No Missing Child

Auto mailing system for QRcode-nametag

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Abstract—**While making QRcode-nametag for children project going, we realize it can be exposed abusing. As a solution to this, we want to develop a program that automatically notifies every time anyone accesses the code. Through this small program, you will be able to quickly track your child's location by not only access log, but also graphically conveying the geographic information and access time associated with Google Maps.**

Keywords—QRcode, Geocoding, Weblogging, Node.js

Roles	Name	Task
All	Junghwan Seo	All

I. INTRODUCTION

As we enter the modern world, urban spaces are becoming more complex and larger. Now, even if you live next door, raising children in a society that doesn't even know your face or name is always a continuation of worry. Preschoolers enjoy running around and enjoying out of reach of their parents, but they can't memorize complex phone numbers, and even hard to say even in a situation where their parents are lost. The crowded downtown, vacation beaches, amusement parks, etc. are frequently used to find children. So I'm involved in a project to develop a silicone cable tie engraved with a QR code that kids can easily wear. However, if anyone easily tags and finds out the child's personal information, it may be a target of crime or personal information is easily exposed. Even so, if you are concerned about this and make it difficult to access, it may interfere with the purpose of the product. Therefore, the method is the development of a program that allows someone to tag your child's QR code to access personal information by sending an SMS or e-mail containing the visitor's log record and the geographic information of the current access point to the guardian in real time. This has two advantages. The first is to prevent the abuse of personal information by keeping the information of the person who tagged it. . It will be widely accepted not only for children but also for pets and elderly people with dementia.

II. REQUIREMENT

A. Homepage

The homepage to be accessed through the QR code should be made in a size that does not require scrolling the screen so that the information can be easily identified.

B. Database of User Information

personal information is made into a database upon registration. However, the information you want to expose can be chosen by the individual.

C. Log information of homepage

Extract the IP and time log of the visitor in string form

D. Change IP to Geographic Information

display extracted log records on the map

E. Mailing

Send log records and geographic information by mail and messages.

III. DEVELOPMENT ENVIRONMENT

A. Choice of software development platform

A.1.Operating System
Mint tara mate 64bit(linux) with VM workstation

A.2.Language
HTML, JAVA script

B. Software in Use

B.1.Eclipse
for using JAVA
B.2.Apache Log4j 2
is open source program for weblogging
B.3.Google Geocoding API
is program for changing IP into map pin for visualize IP
B.4.MySQL
for making Database
B.5.Node.js
for mailing with Gmail
B.6.KakaoTalk Link SDK
For sending message

IV. SPECIFICATIONS

A. Making homepage

If someone tag a QR code, they will be taken to user's homepage via a hyperlink. The home page displays the information you want to expose. You choose the information user want when they first create your homepage, and they can change the exposure level whenever they want.

B. Database

Databases created with MySQL work with the homepage using JDBC

C. Weblogging

Log4j extract the log with string form. Whenever someone access the homepage the time and the IP address of accessor are extracted.

D. Geocoding

The extracted log is displayed on the map through Google Geocoding API.

E. Sending Messages and Mails

Using Node.js nodemailer module, sending E-mail contains time of access and geographic information we already gain. At the same time using KakaoLink, sending same message for mobile.