FLAMES® Simulation Framework

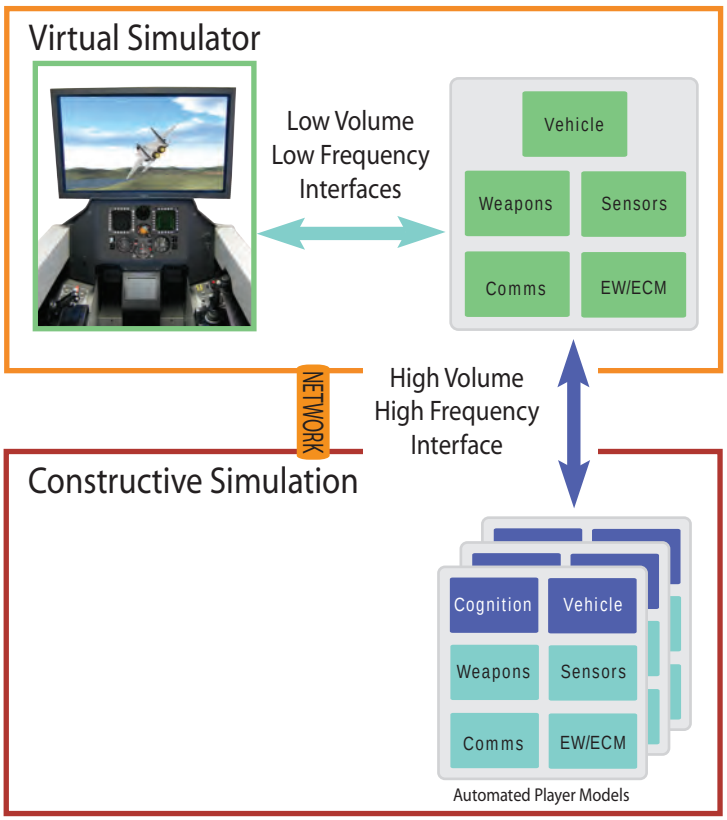
A BETTER WAY TO BUILD High-Fidelity Virtual Simulators

DIS and HLA often provide adequate performance when connecting multiple virtual simulators to each other and to a constructive "scenario generator" simulation. However, when it is necessary to model complex, high-fidelity, interactions between players, a computer network can become overloaded with all the high-volume, high-frequency data necessary to describe the interactions.

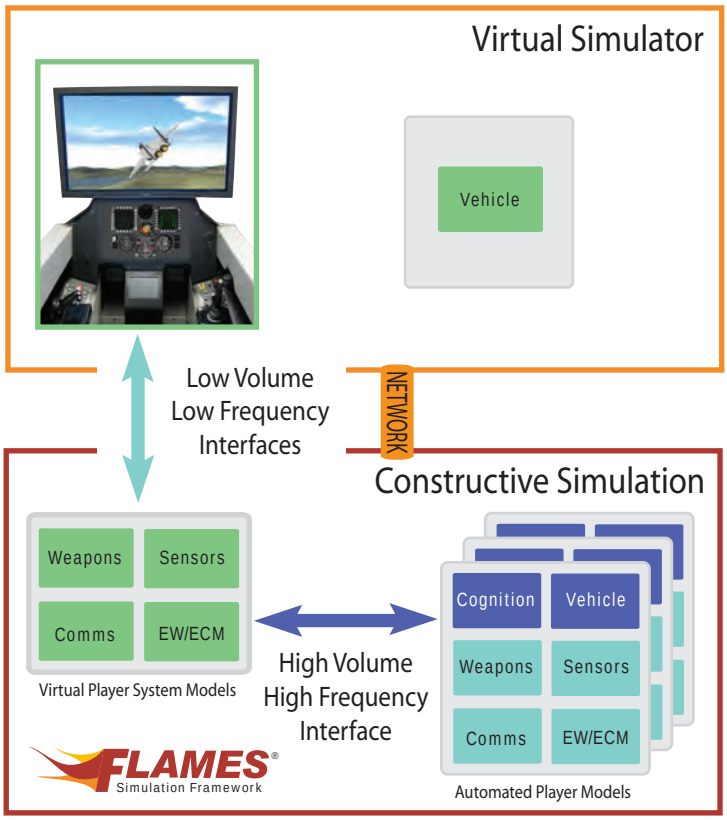
In such cases, it is often helpful to move some of the complex models involved in the interactions out of the individual virtual simulators and into the constructive simulation. This allows the high-volume, high-frequency data necessary to describe the interactions to stay within the constructive simulation where bandwidth and latency are not an issue.

FLAMES® supports both DIS and HLA (simultaneously if necessary), so virtual simulators that use DIS and HLA are supported. In addition, FLAMES supports a Client/Server architecture that allows selected models of a virtual simulator to be moved into a FLAMES-based constructive simulation. The FLAMES Client/Server architecture can also provide the benefits listed below.

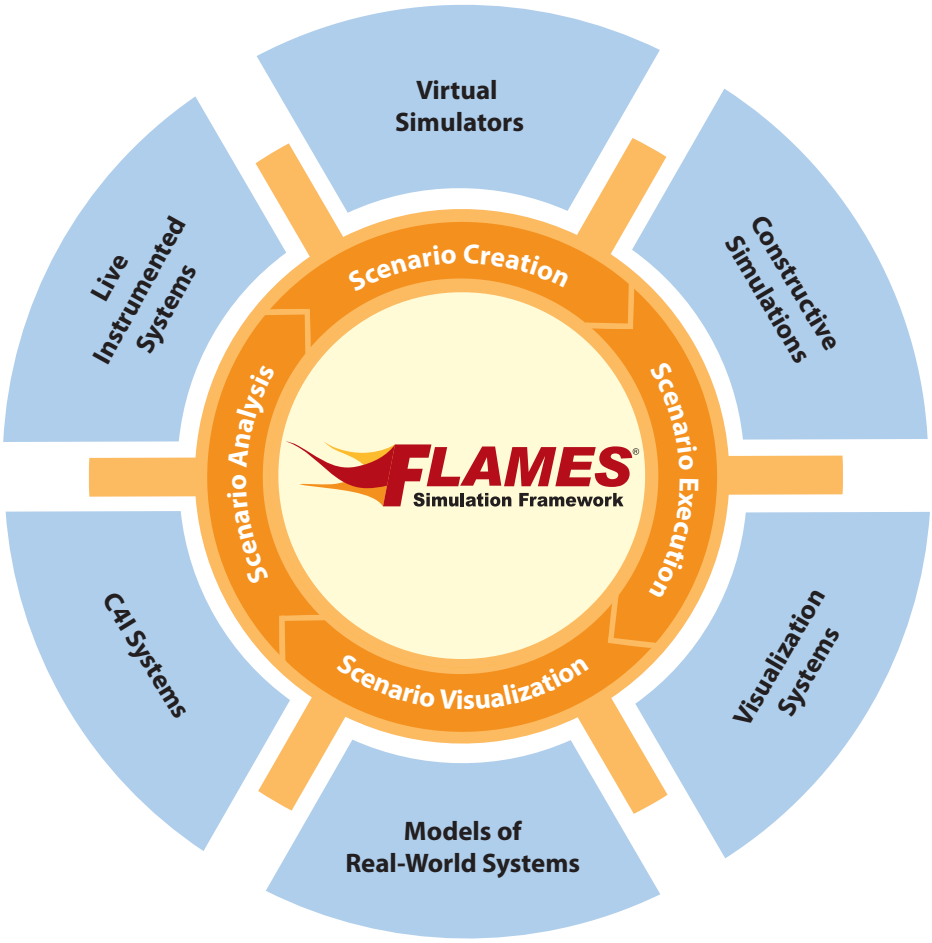
DIS & HLA - *Typical Approach*



FLAMES Client/Server - *Better Approach*



Complex network protocols must be followed by all simulators	No network protocols are required
System models are different for each simulator	System models can be the same for each simulator and for all automated players
Differences in system models often make results unreliable	Common system models operate on a "level playing field" and help make results more reliable
System models are usually difficult to reconfigure	System models for any simulator are easy to reconfigure
Each simulator has its own input database and scenario editing tools	Inputs for system models for all players reside in a common database edited by one set of tools
Each simulator has its own post-processing tools	A single set of post-processing tools can be used



FLAMES-Based Simulation System

FLAMES® is a powerful simulation framework that addresses all aspects of constructive simulation development and use, including customizable scenario creation, execution, visualization, and analysis, as well as interfaces to constructive, virtual, and live systems. FLAMES minimizes the amount of software development needed to get a full-featured, working simulation. At the same time, the open, object-oriented architecture of FLAMES gives you the flexibility to modify or enhance your simulation as necessary to meet your specific requirements. Get the simulation you need, when you need it, with FLAMES.

Since 1989, Ternion Corporation has provided quality commercial simulation products and custom software development and support services to government and commercial organizations worldwide. Ternion is a privately held, employee-owned company located in high-tech Huntsville, Alabama.

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