A Realtime Lifelogging Solution for iOS Devices
Gathered automatically from iPhone

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Lifelogging on an iOS device. To gather a whole day archive with a minimum overhead
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Prior lifelogging work was done using specially developed devices such as the Microsoft Sensecam / Vicon Revue or using specially developed Android Phone apps, such as SenseSeer from DCU, FUNF from MIT or Deja-view from Univ. Southampton. In this work, we have developed a first prototype lifelogging tool for use with Apple iOS enabled devices. This tool gathers data using onboard sensors in a non-intrusive manner and sends the sampled life-activities to a server for storage and interaction using a WWW interface.

Activity Detection

Activity (or event) detection is a key organisational strategy for lifelogs. It allows the organisation of all-day life activities into a managable list of about 20 events daily. To achieve activity detection and appropriate representation, the following data is recorded: Location data (latitude, longitude, altitude, semantic location), motion data (accelerometer, gravity, xyz-axis) and photos captured automatically every thirty seconds. Changes in the data over
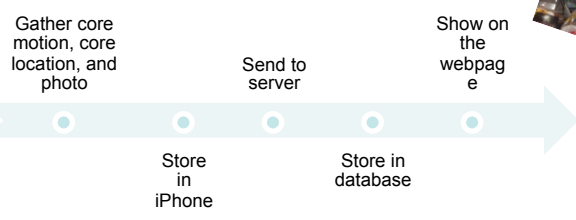
Web User Interface

We implemented a timeline web user interface to show activies in dereasing order of time. Each activity is represented as a web page widget showing the photography along with the associated metadata. This can then be examined in detail by clicking on the activity. Some example screens are shown below.

A morning at home

In the office, after coffee

The Lifelogging Process

Gather core motion, core location, and photo

Send to server

Show on the webpage

Store in iPhone

Store in database

The Lifelogging Architecture

The lifelogging tool is configured to run at phone startup and quietly gathers user activity every second. Typically the phone will be worn on a lanyard around the neck and therefore is orientated towards the makority of the activities the user is engaged in. This application can run for six hours under the least brightness on a normal iPhone. The application periodically uploads to a server when in the presence of a known wireless network and the server indexes the data for presentation via the WWW interface.

Daily activities

Mobile Phone

Cloud-based WWW service

Access Devices

Sample every 1-30 seconds

Fields of Use

Digital Lifelogging has numerous fields of use, from the quantified self, through to extreme lifelogging as practiced by researchers such as Steve Mann. For this work, we can identify many use cases, including:

• A lifestyle analysis tool that will automatically gather a record of physical exercise and activities for reasons such as healthcare or assisted-care giving.

• A digital memory (with visual cues) for memory impaired individuals.

• A tool for gathering life experience for the reason of reminissance support or life-experience sharing.

In additon to the WWW interface, there is a mobile phone interface that gives real-time feedback on the data being sensed.

MORE INFORMATION

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