

## P2247.2

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**Submitter Email:** bob.sottolare@soartech.com

**Type of Project:** New IEEE Standard

**PAR Request Date: PAR Approval Date:**

**PAR Expiration Date:**

**Status:** PAR for a New IEEE Standard

**1.1 Project Number:** P2247.2

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

**2.1 Title:** Interoperability Standards for Adaptive Instructional Systems (AISs)  
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**3.1 Working Group:** Adaptive Instructional Systems (C/LT/AIS)

**Contact Information for Working Group Chair**

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/Learning Technology (C/LT)

**Contact Information for Sponsor Chair**

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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:** 03/2021

**4.3 Projected Completion Date for Submittal to RevCom:** 02/2022

**Note:** Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months  
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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 20

**5.2 Scope:** This standard defines interactions and exchanges between the components of adaptive instructional systems (AISs). This standard defines parameters used to describe exchanges between AISs and establishes requirements and guidance for the use and measurement of these parameters.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** Yes, the AIS conceptual model being defined under P2247.1.

**5.4 Purpose:** This standard enables producers of AISs to describe the overall operation of an AIS in terms of interactions and exchanges between AIS components (e.g., learner models, instructional models, domain models, and user interface models) and other AISs; to specify its approach and method of interoperation; and to identify the methods used to implement specific components, models, and interfaces. This standard enables consumers of AISs to make comparisons to inform purchasing and deployment decisions and serves a reference for technical standards that support the exchange of components and data among AISs and between AISs and other education and training systems. This standard incorporates and promotes the principles of ethically aligned design for the use of artificial intelligence (AI) in AIS.

**5.5 Need for the Project:** AISs, which include "Intelligent Tutoring Systems" (ITS), have been established as effective training and education systems and have been deployed in commercial and open source versions. They have the potential to significantly improve learning effectiveness across many sectors of training and education and are starting to proliferate and move from self-contained desktop software to AI-enabled cloud-based systems. This has created two market needs: One for transparency concerning the operation, features, functionality, and use of AI in these systems for the benefit of consumers, and one for the interoperable exchange of data with other learning and enterprise systems. This standard meets these needs by providing standardized component definitions and levels of functionality and by creating a framework for the development of further data interoperability standards.

**5.6 Stakeholders for the Standard:** Stakeholders include designers and producers of AIS and related instructional systems; education and training organizations that buy and deploy AIS and other instructional systems; designers and producers of tools used to develop AIS and to author adaptive instructional content; researchers in the fields of learning science and learning engineering; learners who interact with AIS; and the general public that may need to interpret data reported by AIS. Anyone or any organization that produces, buys, or uses an intelligent tutoring system or a personalized learning system is a stakeholder.

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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

**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:**