2023 年度年次報告書社会変革に向けた ICT 基盤強化2022 年度採択研究代表者

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通信センシング統合による知的なネットワーク管理

## 研究成果の概要

In this year, the quantum technology was studied to facilitate the network management development. A quantum-inspired control method was proposed. The purpose of the model is to increase the bitrate and decrease the rebuffering events to improve the quality of experience (QoE). During developing the control model, different factors which influence the QoE are considered. The evaluation of the developed method was conducted by using simulation with traces obtained in real world under different scenarios. Furthermore, the comparison with other methods was conducted. The experiment results demonstrated that the proposed method outperformed other conventional adaptive bitrate control methods, showing the efficacy of the proposed method. Besides, due to the increasing demand for low-latency live streaming, the video streaming latency was evaluated using a low-latency protocol. The video streaming experiment was conducted by using WiFi and Beyond 5G testbed. Both the end-to-end latency and round-trip time were measured for comparison.

The results have been published in IEEE Journal and domestic conference.