


Final Report on a Life Style Design for the Ubiquitous Information Society .



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Yaoyorozu Project and LD

Inter-disciplinary Research Project

Ministry of Education, Culture, Sports, Science and
Technology of Japan

Sociological Issues

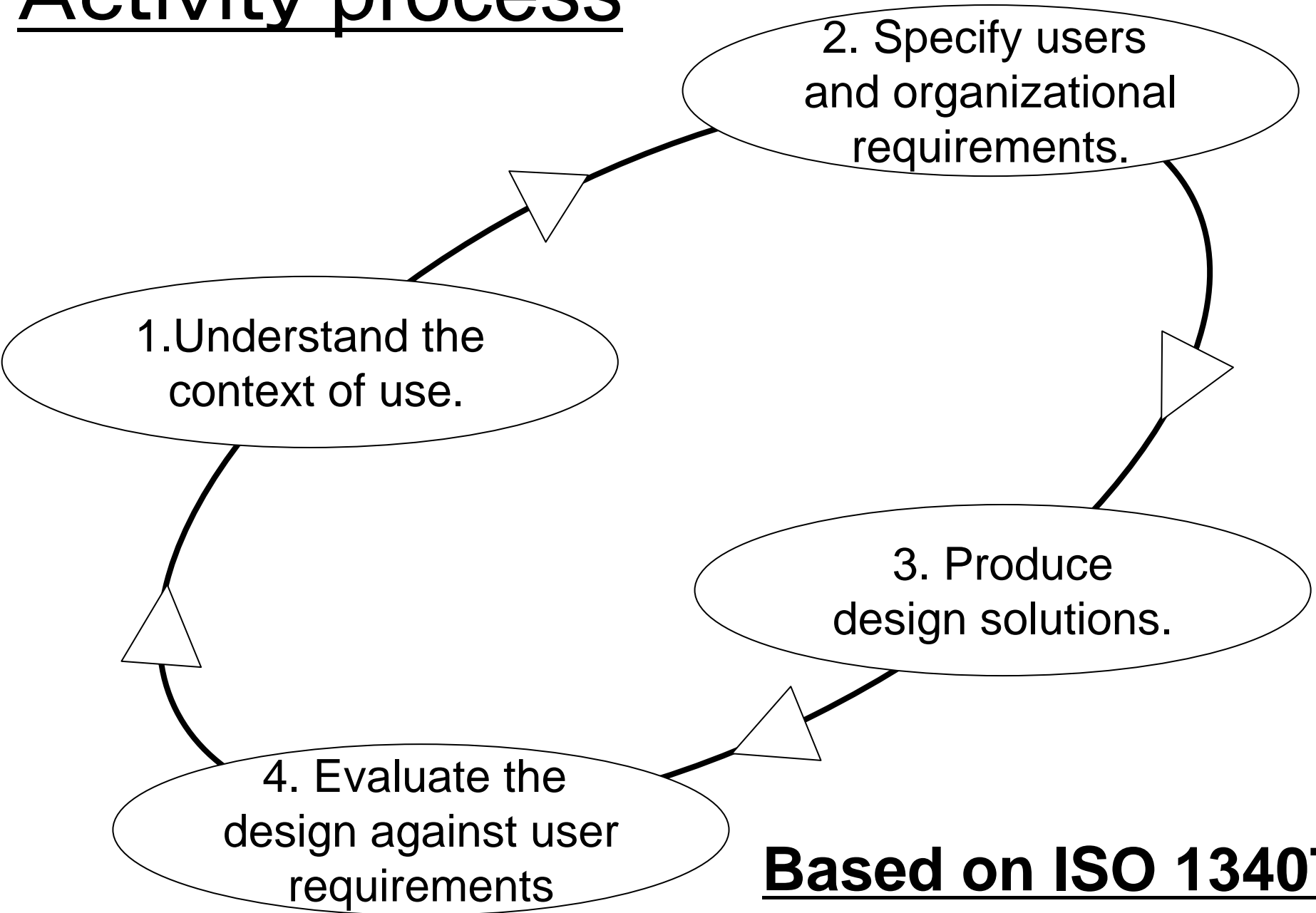
Legal Issues

Desired Ubiquitous
Information Society

Integration

Technological Issues

Activity process



Based on ISO 13407

Activity process

1. Understand the context of use.

2. Specify users and organizational requirements.

Interviewing local governments and citizens to understand G2C or C2C and decision making processes.

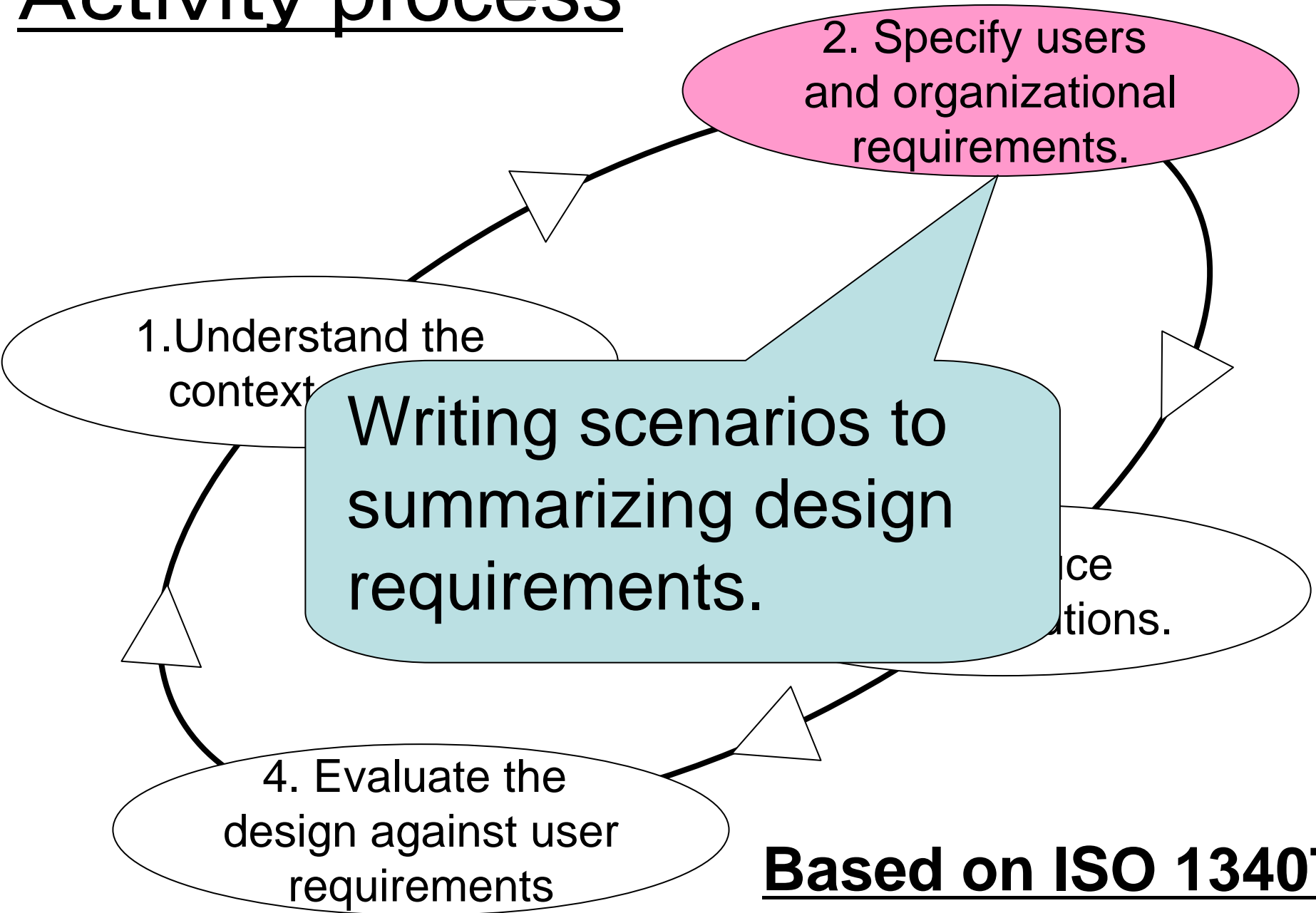
requirements

Based on ISO 13407

Interviews

- Local governments
 - Hamamatsu city government
 - Sapporo city government
 - Mie prefectural government
 - Chiba prefectural government
- Citizens
 - Beppu city
 - Yufuin-cho

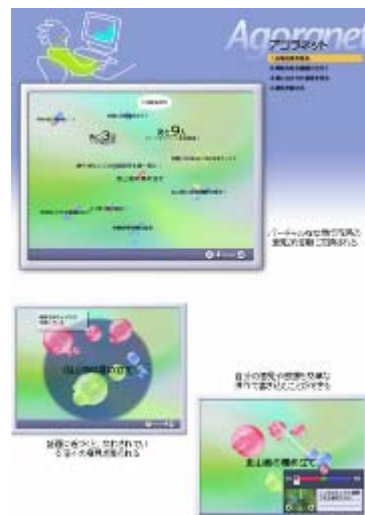
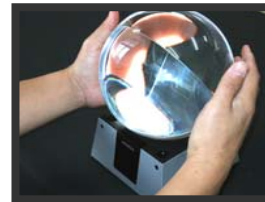
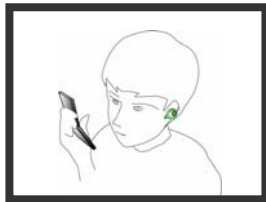
Activity process



Based on ISO 13407

Design Image

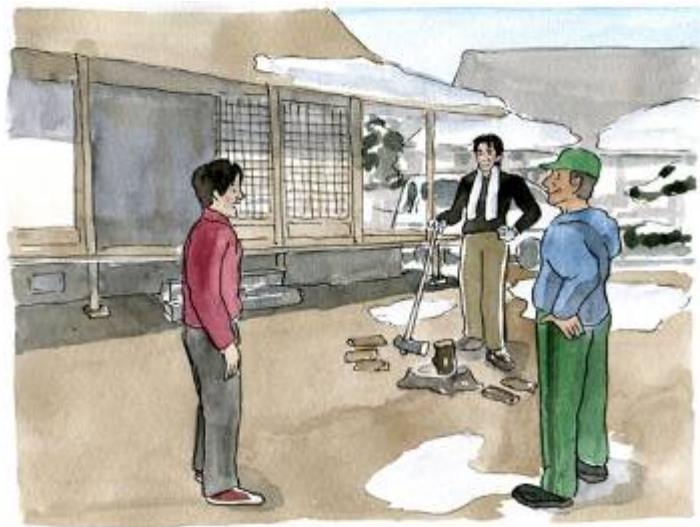
- Designed by Design Division, Hitachi, Ltd.



Near-future Scenario

- **Micro scenario (over 200)**
- **Future prospects based on technological trend analysis :pre-QFD(Quality Function Deployment) (by Kurosu).**
- **Slow life in ubiquitous information society (by Sekine): Depicting desirable ubiquitous information society in a rural area in 2010.**
- **Incorporating technologies and services that are proposed in workshops into a scenario.**
- **Using scenario to gathering opinions form other WG.**

Illustrations (From macro scenario)



Activity process

Designing the “koko-memo” system.

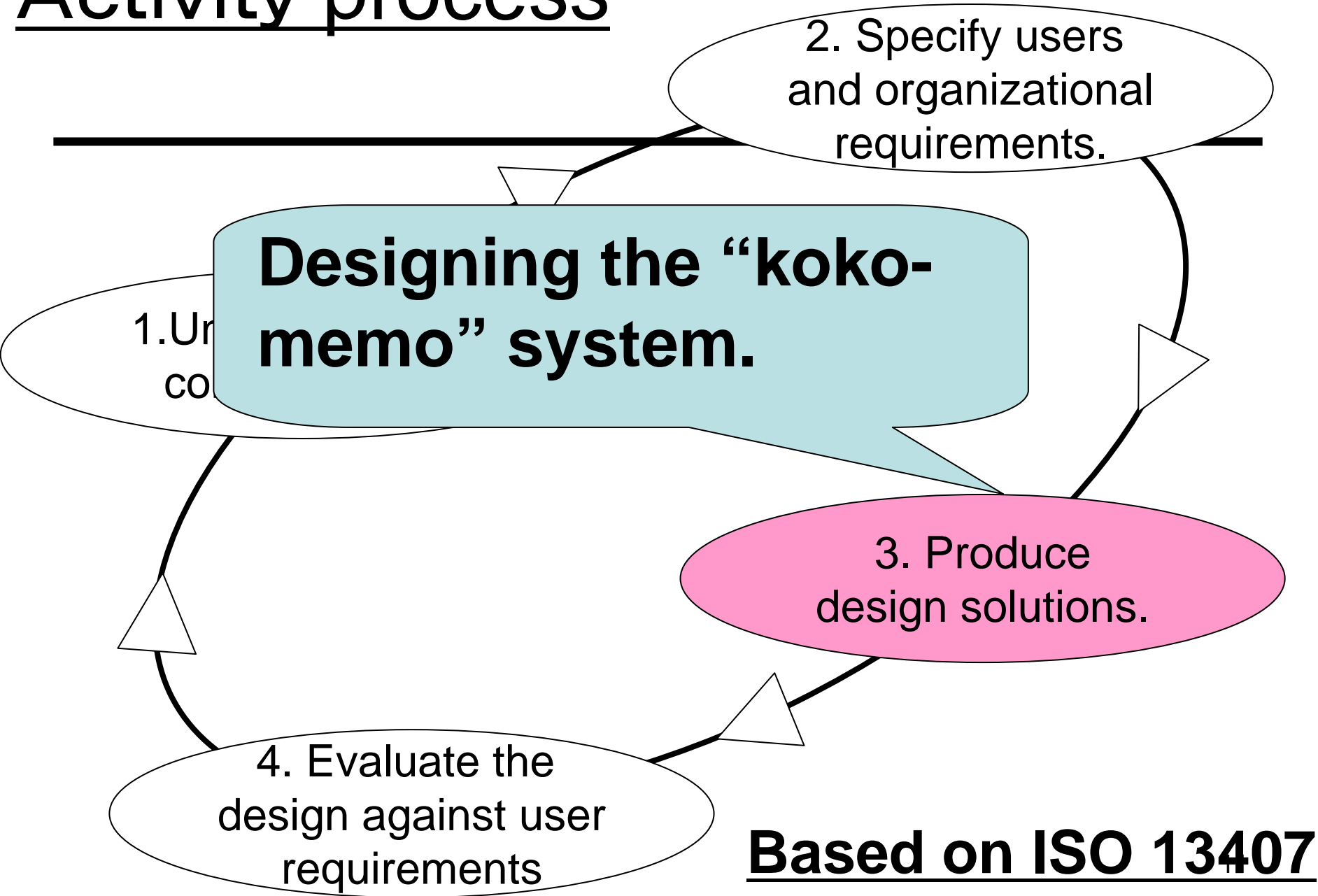
1. Ur
co

2. Specify users
and organizational
requirements.

3. Produce
design solutions.

4. Evaluate the
design against user
requirements

Based on ISO 13407



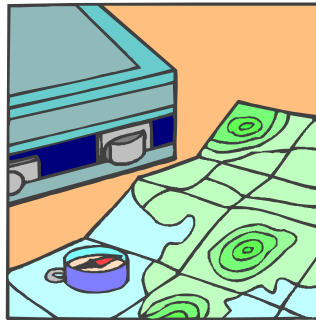
Information Shared in Communities

Image



+

Location



+

Comments

Please fix
the mirror
here.



**City Hall
or
Other citizen**

Ex. Findings in a local
community

- Broken Mirror
- Illegal waste disposal, etc.



Requirements

Information to be exchanged:

Image, text, location

Users: **Wide range of users**

(elderly citizens, people with disabilities,
children and so on.)

System requirements:

Portable and easy to use.

Koko-memo



2.2 inch liquid crystal display

Camera

Position of the mobile phone is located by Global Positioning System (GPS).

Commercially available mobile phone

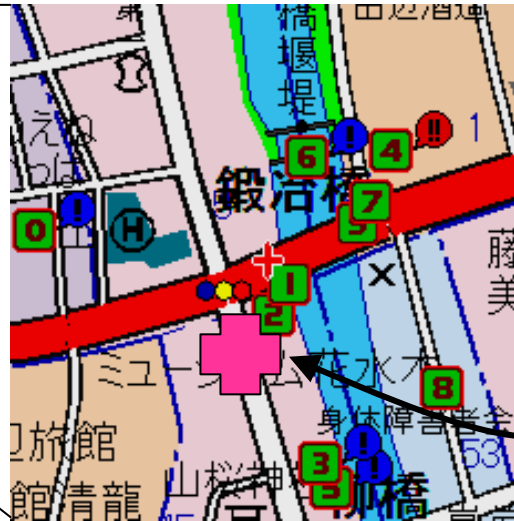
Portable : 5.3 oz

2inch x 4inch x 1inch

Easy to locate

Koko-memo

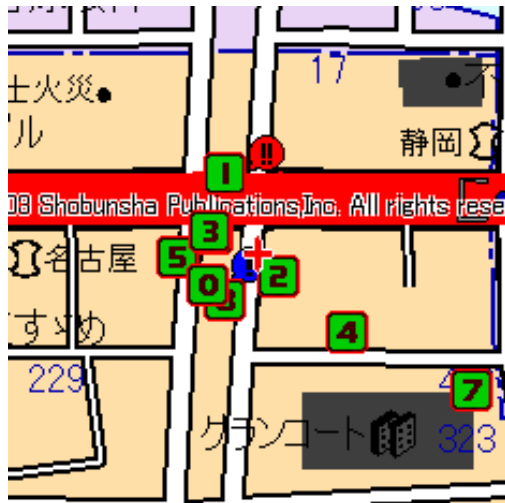
Global Positioning System detects user's location.



Information around the current location is displayed.

Example for Easy to Locate

Map



Annotation with image and text



- 9 annotations found
- 0: Elevator is broken.
- 1: Lots of stairs.
- 2: Restroom

■ Very clean and nice.
Fathers can change
diapers.

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Easy to inform and update

Koko-memo
server



e-mail

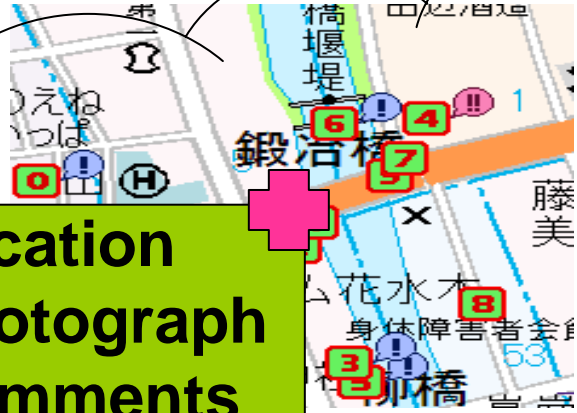


Interface: standard e-mail interface

- Sending e-mail with location information, photograph, and comments from a mobile phone.

Easy to inform and update

Koko-memo
server



- Location
- Photograph
- Comments

Server updates a map.

Easy to inform and update

Koko-memo
server

Accessing the server



Updated map is displayed.

Sharing Information



Information recipients

Koko-memo server

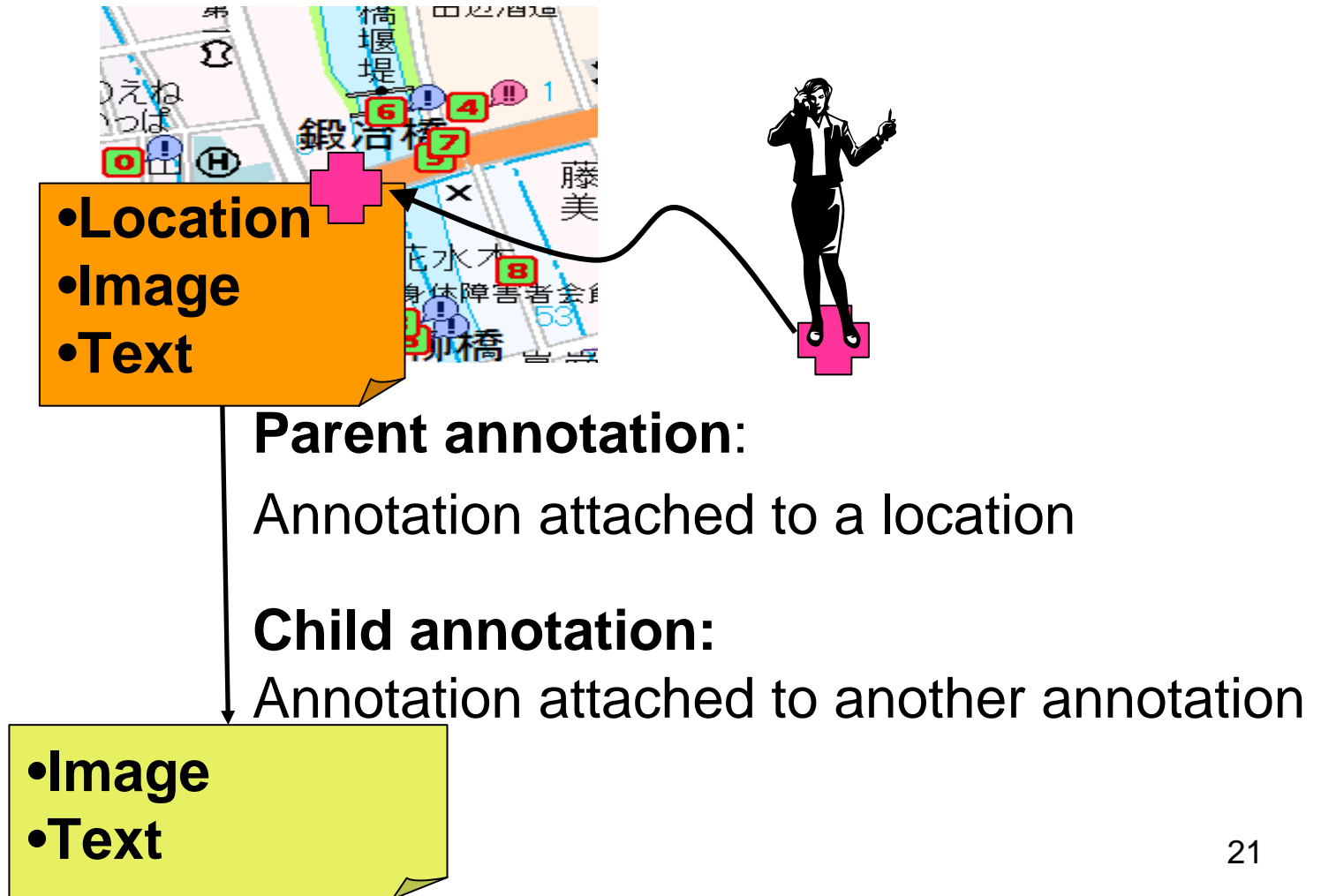


Informant

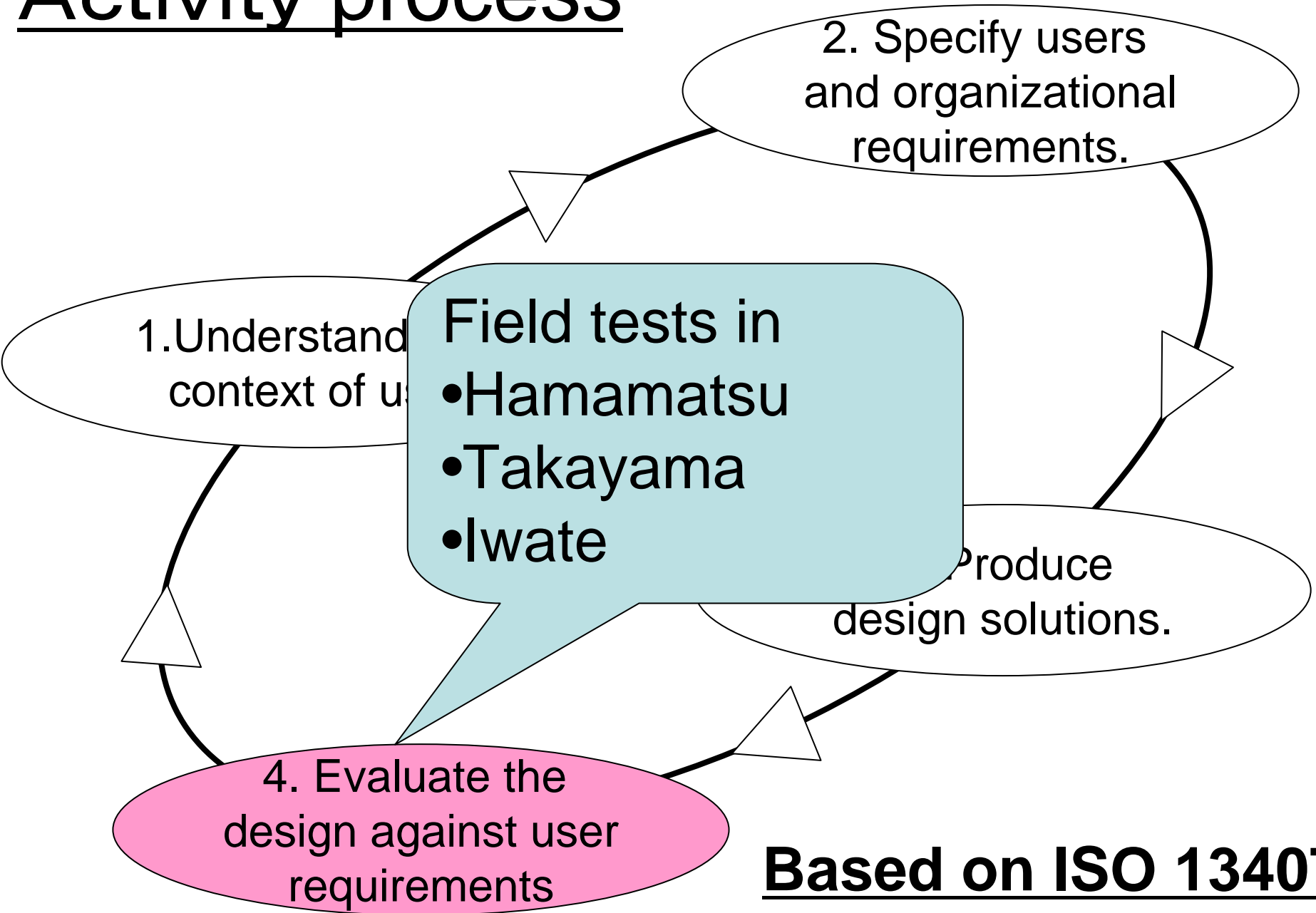


- Residents
- Professionals, etc.

Linked annotations



Activity process



Based on ISO 13407

Experiments

Senior citizens, children, people with disabilities used the system to share information in communities.


Age: 10s to 50s

Number of participants: 28

(2 wheelchair users, 1 hearing impaired)

Task: exchanging information of local areas

Example of result



■ 10 annotations


- (1) Universal bathroom
- (2) Slope to a rooftop park→Children
- (3) Place to take a rest
- (4) Dangerous place !



■ Parent annotation
 Title: Slope to a rooftop park
 Date: 2004/11/22(Mon)13:15

The slope is hard to clime with a wheel chair. 🤢

Parent



■ Parent annotation
 Title: Slope to a park
 Date: 2004/11/22(Mon)13:15

Child: 1
 The slope is hard to clime with a wheel chair. 🤢

■ Child annotation
 Concerts are often held here.

Child1



■ Child annotation
 Title: At the park
 Date: 2004/11/22(Mon)13:15

The park has dangerous stairs.

Child2 24

Results

- Participants could provide information on the spot in real-time.
 - Portable device, GPS, and image enabled creation of on-the-spot information.
- Information from members of the community was shared and respected.
 - Linked annotations allowed to share different opinions.
 - Image allowed users share specific topics.

Conclusion

- Proposed systems using the macro scenario.
- Designed, developed, and evaluated one of the proposed systems.
- From the interviews, we found that many people have problems in understanding.
- Developing and evaluating a Koko-memo prototype system.
- Activities to incorporate public opinions will become important in the coming aging society.
- To reflect public opinions in researches and developments, collaboration between researchers in humanity field.

Acknowledgement

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<http://www.8mg.jp/en/index.html>