Goal1 Realization of a society in which human beings can be free from limitations of body, brain, space, and time by 2050.

The Realization of an Avatar-Symbiotic Society where Everyone can Perform Active Roles without Constraint

Here begins our new MIRAI

MOONSHOT RESEARCH & DEVELOPMENT PROGRAM

R&D Theme

Avatar Social Ethics Design

Progress until FY2022

1. Outline of the project

This research addresses the ethical and legal issues in the use of Cybernetic Avatars (CA) and the realization of moral computing. The social ethics research examines the social, ethical, and even psychological effects that could occur if CA is widely used in the society. The legal research discusses certification systems for avatars, privacy issues, and legal issues in social implementation of avatars. In the engineering approach, we conducted research and development of moral computing. In addition, the Avatar Symbiosis Social Ethics Consortium (Figure 1) is developing guidelines for CA social implementation.

2. Outcome so far

①Avatar Social Implementation Guidelines (Draft)

The members of Symbiotic Social Ethics Consortium have been discussing the issues to be considered in implementing avatars in a society in terms of legal, ethical, and technical perspectives. Based on the discussion, we proposed the Avatar Social
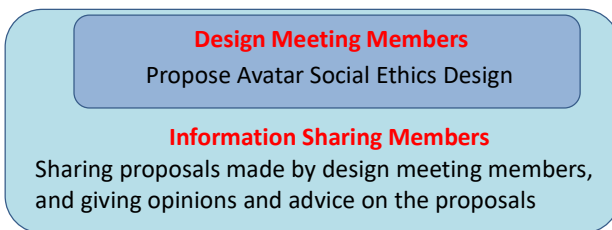
Design Meeting Members
Propose Avatar Social Ethics Design

Information Sharing Members
Sharing proposals made by design meeting members, and giving opinions and advice on the proposals

Figure 1: Avatar Symbiotic Social Ethics Consortium

Implementation Guidelines.

◆Aiming to enhance social wellbeing, we need to overcome issues for disseminating new technologies into a society, while considering the issues of concern and trust (legal and ethical issues, etc.) regarding new technologies.

◆[Consideration] Consideration to issues related to concern and trust in CA development.

– Consideration for operators

– Consideration for users

◆[Dissemination] What should be aimed at in disseminating CA to society.

– Give everyone an opportunity to use CA.

– Improve service quality and productivity using CA.

– Contribute to realizing a sustainable society using CA.

②Activities of the Avatar Symbiotic Social Ethics Consortium We have organized three consortium symposia, three international workshops, four experience-based workshops, and monthly design meetings to discuss the ethical design of avatar society with experts in a wide range of fields (law, ethics, engineering, education, SF writer, etc.).

③In moral computing research, we proposed an operator support system that makes the operator aware of unintentional avatar mis-operation. We also developed a technique that converts operator's inappropriate speech into polite one (Figure 2).

④In social ethics research, we conducted an impression survey of avatar technology and collected opinions of the public for their expectations and concerns about avatars.

⑤We discussed legal issues for 1) identity theft of avatars from

Figure 2: Moral computing system

the perspective of privacy protection, and avatar misuse in a virtual space, 2) institutional issues for avatar certification. and 3) social implementation of avatars that enable interactive discussions by a larger number of people.

3. Future plans

– We will improve and disseminate the Avatar Social Implementation Guidelines by continuing discussions with a wide range of people.

– We will clarify social ethical, legal, and psychological issues through experimental studies.

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