|  |  |
| --- | --- |
| Project | **Human Factor for Immersive Content Working Group**  < <https://sagroups.ieee.org/3079/> **>** |
| Title | **PAR proposal on ‘Biometric Personal Information Protection in Metaverse Environment’** |
| DCN | **3079-23-0066-03-0003** |
| Date Submitted | **Oct. 19, 2023** |
| Source(s) | **ByungGook Lee,** [**lbg@dongseo.ac.kr**](mailto:lbg@dongseo.ac.kr) **(Dongseo Univ.)**  **Hoon Jae Lee,** [**hjlee@dongseo.ac.kr**](mailto:hjlee@dongseo.ac.kr) **(Dongseo Univ.)**  **Dae-Ki Kang,** [**dkkang@dongseo.ac.kr**](mailto:dkkang@dongseo.ac.kr) **(Dongseo Univ.)** |
| Re: | IEEE 3079 Session #29 Plenary Meeting in Jeju, Korea |
| Abstract | This document is a description of a new PAR to propose a framework for Biometric Personal Information Protection in Metaverse Environment. |
| Purpose | This document is submitted to propose a new PAR. |
| Notice | This document has been prepared to assist the IEEE 3079 Working Group. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE’s name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE’s sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that IEEE 3079 may make this contribution public. |
| Patent Policy | The contributor is familiar with IEEE patent policy, as stated in [Section 6 of the IEEE-SA Standards Board bylaws](http://standards.ieee.org/guides/opman/sect6.html#6.3) <[http://standards.ieee.org/guides/bylaws/sect6-7.html#6](http://127.0.0.1:4664/cache?event_id=757737&schema_id=1&s=5X0vID10lu_E6yrIkWkNd4Wz2H8&q=hancock)> and in *Understanding Patent Issues During IEEE Standards Development* <http://standards.ieee.org/board/pat/faq.pdf> |

**PAR for a New IEEE Standard**

# Section 1

1.1 Project Number: P3079.3.2 (Project Proposal)

1.2 Document Type: Standard

1.3 Life Cycle: Full Use.

# Section 2

2.1 Project Title: Biometric Personal Information Protection in Metaverse Environment

# Section 3

**3.1 Working Group: Human Factor for Immersive Contents Working Group (C/SAB/3079\_WG)**

**3.1.1 Contact Information for Working Group Cahir:**

**Name:** Beom-Ryeol Lee

**Email Address:** lbr@etri.re.kr

**3.1.2 Contact Information for Working Group Vice Cahir:**

**Name:** Wookho Son

**Email Address:** whson@etri.re.kr

**3.2 Society and Committee:** C/SAB

**3.2.1 Contact Information for Standards Committee Cahir:**

**Name:** Edward Au

**Email Address:** edward.ks.au@gmail.com

**3.2.2 Contact Information for Standards Committee Vice Cahir:**

None

**3.2.3 Contact Information for Standards Representative:**

None

# Section 4

**4.1 Sponsor Balloting Information: *Individual or Entity***

Individual

**4.2 Expected Date of Submission of Draft to the IEEE-SA for Initial Standards Committee Ballot:**

**Month: Jan. Year: 2025**

**4.3 Projected Completion Date for Submittal to RevCom**

**Month: Jan. Year: 2026**

# Section 5

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

20

**5.2 Scope of the proposed standard:**

This standard aims at data management for the protection of biometric personal information in Metaverse environments.

In this standard, we review the latest technological level related to biometric personal information threats in the Metaverse environment and propose standardization to protect personal information accordingly.

**5.3 Is the completion of this standard dependent on the completion of another standard?** No

**5.4 Purpose:**

The purpose of this standard is to provide a review and basic methods for protecting biometric personal information in the Metaverse environment. Biometrics are body measurements and calculations related to human characteristics. This standard provides basic methods including encryption, explicit consent, data minimization, transparency & control, data breach response plan, multi-factor authentication, and third-party audits.

**5.5 Need for the Project:**

The Metaverse environment has a large amount of data created and shared by users, so the management and control of this data is important. In particular, user authentication through biometric information can be the key mechanism for entering Metaverse world. However, there is currently no clear standard on how to protect this data.

If a criminal can steal and/or masquerade the user’s biometric information, it can lead to leakage of user's personal information, infringing on user's privacy and constraining their autonomy. Therefore, a standardized framework is needed to protect biometric personal information in Metaverse environment.

5.6 Stakeholders of the Standard:

metaverse platform providers and operators, users who use avatars, government that makes and supervises data protection-related laws and regulations, etc.