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Master's Thesis

Academic Year 2015

Autonomous Cooperation of Social Things

Graduate School of Media Design,
Keio University

Miyo Okada

A Master's Thesis
submitted to Graduate School of Media Design, Keio University
in partial fulfillment of the requirements for the degree of
MASTER of Media Design

Miyo Okada

Thesis Committee:

Professor Masa Inakage	(Supervisor)
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Abstract of Master's Thesis of Academic Year 2015

Autonomous Cooperation of Social Things

Category: Science / Engineering

Summary

IoT has been brought as a keyword of the next paradigm shift recently. Its technology is expected to connect various things through the network to work collaboratively, and obtain services that across various industries. However, most of current IoT products or services such as mentioned earlier are designed to display the information on cell phones or closer to users and wait for interactions from them instead of getting a job done. Therefore, enabling of autonomous interactions by networked things is a crucial challenge in this paradigm shift. This research aims at achieving autonomous cooperation of networked things based on the concept "Social Thing" which things automatically build network and cooperate with each other.

This study proposes a system that achieves autonomous cooperation of Social Things by providing them with preset conditional statements, combinations of triggers and action, which are triggered based on information transfer via inter-thing communication. On this system, Social Things shall autonomously exchange information about each other and take action by using those information to execute functions. The system has an advantage in which enables to code cooperative functions of Social Things with comparative ease. The biggest contribution is achieving cooperation between mascots and a bench on the system. That represents cooperation among private and public things.

Keywords:

Internet of Things, Social Things, P2P, Cooperation System, Things' Autonomy

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