

# P1278.1

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**Submitter Email:** [jmccall771@aol.com](mailto:jmccall771@aol.com)

**Type of Project:** Modify Existing Approved PAR

**PAR Request Date:** 20-Jul-2010

**PAR Approval Date:** 30-Sep-2010

**PAR Expiration Date:** 31-Dec-2012

**Status:** Modification to a Previously Approved PAR for the Revision of a Standard

**Root PAR:** P1278.1 **Approved on:** 20-Mar-2005

**Project Record:** P1278.1

**Root Project:** 1278.1-1995

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**1.1 Project Number:** P1278.1

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Distributed Interactive Simulation - Application Protocols

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**3.1 Working Group:** Working Group for Distributed Interactive Simulation (C/SI/DIS\_WG)

**Contact Information for Working Group Chair**

**Name:** James Mccall

**Email Address:** [jmccall771@aol.com](mailto:jmccall771@aol.com)

**Phone:** 480-855-0230

**Contact Information for Working Group Vice-Chair**

None

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/Simulation Interoperability Stds Organization/Stds Activities Committee (C/SI)

**Contact Information for Sponsor Chair**

**Name:** Katherine Morse

**Email Address:** [katherine.morse@jhuapl.edu](mailto:katherine.morse@jhuapl.edu)

**Phone:** 858 678-0629

**Contact Information for Standards Representative**

**Name:** Marcy Stutzman

**Email Address:** [marcy.stutzman@ngc.com](mailto:marcy.stutzman@ngc.com)

**Phone:** 301-317-9698

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 05/2010

**4.3 Projected Completion Date for Submittal to RevCom:** 09/2011

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 80

**5.2 Scope:** This standard is part of a set of standards and recommended practices for Distributed Interactive Simulation (DIS) applications. Each standard and recommended practice in the set describes one or more of the elements that constitute the DIS environment. As a whole, the set of standards and recommended practices defines an interoperable simulation environment. This particular standard addresses the application protocols.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** This standard defines the data messages, known as Protocol Date Units (PDUs), that are exchanged on a network among simulation applications. The messages are organized within specified domains called protocol families. The protocol families included in this standard include Entity Information/Interaction, Warfare, Logistics, Simulation Management, Distributed Emission Regeneration, Radio Communications, Entity Management, Minefield, Synthetic Environment, Simulation Management with Reliability, Information Operations, Live Entity Information/Interaction, and Non-Real Time. Future versions of this standard may contain additional protocol families or PDUs to exchange

**Changes in scope:** This standard is part of a ~~proposed~~ set of standards ~~and recommended practices~~ for **Distributed Interactive Simulation (DIS)** applications. Each standard ~~and recommended practice~~ in the ~~proposed~~ set describes one or more of the elements that constitute the DIS environment. As a whole, the set of standards ~~will and recommended~~ **define practices** defines an interoperable ~~simulated~~ **simulation** ~~environment~~ environment. This particular standard addresses the application protocols.

**Changes in purpose:** This standard defines the data messages, known as **Protocol Date Units (PDUs)**, ~~which that~~ are exchanged on a network ~~between among~~ simulation applications. The messages ~~defined are for~~ **organized interactions that take place** within specified domains called protocol families. ~~Current~~ **The protocol families included in this standard** include Entity Information/Interaction, Warfare, Logistics, Simulation Management, Distributed Emission Regeneration, Radio Communications, ~~Simulation~~ **Entity Management, Minefield, Synthetic Environment, Entity Simulation Management with Reliability, Minefield Information Operations, Live Entity**

information about interactions and functions not currently supported.

Information/Interaction, and Non-Real Time. Future versions of this standard ~~will~~may contain additional ~~PDU~~s and protocol families or PDUs to exchange information about interactions and functions not currently supported.

**5.5 Need for the Project:** Many U.S. DoD agencies have determined that, with the advent of the Distributed Interactive Simulation/High Level Architecture (DIS/HLA) Gateway and training needs that can continue to be met in a cost-effective manner using DIS, in the near term, HLA is unlikely to achieve 100% replacement of DIS for all simulations. In addition, other nations such as Australia will be using DIS as their standard distributed simulation methodology along side of HLA for the next 10 years. The U.S., Australia, United Kingdom, Canada, Germany, Sweden and other NATO countries will continue to conduct joint distributed training exercises using DIS and HLA, as well as other protocols, for the foreseeable future. Many countries have a large investment in DIS. Since the DIS protocol is actively being used worldwide, the standard must be kept current with simulation developments and an active DIS community must exist to support DIS software development and use. We propose to combine IEEE 1278.1-1995 and IEEE 1278.1a-1998 and update the combined standard. Updates to the standard will be based on a large base of users with deep expertise and experience in the technology and the interoperability issues involved in its use. Over 100 Problem/Change Requests have been identified that cover clarification requests and changes that have been made to DIS over the last six years by organizations and companies that are using the DIS Protocol.

**5.6 Stakeholders for the Standard:** Government, Industry, Commercial, and Academic organizations using distributed simulation technologies.

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### 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

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**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

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**8.1 Additional Explanatory Notes (Item Number and Explanation):** 5.2 & 5.4: The original PAR copied the original Scope (and what would have been a Purpose) paragraphs from IEEE Standard 1278.1-1995. These paragraphs were written for proposed standards and defined the protocol families included in the 1995 standard. These paragraphs were modified in the IEEE Standard 1278.1a-1998 version to reflect the fact that the standards were no longer "proposed", defined a narrower scope and dropped the suggestion that the standard would be expanded in the future.

The proposed modification to the Scope reflect the fact that the standards are no longer longer "proposed" and provide a more accurate description of the what the standards define - "an interoperable simulation environment."

The proposed modification to the Purpose reflect the protocol families included in the revision and the expectation that future revisions will expand the functions included in the standard.