ds.tools
DISTRIBUTED SIMULATION TOOLS

FMI

coreDS FMI

HLA and DIS made easy with coreDS™

Overview

coreDS™ FMI (Functional Mock-up Interface) is an application that turns a FMU (Functional Mock-up Unit) into a full-featured HLA federate and/or DIS simulation. The good news is you don't need to be a programmer or a HLA/DIS Expert. No code is required!

This comes with an impressive set of features and support all standards, all FOM modules and all RTIs. Automatic data encoding/decoding capability significantly reduce implementation time and allows the end user to work with high-level data representation. Scripting functionality provides the flexibility needed by the end user to fully customize simulation behaviours.

The software provides all the configuration GUIs, data encoding, a scripting engine and rate limiting capability.

All your Inputs/Outputs defined in your FMU will be available in the Mapping window. This allows you to map your local FMU properties to HLA or DIS parameters. If you have data conversion to do, just use our builtin LUA scripting engine.

Easy process: define your input-output object, variables and your messages - that's all.

Main features

- Cost-effective solution using proven technologies - save time and money;
- Switch configuration at runtime from HLA to DIS, or to a new set of mapping, or FOM, or anything you can think of;
- Lightweight scripting engine (LUA) to do on-the-fly data conversion, reply to messages or update objects;
- Data mapping at run time. Change your FOM file or PDU mapping on the fly;
- Automatic data encoding/decoding;
- Integrated dead reckoning;
- No code generation required;
- Integrated data filtering;
- Support most distributed simulation concepts out of the box.

fmi FUNCTIONAL MOCK-UP INTERFACE

High-Level Architecture (HLA)

Supported protocols

- HLA - DOD 1.3
- HLA - IEEE 1516
- HLA - IEEE 1516e

Supported RTIs

- All commercial RTIs (Pitch, MAK, RTI Ng Pro, RTI-S, Raytheon RTI, CAE RTI)
- Most OpenSource RTIs (Portico, Certi, Open-RTI)

Supported FOM

- Support any valid FOM File
- Tested with the RPR-FOM, NETN FOM

Distributed Interactive Simulation (DIS)

Supported protocols

- DIS 5 (IEEE 1278.1-1995)
- DIS 6 (IEEE 1278.1a-1998)
- DIS 7 (IEEE 1278.1-2012)

Supported PDUs

- All PDUs are supported
- Custom PDUs are supported