

Title	非常時に対応可能なプライバシーポリシーマネジメント・認可基盤に関する研究
Author(s)	草野, 清重
Citation	
Issue Date	2024-03
Type	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/18880
Rights	
Description	Supervisor: 丹 康雄, 先端科学技術研究科, 修士(情報科学)

Abstract

Currently, smart sensor data is collected by each smart sensor manufacturer and data is shared with third parties according to their privacy policy. Each manufacturer is working on their own data access authorization, and privacy policy consent is obtained from users via apps or the web. However, it is necessary to frequently confirm with users when updating policies or using new devices, and privacy policy managers (PPM) are being studied as a countermeasure.

Conventional authorization infrastructures have been created for data utilization and obtaining privacy policy consent information during normal times. However, it is necessary to provide quick and flexible data access authorization considering individual privacy policy not only in normal times but also in emergency situations.

This paper proposes a privacy policy management and authorization infrastructure that can respond to emergencies by utilizing alert levels and privacy policies, based on the Multimode Kominkan Operating System (MKOS), a building operating system that operates within a community center, targeting community centers that must respond to both normal and emergency situations.

For the sensor data, building and ledger data collected in MKOS, there is the issue of identifying the situation in order to utilize the data not only in normal times but also in emergency situations. In addition, there is the issue of using data in accordance with the user's intention for personal information and privacy information.

For the issue of determining the situation in order to utilize the data not only in normal times but also in emergency situations, we proposed the use of warning levels, which are disaster prevention information issued by each municipality in emergency situations. This makes it possible to make a comprehensive judgment of the emergency situation from the viewpoint of the necessity of evacuation for each region. In addition, by not using information issued for each disaster, such as earthquakes and tsunamis, it is possible to reduce the number of times users need to configure policies.

To address the issue of using personal and privacy information in accordance with users' intentions, we proposed to set a consent information policy for each user in the policy management module for normal and emergency situations within MKOS. This would make it possible to specify the services to which data is to be passed, and to specify data sharing according to normal and emergency situations using alert levels.

This makes it possible to use the sensor data in the community center and the data in the building and ledger according to the user's intentions in normal and emergency situations. In addition, applications and services will be able to flexibly acquire data that could not be acquired in the past, depending on the disaster situation, thereby expanding the range of data utilization in times of disaster.