

Principles of the Metaverse (Version 2.0) with Additional Explanation

Ministry of Internal Affairs and Communications, Japan

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The structure is the same as "Version 1.0".

Principles of the Metaverse (Ver 2.0)

Key elements of democratic values for realizing a safe and secure metaverse

The metaverse is provided as a free and open place and widely enjoyed around the world.

Users can act proactively on the metaverse.

Human dignity in physical space and virtual space is respected through activities on the metaverse.

Principles for the Further Self-motivated and Autonomous Development

Openness
and
Innovation

Diversity
and
Inclusion

Literacy

Community

Principles for Improving Trustworthiness

Transparency
and
Explanation

Accountability

Privacy

Security

Support realization of elements above, along with principles below

Support realization of principles above

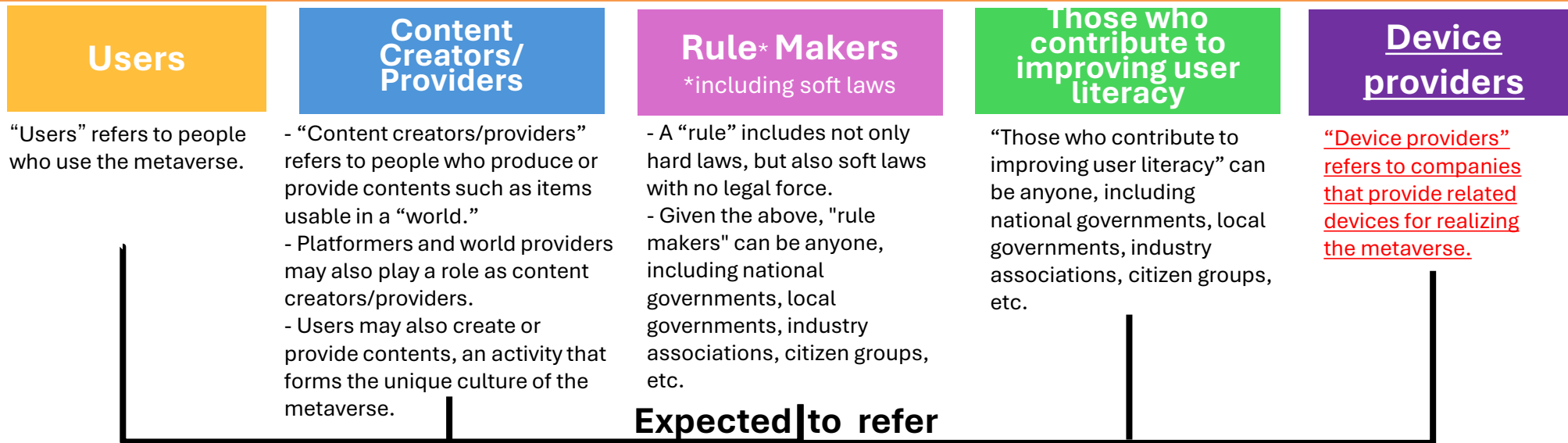
The Perspective on revision from Version 1.0 to 2.0

The revision from “Principles of the Metaverse Version 1.0” to “2.0” was conducted based on the following perspectives.

- Considering that the primary target of the principles is metaverse-related service providers, and that the fundamental concepts underlying the principles include democratic values, self-motivation and autonomy, the study group on realizing safe and secure metaverse has added sentences or explanation regarding issues specific to the metaverse that can be addressed as initiatives by metaverse-related service providers.
- The scope of the study group’s discussions has expanded from VR metaverse for communication purposes to AR/MR metaverse, and this expansion of scope led to the revision. Therefore, this revision is recognized as a major update, and the revised principles are referred to as the “Principles of the Metaverse (Version 2.0).”
- The revised principles are expected to continue to serve as a reference for all stakeholders, including users, content producers and providers(including creators), those involved in developing the rules of the the metaverse, those who contribute to improving user literacy, and device providers.

Reference: Stakeholders related to the metaverse

(Underlined parts are revisions from Version 1.0)



Aims of the principles

Principles of the Metaverse (Version 2.0)

Metaverse-related service providers (MSPs)

World providers

Platformers

- A "world" is an individual space in the metaverse constructed and operated on a "platform."
- "World providers" refers to people who have some kind of contractual relationship* with "platformers" and construct and provide a "world" on a "platform."
- Those who carry out the action above as a business are referred to as "business world providers."
- "Platformers" may construct and provide a "world."

* The contract type may be either paid or free, and includes agreement with the terms of use.

- A "platform" is an infrastructure for constructing and using the metaverse.
- "Platformers" refers to people who provide a "platform."
- "Platforms" are diverse; they can be a set of functions, materials, laws, and rules for constructing a metaverse or basic services such as user authentication and management, item management, communication functions, contracts, and transactions.

**These are examples of key stakeholders and do not deny the existence of other stakeholders.

**The distinction between stakeholders is a functional one, and in practice one entity may serve multiple roles.

Outline

(Building a future vision of the metaverse based on democratic values)

- In the future, various virtual worlds will be provided in the metaverse across borders, and it is expected that the metaverse will develop more and more as a living space for citizens and a place for social activities as well as a physical space, and expand people's potential. On the other hand, there is a possibility that actions in the metaverse will be governed by excessive commercialism and that a virtual space undermining democratic values will emerge. Furthermore, as a result of the progress in fusing physical and virtual spaces, the events and values in the metaverse will influence not only the virtual space but also the physical space and undermine the democratic values of both spaces. In order to prevent such a situation, it is important to build a future vision of the metaverse based on the following three items as the key elements of democratic values in the metaverse, as shared and internationally recognized values.
 - (1) The metaverse is provided as a free and open place and widely enjoyed around the world.
 - (2) Users can act proactively in the metaverse.
 - (3) Human dignity in physical space and virtual space is respected, through activities in the metaverse.

(Positioning of Principles)

- In order to realize the above-mentioned democratic values and enable people to use the metaverse safely and securely, the role of metaverse-related service providers (platformers and world providers) who provide the virtual related space is important. The following two items are positioned as the major pillars of initiatives by metaverse-related service providers.
 - (1) Principles for the further self-motivated and autonomous development of the metaverse in cooperation with society
 - (2) Principles for improving trustworthiness of the metaverse

Outline

(Concept of the Principles for the Further self-motivated and Autonomous Development of the Metaverse)

- Based on the background in which the metaverse has achieved autonomous social and cultural development through the creation of creative content (including UGC) by users, etc. as well as the provision of various virtual spaces by metaverse-related service providers, we will promote openness and innovation in “worlds,” enhance diversity and inclusion through the use of the metaverse by users with various attributes around the world, improve ICT literacy, and respect community management, in cooperation with society.

(Concept of the Principles for Improving Trustworthiness of the Metaverse)

- In order to assist with the further self-motivated and autonomous development of the metaverse, necessary measures shall be taken to improve trustworthiness of the metaverse, including transparency and explanation, accountability, consideration for privacy, and security assurance.

(Explanations to above outline)

- In order to realize safe and secure metaverse based on democratic values, it is important for all stakeholders involved in the metaverse to undertake relevant initiatives. The principles based on the fact that the role of metaverse-related service providers (platformers and world providers) who provide virtual spaces is particularly important in order to realize democratic values in the metaverse and enable users to use it safely and securely.
- Therefore, while the principles are aimed at the initiatives of metaverse-related service providers, the principles are also expected to be referred to by all stakeholders, including users, content producers and providers (including creators), those involved in developing the rules of the metaverse, those who contribute to improving user literacy and device providers.

<The Principles for the Self-Motivated and Autonomous Development of the Metaverse>

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(Underlined parts are revisions from Version 1.0)

Topic	Content	Explanation
Openness and Innovation	Respecting the metaverse as a free and open place	Just as the Internet has developed as a free and open space accessible to everyone, the participation of users with various attributes and their initiatives are essential for the development of the metaverse in the future. Metaverse-related service providers are expected to welcome the participation of users with various attributes and develop and manage metaverse services that respect users' autonomy.
	Promoting innovation and creating diverse use cases through business development	As the metaverse is utilized in various fields and for various purposes, it has the potential to contribute to <u>sustainable economic development</u> and the resolution of social issues. Metaverse service providers are expected to promote innovation and create diverse use cases in collaboration with users by freely developing their businesses based on creativity and ingenuity, <u>such as actively utilizing the advantages and impacts of cutting-edge technologies after fully understanding them.</u> <u>Additionally, metaverse-related service providers are expected to recognize that the use of the metaverse may have both positive and negative impacts on people's physical, emotional, and behavioral aspects, and to strive to develop and operate Metaverse services that contribute to the physical and mental well-being of users.</u>
	Ensuring interoperability of avatars, contents, etc.	In the utilization of the metaverse, allowing users to select various services leads to increased convenience and openness for users and the promotion of innovation. Therefore, it is expected that metaverse-related service providers will endeavor to ensure interoperability so that avatars, contents, etc. can be used across multiple platforms in accordance with the characteristics of the metaverse services they provide.
	Appropriately protecting intellectual property rights and other rights	In order to enable creators to create content safely in the metaverse and for users to use it safely, metaverse-related service providers are expected to endeavor to appropriately protect intellectual property rights and other rights in the development and management of metaverse services. <u>While metaverse-related service providers are expected to pay attention to the fact that certain data obtained from users, such as technical information and know-how, may need to be kept confidential for competitive reasons,</u> they are also expected to disseminate the importance of appropriate protection of intellectual property rights and other rights to users through their terms of use, community guidelines, etc. and to clarify the rules, etc. regarding the creation and use of UGC, such as whether its secondary use is permitted, in these documents.

Items	Content	Explanation
Diversity and Inclusion	Providing a space for self-realization and self-expression free from the restrictions in physical space	It is expected that metaverse-related service providers will develop and manage the services so that users can engage in activities in the metaverse free from attributes and restrictions, such as age, gender, and residential area in physical space, and lead to self-realization and self-expression, in accordance with the characteristics of the metaverse services they provide.
	Respecting cultural diversity created by various countries, regions, user attributes, etc.	It is expected that metaverse-related service providers will recognize that the metaverse may be provided across national borders and that users with different social and cultural backgrounds may participate in the metaverse from different countries and regions and create a culture of individual metaverse, and the metaverse-related service providers will endeavor to respect cultural diversity by considering the attributes of various users and fostering a sense of mutual respect among users with different attributes.
	Ensuring diverse opinions (metaverse that is less likely to cause problems, such as filter bubbles and echo chambers)	It is expected that metaverse-related service providers will recognize that dealing with problems such as filter bubbles and echo chambers, which arise from the characteristics of information distribution in the digital space and pose risks such as the distribution and diffusion of disinformation and misinformation, can be a more difficult problem in the future due to the characteristics of the metaverse, such as a high level of sense of immersion. Based on the necessity of maintaining a sound media space, metaverse-related service providers will develop and manage such services so that users can make diverse opinions and have access to them in accordance with the characteristics of the metaverse services they provide.

Items	Content	Explanation
Diversity and Inclusion	Utilizing the metaverse as an effective means for social participation for persons with disabilities and other handicaps	The metaverse can be a place for people who have difficulty in moving or communicating in physical space due to their physical or mental disabilities to attend school, to work, and to interact with others. Therefore, it is expected that metaverse-related service providers will take initiatives to develop and manage the services so that they can be utilized as effective means for social participation in accordance with the characteristics of the metaverse services they provide.
	Ensuring fair participation in the metaverse Ensuring usability for everyone	As a virtual space on the Internet, the metaverse is expected to be an open place where anyone with access can participate. The metaverse-related service providers are expected to ensure fair participation opportunities to users through diverse and flexible means of access, and to ensure usability so that everyone can use the metaverse easily in accordance with the characteristics of the metaverse service they provide.
Literacy	Helping users improve their understanding of the metaverse Helping users improve their ICT literacy	In order to promote the use of the metaverse throughout society, it is necessary to help users improve their understanding of the metaverse and improve ICT literacy. Therefore, it is expected that metaverse-related service providers will provide information to users and support providing learning opportunities in cooperation with national governments, local governments and related organizations.
Community	Respecting autonomy in community management Supporting community development	The community in the metaverse is a form of social connection of people as well as the community in the physical space. Therefore, based on the background in which the community in the metaverse has developed through the originality and ingenuity of users, it is expected that metaverse-related service providers will respect the users' autonomy in community management and will support smooth interaction among users for further community development.

(Underlined parts are revisions from Version 1.0)

Items	Content	Explanation
Transparency and Explanation	Clarifying stored data (period, contents, etc.) and data used by metaverse related-service providers when a person uses a service and providing that information to users	<p>In order to clarify the handling of data pertaining to users, metaverse-related service providers are expected to clarify to users the content of data to be acquired and stored and the storage period thereof when using the metaverse. They are also expected to indicate the scope and purpose of use of acquired and stored data and whether or not the data is provided externally, as specifically as possible to users.</p> <p>In addition, it is expected that managing methods and systems for acquired and stored data will be clarified as possible.</p> <p>In the case of clarification, visual explanations with high visibility and plain language are expected to be used so that the users can easily understand, and consideration is expected to be given to the place and method of posting so that the users can easily see it.</p>
	Explaining the characteristics of the provided metaverse	<p>There are various types of metaverses, and users use them in different ways. <u>Furthermore, as the number of users increases, their attributes are also becoming diverse. Given the current situation where there are no services widely used by a large number of users in Japan, metaverse-related service providers are expected to take into consideration the fact that relationships between users, modes of communication, expected behaviors, and rules to follow may vary depending on the specific service or world. Therefore, it is expected that metaverse-related service providers will explain the characteristics of their metaverse services and world to users by using visual explanations with high visibility and plain language, so that users can fully understand the nature and context of each service and/or world before experiencing the service.</u></p>

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Items	Content	Explanation
Transparency and Explanation	Explaining measures against aggression or cheating against users when using the metaverse	<p>In order to prevent problems between users in the metaverse and to facilitate communication, it is expected that the metaverse-related service providers will explain what kind of acts fall under aggression or cheating against other users in their metaverse services, and will explain possible measures for users who have committed such acts. Metaverse-related service providers may pay attention to, for example, the following:</p> <ul style="list-style-type: none"> ● Stipulating, as specifically as possible, the types and modes of acts that fall under the category of aggression or cheating against other users in consideration of the characteristics of the metaverse service in order to make it easier for users to understand. ● Explaining, as specifically as possible, the measures that may be taken against users who have committed aggression or cheating. ● Providing visual explanations with high visibility and plain language so that the users can easily understand the explanations.
	<u>Measures to verify authenticity</u>	<p><u>Metaverse-related service providers are expected to recognize that the necessity of ensuring the authenticity of actors within the metaverse varies depending on the characteristics of the metaverse services they provide. Where necessary, they are expected to implement measures to enable users to verify authenticity. For example, the following measures may be appropriate:</u></p> <ul style="list-style-type: none"> <u>● In situations where it is necessary to identify the party responsible for entities acting within the space, clearly disclose to users through terms of use or community guidelines the information necessary to identify such party or the fact that the metaverse-related service provider has identified such party.</u> <u>● In cases where the above measures are difficult or inappropriate due to technical, cost, or service design considerations, clearly disclose in the terms of use or community guidelines that the entity responsible for the actions of entities within the space has not been identified.</u> <u>● In situations where verification of the identity of the responsible party is required for actors within a space, ensure that the fact that such verification has been conducted, including the verification methods used, can be clearly identified.</u>

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Items	Content	Explanation
Transparency and Explanation	<u>Measures regarding the selection and display of information that is virtually added to or removed from physical space</u>	<u>Metaverse environments range from private spaces to those with a certain degree of public nature where multiple users can participate. As the fusion of virtual and physical spaces progresses, the manner in which information is displayed to individual users may not always be uniform. In physical space, communication assumes that multiple people see the same thing when observing physical objects. However, in the metaverse, where information can be virtually added or removed, this is not necessarily guaranteed. This can make it difficult to establish a shared understanding as a basis for discussion with others, posing risks to collaborative consensus-building and social decision-making, which are essential elements of democracy. Metaverse-related service providers are expected to take measures to address such risks, taking into account the context and content of information that is added or removed, while also considering the situation surrounding discussions on other services such as social networking services (SNS), in accordance with the characteristics of the metaverse services they provide.</u>
	<u>Measures to ensure user safety</u>	<u>In cases where use is anticipated in outdoor or other dangerous locations, or where risks of injury or accidents are foreseeable depending on the method of use, metaverse-related service providers are expected to request users to use the services safely, restrict certain functions of the services provided to ensure user safety, and take other necessary measures. In such cases, metaverse-related service providers are expected to explain the measures taken to ensure user safety.</u>

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Items	Content	Explanation
Accountability	Creating mechanisms to prevent conflicts between <u>users and other related parties</u> in advance and taking relief measures for users who suffered disadvantages	<p>In order to ensure that while using the metaverse safety and security are not impaired by <u>problems among users and other related parties</u>, it is expected that metaverse-related service providers will take measures to create mechanisms for preventing user-to-user conflicts in advance and take measures to provide after-the-fact relief to users who suffered disadvantages. For example, the following measures could be considered:</p> <ul style="list-style-type: none"> ● Alerting visual explanations with high visibility. ● Conducting monitoring actions such as patrols and content moderation within metaverse services. ● Implementing technical user protection functions such as a block/mute function. ● Establishing a system that can respond quickly in the event of trouble, such as establishing a contact point from users, <u>and clarifying response policies in advance.</u> ● <u>Clarifying in advance the responsibility for any incidents resulting from experiential content such as effects or events within the metaverse service among related parties.</u> ● <u>Considering disadvantages to users may be arising from the suspension or termination of metaverse service and clarifying response policies in advance for those.</u>
	Suppressing slander and defamation against other users and avatars	<p>In order to suppress slander and defamation against other users and avatars in the metaverse, which is a free and open place, metaverse-related service providers are expected to formulate a common idea regarding the metaverse services among users and between users and metaverse-related service providers through their terms of use, community guidelines, etc. and to take necessary measures based on this idea in order to prevent such acts from occurring in their metaverse services.</p>

Items	Content	Explanation
Accountability	Improving services based on feedback through interactions with users, etc.	<p>In order to develop the metaverse based on the opinions of users, etc., it is expected that metaverse-related service providers will gain feedback through the collection of opinions from users and other stakeholders, leading to improvements in development and management, etc.</p>
	Supporting children and minors	<p>Metaverse-related service providers are expected to take measures to ensure safety and prevent problems, because special consideration must be taken when children and minors use the service. Metaverse-related service providers may pay attention to, for example, the following:</p> <ul style="list-style-type: none">● Alerting them using visual explanations with high visibility and plain language so that children and minors can easily understand the alert.● Labeling content that is harmful to children and minors and rate targeted ages.● Implementing monitoring, such as content moderation.● Implementing protective functions, such as filtering.● Constructing a system in which parents can participate, such as implementing parental controls.

<The Principles for Improving Trustworthiness of the Metaverse>

(Underlined parts are revisions from Version 1.0)

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Items	Content	Explanation
Privacy	Handling users' behavioral records appropriately	<p>In the use of the metaverse, it is expected that metaverse-related service providers will handle the metaverse with due consideration given to the privacy of the users, taking into the consideration that a large amount of the history of various behaviors <u>including biometric information and location information in physical spaces</u> of the users, may be recorded and accumulated. Metaverse-related service providers may pay attention to, for example, the following:</p> <ul style="list-style-type: none">● Clarifying what behavioral records is to be obtained, and when using the records, clarifying the purpose of use and obtain consent from the users.● Limiting the behavioral records acquired in the service to the range necessary for use <u>and limiting the retention period to the range necessary</u>.● Clarifying the management method and management system of the behavioral records.
	Respecting privacy in linking users to their avatars	<p>Users vary in the degree to which they self-project to their avatars, and some use different avatars for different purposes. Users also vary in the amount of information they disclose to the public in the metaverse. Therefore, it is expected that the metaverse-related service providers will respect the privacy of users and take appropriate measures against those who commit an act that violates their privacy, such as clarifying the concept in their terms of use and community guidelines, etc., so that the information will not be disclosed against users' will due to the unintended linkages between the users and the avatars.</p>
	Taking measures, such as complying with laws and regulations regarding data acquisition, against unintended acquisition of user data and unintended capture of privacy data	<p>It is expected that metaverse-related service providers will comply with laws and regulations concerning personal information regarding the acquisition and use of data pertaining to users, and will take measures against unintended capture of personal information in consideration of the case where data obtained by photographing a physical space is used or the case where screen shots are taken by users in the metaverse. For example, the following measures could be considered:</p> <ul style="list-style-type: none">● When acquiring and using users' data, clarifying the content to be acquired and the purpose of use, and obtaining consent.● Obtaining consent in the case where personally identifiable information is included in the data obtained by photographing the physical space, and where it is possible to obtain consent for the use of the photographing data. If it is difficult to obtain consent, process it into a form that cannot be identified.● Obtaining prior consent from users that screen shots may be taken by other users.

<The Principles for Improving Trustworthiness of the Metaverse>

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Items	Content	Explanation
Privacy	<p>Considering the handling of avatars (including avatars imitating real people)</p> <p>*including the viewpoints of intellectual property rights, defamation, and publicity rights</p>	<p>When avatars imitating real people are created or used without permission, there may be infringement of portrait rights or intellectual property rights in accordance with the actual condition of the appearance of the avatars, etc., and there may also be infringement of privacy or defamation of real people depending on the condition of use. Also, when famous people are used as avatars without permission, there may be a problem of publicity rights. For this reason, it is expected that metaverse-related service providers will consider taking measures based on the trends of discussions regarding the handling of rights related to avatars.</p> <ul style="list-style-type: none"> ● With regard to the use of copyrighted works, portraits and voices, etc., clarifying the basic concepts, matters to be noted, procedures required for licensing, measures to be taken in the event that infringement of rights is confirmed, etc., in the terms of use and community guidelines, etc. ● Taking prompt measures in accordance with the terms of use and community guidelines in the event that a situation that may constitute defamation or infringement of rights is confirmed.
	<p><u>Consideration for the privacy of individuals nearby not using the service</u></p>	<p><u>Considering that users may share physical space with individuals nearby not using the service while using the metaverse service, metaverse-related service providers are expected to alert users that when taking photos or collecting data during service use, they must consider the privacy not only of other users of the same service but also of individuals outside the service.</u></p>

<The Principles for Improving Trustworthiness of the Metaverse>

Items	Content	Explanation
Security	Ensuring security of metaverse systems (measures against unauthorized access from outside, etc.)	<p>Based on the need to appropriately protect information, etc. pertaining to users, metaverse-related service providers are expected to take necessary measures to ensure the security of metaverse systems, including measures against unauthorized access from outside. For example, in accordance with the characteristics of the provided metaverse services, the following measures could be considered:</p> <ul style="list-style-type: none"> ● Considering introducing and strengthening necessary measures, including identity verification systems at the time of registration. ● Considering introducing and strengthening authentication systems at the time of login. ● Establishing systems to respond to security risks. ● Establishing an information security policy.
	Preventing spoofing when using the metaverse	<p>Metaverse-related service providers are expected to consider and introduce necessary measures to prevent users from being disadvantaged by spoofing, etc. For example, the following measures could be considered:</p> <ul style="list-style-type: none"> ● With regard to imitating avatars, etc., clarifying the concept of elements that may be subject to imitation, such as appearances and voices, etc., in their terms of use and community guidelines, etc. ● When spoofing is recognized, taking appropriate measures to prevent the spread of damage, such as promptly suspending the fake account.