“UBWALL”, ubiquitous wall changes an ordinary wall into the smart ambience

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Paradigm shift in computing

"Ubiquitous Computing"
Ownership of Computing ➔ Situated Utilization

Enjoy computing power even though you have no device.

Mobile devices
You bring your own devices, and use them intentionally

Ubiquitous devices
Use devices on demand
- Mobile devices
- Settled devices
- Wearable devices
- Embedded devices
- Embedded sensors

Paradigm shift in Display

- Change of IT usage situation
  - Ubiquitous device in the future
  - Use device on demand, on site
  - Printed matter (Poster, Advertisement, or Directory info.) will be provided with a large display

- Large display
  - "Watch" expand to "Interaction"
  - "Personal use" expand to "Plural and simultaneous"
  - Change of setting location

Usage expansion of Large Display / One way info. service ➔ Interaction

Various scenery using mobile device
Cellular PDA Mobile

Expansion of usage
**Smart Ambience**

“Smart Ambience” is the system which Intelligent function is installed in environment

System detect a person and provide optimal service

AGENT

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**UBWALL (PDP model)**

- Motion Sensor
- PDP with touch sensor
- RFID R/W (R series)
- PC with W-LAN
UBWALL Demo

Demonstration with VTR

UBWALL (projector model)

“UBWALL” projector model is easily installed in a wall.

- Motion Sensor
- Screen (Projector)
- RFID R/W (8 series)
- PC with W-LAN
Interaction rule example

Scenario
Scenario consist of a series of interaction rules.

Action part
When upper condition is satisfied, this action is activated.

Condition part
When a user touches UBWALL, next action is activated.

Scenario in Airport

Flight information service
- Personal service and public service
- Simultaneous information providing

« Boarding pass with IC chip is the key »
(1) In the departure floor, there are so many people and many flight information are displayed.
(2) Personal customer might be want to know his/her own information at first.
(3) When the boarding pass get closer to UBWALL RFID reader, ID is detected and flight information is displayed.
(4) But information about privacy matter is inhibited, only the person who touched UBWALL can know adequate info.
Directory service in Airport

Native Language  
Simultaneous

Shopping scenario

Shopping service with UBWALL
- Promotion
- Awareness
- CRM service
- Guide people into the shop

« Offer sample music in the CD shop »
- UBWALL shows music titles now on sales for promotion
- Customers find it and get interested
- Sample music items are listed on their mobile device and can make selection
- The music is transmitted to the mobile device wirelessly and then it plays
- Download and buy favorite music online with the mobile device
- Multiple plays and downloads are permitted
Discussions

- Service Value Test
- User Interface Test
- RFID Usability Test

Service Value Test

- Appropriate for directory services, promotion services

Demonstration

Main Entrance

Information Service Area
User Interface Test

- People want to touch display, but...
  - General Information is enough for almost all the people and those people satisfy only touch and look at the general information.
  - In order to make them use RFID cards, we need to offer extra service like delivering a discount ticket.

RFID Usability Test

- With easy Interface, get users’ real taste
- How to deliver cards
Customers’ Opinion

- Privacy issue is clear?
- W-LAN device become popular?
- RFID cards become popular?

UBWALL for future

- Expand it to interactive service tool with intelligence

Directory services

Electronic Poster

Field Promotion

Pillar Poster

Public Space