Health Information Feedback by Push Type Digital Signage

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Outline

- Background and purpose
- Framework of health information system
- Push type digital signage
- Prototype system
- Conclusions
Background

■ Aging Society
- Elderly population is increasing based on increase of life expectancy.
- Healthy life expectancy is not necessarily increasing.
- Prevention of lifestyle-related diseases (brain stroke, heart disease, high blood pressure, etc.) is necessary.

■ Problem
- Improvement of health consciousness in daily life is very important.
- It is difficult for us to continue healthy actions.
Purpose of This Study

■ Purpose
- Development of framework to maintain health consciousness by IT technology
- **Push type digital signage** that displays personalized health information

■ Push type digital signage
- Detects user who is walking in front of the digital signage, and displays **personalized information**.
- Even if user does not do anything of his own accord, personalized health information is displayed.
NICT Project

“Improvement of Health Literacy by Health Information Feedback based on Life Log Data Analysis”
- Activity monitor data, body composition monitor data, and blood pressure monitor data are collected automatically.

Health Log Collection System

- Activity monitor data, body composition monitor data, and blood pressure monitor data are collected automatically.
- Collected health data is analyzed using visual analytics tool and health information database is constructed.

Health Data Analysis System

Health log collection system

Health data analysis system

Health log data

Visual analytics tool

Big data analysis

Health information feedback system

Health information database
- Push type digital signage provides personalized health information.
- Health information can be shared among community.
- Information is provided using the gamification technology.
Identification of User

- Identifying the smartphone of the user to identify the user
- Detecting MAC address of the smartphone to identify the smartphone

Process
- Smartphone searches for access point
- Smartphone sends MAC address to wireless router
- MAC address can be detected
- Owner of the smartphone can be identified
Wi-Fi Router

- Router was wrapped by one aluminum foil, so that the user does not pass through the digital signage during the polling interval.
- Connection distance became closer when user walked faster.
- User can be identified at appropriate position.
- Graphic visualization, ranking, message, bits of knowledge
- Motivation for healthy life would be improved based on the effect of gamification
Prototype System

- System configuration of push type digital signage

![Diagram of system configuration]

- 42-inch monitor
- PC
- WiFi router
- health information database
- activity log DB
- device DB
- message DB
- user group DB
- bits of knowledge DB
- DB server
- Internet

iPhone
Demonstration
Conclusions

- Framework of health information system that improves health consciousness was proposed.

- Health information feedback system using push type digital signage was developed.

- In future work, health log collection system, health data analysis system, and health information feedback system will be integrated.