P1516

Submitter Email: r.saunders@ieee.org
Type of Project: Revision to IEEE Standard 1516-2010
PAR Request Date: 18-Nov-2015
PAR Approval Date: 05-Feb-2016
PAR Expiration Date: 31-Dec-2020
Status: PAR for a Revision to an existing IEEE Standard
Root Project: 1516-2010

1.1 Project Number: P1516
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Framework and Rules

3.1 Working Group: HLA Evolved Working Group (C/SI/1516_WG)
Contact Information for Working Group Chair
Name: Randy Saunders
  Email Address: r.saunders@ieee.org
  Phone: +1 443-778-3861

Contact Information for Working Group Vice-Chair
None

3.2 Sponsoring Society and Committee: IEEE Computer Society/Simulation Interoperability Stds Organization/Std Activity Committee (C/SI)
Contact Information for Sponsor Chair
  Name: Marcy Stutzman
  Email Address: marciastutzman@netscape.net
  Phone: 301-317-9698
Contact Information for Standards Representative
  Name: Marcy Stutzman
  Email Address: marciastutzman@netscape.net
  Phone: 301-317-9698

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 07/2017
4.3 Projected Completion Date for Submittal to RevCom: 08/2018

5.1 Approximate number of people expected to be actively involved in the development of this project: 30
5.2 Scope: This document provides an overview of the High Level Architecture (HLA), defines a family of related HLA documents, and defines the principles of HLA in terms of responsibilities that federates (simulations, supporting utilities, or interfaces to live systems) and federations (sets of federates working together) must uphold.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: This document describes the general principles defining the HLA and delineates the set of rules that apply to HLA federations and federates. Each rule is then described, and the rationale for its inclusion is provided.

Many different classes of simulations exist. Each class has changing application characteristics and needs to be flexibly supported to allow for interoperability and reuse across classes and to limit the need to maintain multiple interoperability approaches. The HLA is a common integrated architecture, which has been developed to provide a flexible approach for addressing these interoperability and reuse needs. The related standards need to be considered as a set of products because changes in one are likely to have an impact on the others.

5.5 Need for the Project: The HLA has been in active use among many different classes of distributed simulation users since the mid-1990s. The user community spans many different user domains (e.g., training, analysis, acquisition) and application areas (e.g., defense, entertainment, medical). The stakeholders for this standard include developers and integrators of simulations and federations as well as the vendor community that develops tools for simulation and federation integration, execution, monitoring, and control.
The IEEE 1516-series represents the current commercial standards for the HLA. As experience with the use of IEEE 1516 continues to grow, and as new technologies that affect HLA implementations are developed, it is vitally important that the IEEE 1516 standards be periodically evaluated and modified as necessary to meet the evolving needs of the user community. Since the IEEE 1516-2010 series documents were approved by the IEEE Standards Activity (SA) Board in the Fall of 2010, substantial use of the standards has occurred. The changes in the Framework and Rules are expected to primarily be changes and clarifications in definitions resulting from the use to date and needed to ensure consistency with the other two documents in the series.

The Working group has identified 24 areas where agreement is considered likely on changes to the 1516 standards. There are at least 12 more areas where agreement may be possible.

5.6 Stakeholders for the Standard: A large, international simulation community currently uses HLA. Several vendors and open-source software projects have produced product offerings based on the standards.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): 5.3: Title of IEEE 1516-2010 is Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) -- Framework and Rules.