 

P3079.3.2.1

**Type of Project:** New IEEE Standard **Project Request Type:** Initiation / New **PAR Request Date:** 25 Jul 2024

**PAR Approval Date:**

**PAR Expiration Date:**

**PAR Status:** Submitted

* 1. **Project Number: P3079.3.2.1**
	2. **Type of Document:** Standard
	3. **Life Cycle:** Full Use

**2.1 Project Title:** Standardized Framework for Avatar Data Transfer Using Preset Values Across Metaverse Platforms

* 1. **Working Group:** Human Factors for Immersive Content(C/SAB/3079\_WG)

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None

* 1. **Society and Committee:** IEEE Computer Society/Standards Activities Board(C/SAB)

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None

* 1. **Type of Ballot:** Individual

# Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:

July 2024

# Projected Completion Date for Submittal to RevCom: Oct 2025

* 1. **Approximate number of people expected to be actively involved in the development of this project:** 10
	2. **Scope of proposed standard:** The proposed standard aims to ensure compatibility and consistency of user avatar data between the physical world and various metaverse platforms. It covers the standardization of avatar customization, behavior, and interaction data. The scope also includes providing a foundation for users to freely move and interact across different metaverse platforms.

# Is the completion of this standard contingent upon the completion of another standard? No

* 1. **Purpose:** This document will not include a purpose clause.
	2. **Need for the Project:** As the metaverse industry grows rapidly, providing user-centric experiences and increasing user engagement by lowering barriers between metaverse platforms is essential. This requires enhancing the continuity and convenience of user experiences across metaverse platforms, maintaining consistency in managing users' digital identities, and promoting the development of the metaverse ecosystem through interoperability. Standardizing avatar data handling will enable users to seamlessly navigate and interact across various digital worlds while maintaining a consistent digital identity. Moreover, this standard framework is expected to contribute to the sustainable growth and evolution of the metaverse ecosystem by facilitating interoperability among metaverse platforms. In conclusion, the proposed metaverse avatar data handling standard is a necessary step towards building an inclusive, interconnected, and user-friendly metaverse ecosystem that empowers individuals to freely explore, create, and socialize in digital worlds.
	3. **Stakeholders for the Standard:** Content producers and providers, game service providers, and medical application developers and users.

# Intellectual Property

* + 1. **Is the Standards Committee aware of any copyright permissions needed for this project?**

No

# Is the Standards Committee aware of possible registration activity related to this project?

No

* 1. **Are there other standards or projects with a similar scope?** No
	2. **Is it the intent to develop this document jointly with another organization?** No

**8.1 Additional Explanatory Notes:**

**Functional Description**

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**<Pic 1> Scenario Architecture**

**Terms and Acronyms**

Physical World (Real World)

* Definition: The actual, tangible world in which users physically exist.
* Explanation: This represents the real-world environment where users live and interact with digital devices to access metaverse platforms.

Digital World (Metaverse)

* Definition: Virtual, digital environments that users can access and interact with through various devices.
* Explanation: The diagram shows multiple digital worlds (1, 2, n) to represent different metaverse platforms or instances. Each of these can have unique features, rules, and avatar representations.

User

* Definition: The real person who accesses and interacts with metaverse platforms.
* Explanation: Users exist in the Physical World and create/control avatars in Digital Worlds. They are the source of personalization and behavior data for their avatars.

User Avatar

* Definition: A digital representation of the user within metaverse platforms.
* Explanation: Avatars are the user's presence in Digital Worlds, capable of customization and interaction based on preset data and user input.

Avatar Customization Preset data

* Definition: Standardized data sets for avatar appearance and characteristics.
* Explanation: This includes preset values for physical attributes (e.g., height, body type, facial features) and clothing/accessories. These presets allow for consistent avatar appearance across different metaverse platforms.

Behavior and Interaction Preset data

* Definition: Standardized data sets for avatar actions, movements, and interaction capabilities.
* Explanation: This includes preset values for animations, gestures, voice characteristics, and interaction styles. These presets ensure consistent avatar behavior across different metaverse platforms.

Preset data (arrow)

* Definition: The flow of standardized avatar data between different Digital Worlds.
* Explanation: This represents the transfer of both customization and behavior preset data, allowing avatars to maintain consistency across various metaverse platforms.

PII DB

* Definition: Personally Identifiable Information Database.
* Explanation: A separate, secure database in the Physical World that stores sensitive user information. This separation ensures that personal data is protected and not directly transferred between metaverse platforms.

**Example of Standard Preset Codes for Avatar Appearance:**

**Skin Tone:** 001.000.000.001

**Hair Style:** 002.001.000.003

**Eye Color:** 003.002.000.002

**Height:** 004.180.000.000

**Outfit:** 005.001.001.002

**Each section of the code can represent different aspects of the avatar’s appearance:**

* The first set of three digits (001, 002, 003, etc.) could denote different categories like skin tone, hair, eyes, etc.
* The second set of three digits could denote specific options within that category, like specific colors or styles.
* The subsequent sets of digits can be used to further refine the options or denote variations.
* This coding system is designed to be flexible and expandable, allowing for easy integration of new appearance options as they become available and ensuring a consistent application across various Metaverse platforms.