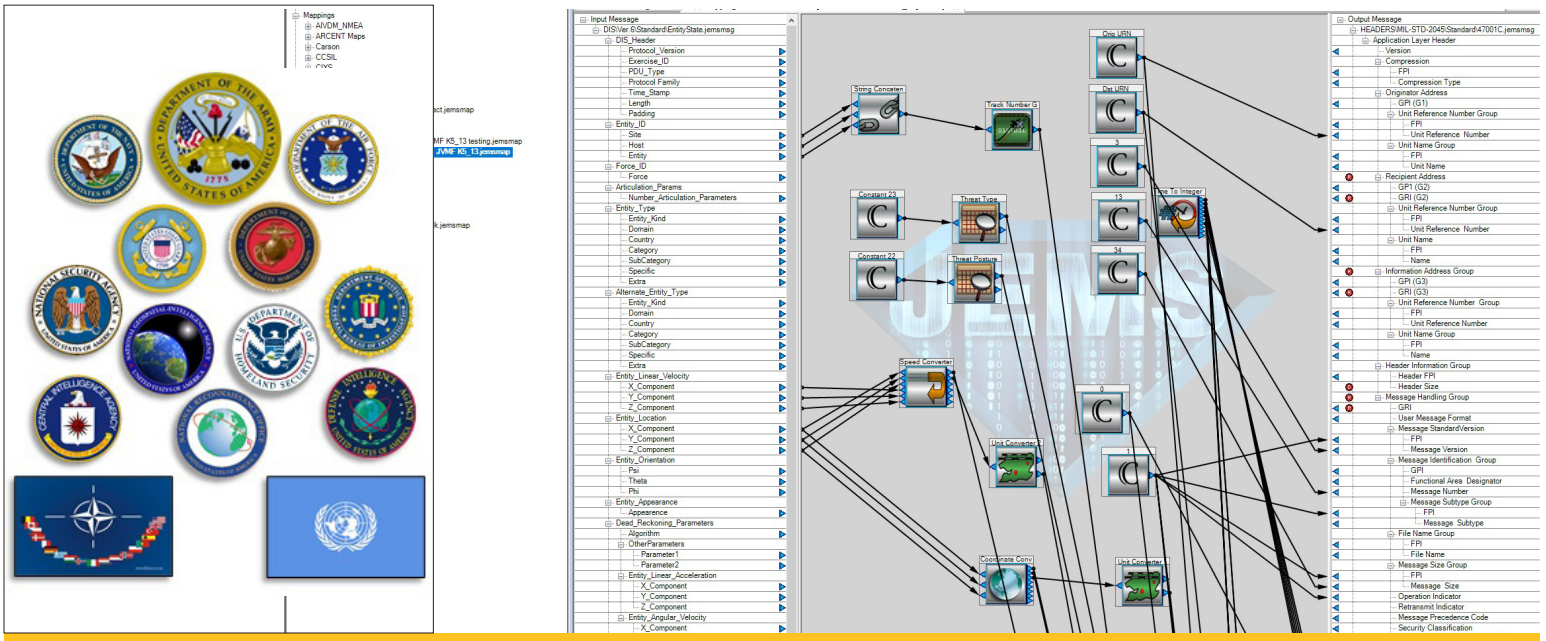
U.S. ARMY

JOINT EMBEDDED MESSAGING SYSTEM (JEMS)

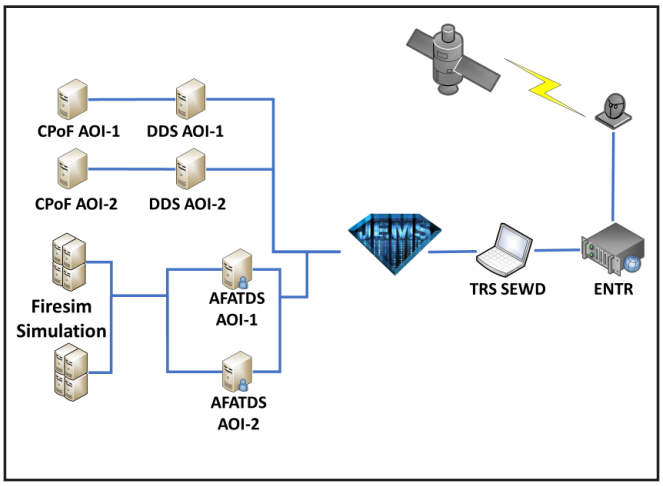


JEMS is a powerful communication and interoperability tool ideally suited to linking C4I, simulation and other systems.

The Joint Embedded Messaging System is a highly flexible and powerful tool capable of transforming the information environment. JEMS provides the user with the ability to rapidly translate messages, route data and manipulate information without the typical code changes required in other software.

Operators use the JEMS graphical user interface editors to quickly define data formats, create translations and define communications routes to improve interoperability across the data landscape.

In a rapidly changing, data-driven world, JEMS provides users the ability to adapt their systems and networks to ever-changing requirements.



- Translate simulation, tactical, and command and control data between systems
- Control the receipt and transmission of data from external systems
- Uses graphical user interface editors to create solutions, no code changes required
- Save and export solutions for reuse
- Joint service, inter-agency, multi-national/coalition

JEMS

The Joint Embedded Messaging System translates messages and protocols for command and control, simulation, tactical and other systems using an operator configurable application for input and output formats. JEMS has traditionally been used to provide interoperability between simulation systems and tactical systems in support of Army Training and Learning Demand exploration. Additionally, JEMS has been used to explore new processes and procedures by linking systems previously unable to communicate. JEMS provides interoperability solutions while not requiring software modifications for data compatibility between systems.

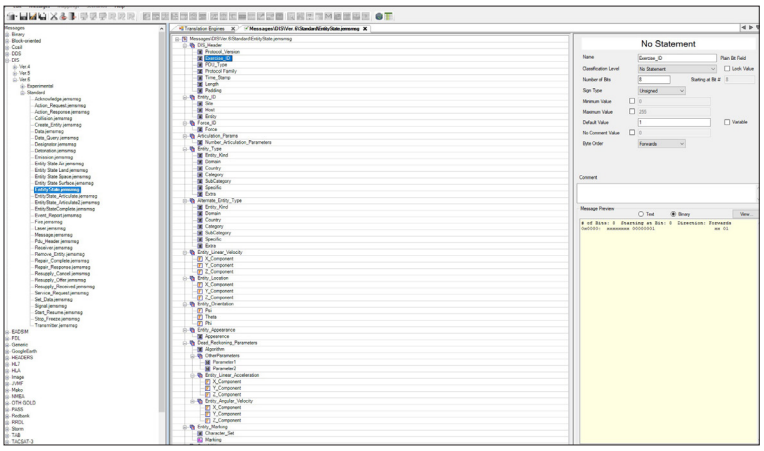
A JEMS operator interfaces with its graphical user interface editors to define data formats, translations and communication routing.

The message editor is used to create text, binary, xml, database or mixed message defined at the field, line, element or group level with characteristics such as length, delimiters and content rules. Messages are created using a point-and-click interface and completed messages are called a message specification.

The map editor is a tool that allows a user to create the translation between input and output message specifications. This editor provides a graphical representation of translation logic and data operations. The map editor has more than 20 data conversion, lookup and creation operators. These operators perform functions like transforming coordinates, executing math operations, looking up external data, etc. The combination of input and output message specifications with these associated translations is called a map.

The communication path editor provides a user the ability to specify how data is received and where data will be routed as well as what maps are used to transform that data. Routes include data type, protocols and the translation requirements required between external systems. External systems can have the following characteristics defined: interface type, communication protocol, supported data formats, high level protocols and classification level.

The JEMS input/output component controls the translation and receipt of data from external systems. JEMS can be configured with multiple I/O components on the same or different systems and also support remote operations whereby a JEMS system can be configured from a different system



if required. JEMS can test message routing for validity and accuracy before an exercise or operation takes place to ensure that the training event or operation is not hindered by message and data incompatibility issues.

JEMS has been used in U.S. Army Training and Doctrine Command experiments such as Omni Fusion and Unified Challenge to translate simulation data into mission Command/C2 data formats. JEMS also has been used to create situation awareness, cyber, electronic warfare and other data products for exercise use to enhance multi-domain operations throughout the experiments.

Third Army has used JEMS to support the Lucky Warrior, Lucky Sentinel, and Iron Union series of exercises for many years, even using JEMS to link coalition systems to U.S. Army Space and Missile Defense Command systems. USASMDC along with Fires Battle Lab and other agencies such as the National Reconnaissance Office have used JEMS to prove out direct sensor-to-shooter linkages and their effect on the timely delivery of counterfire.

C2 systems, simulations and tactical systems are always evolving. Along with those, systems message formats are constantly evolving creating a potential and inevitable interoperability issue between systems and organizations. JEMS is a highly flexible and proven tool that assists users and organizations at the operator level, not the software developer level, allowing for rapid solutions to integration challenges.

For more information, please contact: USASMDC Public Affairs Office

P.O. Box 1500
Huntsville, AL 35807
256-955-3887

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