



# HLA and DIS made easy with coreDS™

# Overview

coreDS<sup>TM</sup> is an easy to use multi-platform C++ API to rapidly connect to a HLA Federation or a DIS simulation.

Save time and money; needs as low as 5 lines of code to have a complete integration.

Once integrated, no more recompilation, everything is done at runtime through our provided GUIs, including data mapping and distributed simulation configuration.

coreDS<sup>TM</sup> provides an elegant and cost-effective solution to add HLA and DIS support to your C++ software.

# **Main features**

- •Cost-effective solution using proven technologies save time and money;
- •Provides configuration Graphical User Interfaces you can integrate in your software;
- •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.

Federate Parameters R	TI Settings	Publication ar	nd Subscription	Mapping In	Mapping Out	Metadata	About	
Federate Name:	Sender Sender				Create Federation Execution 📝 Destroy Federation Execution			
Federate Type:					FCM Files			
Federation:	Exchange				Filename Full path			
Time Management					RPR2-	D 17_20 10.xml	C:/Program Files/ds.tools/coreDSPython/RPR2-D17_20	
Time Step:			zation ter Synchronization Point					
Lookahead:	0.10	📃 Enabl	e Synchronization		Optional FOM Files			
Time Regulating Synchron Time Constrained SyncPol			ization Point Nam	e:				
		it		Filename Full path				
Enable Asynchronous Delivery								
Start at Greakest available	ilable logical tim	(GALT)					Lood	
					Resign option:		Delete Objects	
vokeCalBack min: 0.00			Logical Time Implementation f		me: Display received calback to log			
EvokeCallBack max:	keCallBack max: 0.10		Double	•	Enable Provide Attribute Values			
alback Delivery Mecanism: HLA_EVCKED					Request attribute values update on discovery			

# **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