

Press Release

December 4, 2006

T-Engine Forum
Ubiquitous ID Center

Advancing Practical Application of ucodes/uID Architecture

T-Engine Forum/Ubiquitous ID Center (Shinagawa Ward, Tokyo, Chair: Ken Sakamura, Professor at the University of Tokyo) has been promoting the research and development activities for ubiquitous ID technology, that automatically identifies ucodes that are assigned to physical objects and locations and provides services using the information associated with those physical objects and locations, towards realization of a ubiquitous computing society.

In FY2006, T-Engine Forum/Ubiquitous ID Center launched the core systems for the practical application of ucodes and uID architecture such as the system to distribute ucodes to the members of Ubiquitous ID Center and the ucode provider system which operates the ucode redistribution business. Based on these systems, ucodes and uID architecture are being practically applied to the user service of private companies and public agencies. The following are the major application case studies launched in FY2006 and certain businesses to be released for the first time at this TRONSHOW 2007;

Notes

1. “Inventory Control through ucodes” for business applications (Nihon Unisys, Ltd.)

Nihon Unisys, Ltd. and UNIADDEX Ltd., a part of Nihon Unisys Group, will exhibit “Inventory Control through ucodes” at TRONSHOW 2007 for its early business adoption. Ucodes embedded in RFID will enable you to control inventory of IT devices and supplies faster and more accurately. Nihon Unisys Group will promote the early commercialization of “inventory control through ucodes”. Moreover, we will examine the possible commercialization of “individual item identification control through ucodes” in combination with various solutions.

2. Practical introduction of Active IC tag, Flashing Dice application System “Flashing Tag” at the Medical Distribution Center (Toho Pharmaceutical Co., Ltd. and YRP Ubiquitous Networking Laboratory)

In November 2006, the major medical wholesaler Toho Pharmaceutical Co., Ltd. and YRP Ubiquitous Networking Laboratory (hereinafter referred to as “YRP UNL”) jointly developed the “Flashing Tag” system to support the picking operation including the flashing IC tag for distribution business utilizing active tags, IC tag control base station and tag ID information control server, and introduced it to the new distribution center “TBC Tokyo”, which was opened in November 2006 to be the core distribution center in Kanto area and launched the full-scale operation.

**3. Successful development of the world’s first “Talking Concrete”
—Utilizing ubiquitous computing technology for
enhancing the reliability of buildings and structures—
(Sumitomo Osaka Cement Co., Ltd. and YRP UNL)**

“Cyber Concrete” controlled with ucode tags will establish the traceability of test specimen conventionally controlled manually by people and aims for enhancement of efficiency and accuracy of tests. Moreover, by utilizing this “Talking Concrete” technology, we will build a “concrete product traceability system” with which the buyer of the concrete products can check the data specific to each product including the quality, production method and date of manufacture. In addition to this, ucode tags which are attached to panel-shaped Cyber concrete “ICT Concrete Panel” used for buildings and apartments will expand the management information such as “design” and “construction method” of buildings into a system which can offer the information of residences and buildings the ordinary users want to acquire promptly. Such a system will promote information disclosure and evolve into “Building Traceability System” which will enhance the reliability of buildings.

**4. Realizing common platform of multiple organization using ucodes
”Traceability management system of housing components” (The Center for Better Living)**

When each house manufacturer develops a proprietary traceability management system of housing components, respective housing managers cannot work with them because residences are built as an aggregate of a great number of parts and building materials. On the contrary, if each developer and housing manager develops proprietary management system, the manufacturers cannot work with them. Utilizing the third-party position, The Center for Better Living has decided to build the “Traceability Management System of Housing Components”, which is the common platform of many manufacturers and housing managers using ucodes which can embed with various code systems. The server maintained by The Center for Better Living manages the housing components the ucode tags attached to them, and associated data. The information on the housing components corresponding to the ucodes is about installation such as “when”, “where” and “by whom” those housing components were installed. Here, we would like to introduce the outline and plans for our first effort, a system for a residential fire warning system.

5. Information distribution using automatic vending machines (qubit co., Inc.)

qubit co., Inc. installs the information plate incorporating contactless IC chip and QR codes in the front panel of the automatic vending machines of TOKYO COCA-COLA VOTTLING Co., LTD. in Shinjuku-ku, Tokyo to test the distribution of a variety of information including shopping tips. This enables users to obtain information on disasters in the surrounding area (guidance to the shelters), maps, gourmet foods, events, games,

transportation, lodging and public information easily with their mobile phones or mobile terminals from where the automatic vending machines are installed. We are also making efforts for the dissemination of the codes by setting the individual identifier, ucodes to determine the current location in the IC chip of these information plates.

6. Conference Support System which Enables easy operation of information and equipment with ID “Conference@ID (Conference Aid)” (NTT, University of Tokyo)

NIPPON TELEGRAPH AND TELEPHONE CORPORATION (hereinafter called “NTT”) and the University of Tokyo have developed the conference support system “Conference@ID”, which enables easy operation of the information and the equipment on the network using a remote controlling terminal (hereinafter called “Remo-con Terminal”). In addition to securely relating the real equipment to the information on the network, this system enables easy and safe use by adopting a remote-controlled operation model, which is the same in its basic functions as equipment such as video recorders. Also, NTT and the University of Tokyo aim for the further enhancement of usability by relating the information and the equipment with ucodes and promote joint research and development for the creation of new services in the network society.

7. “Well.com” Project : Collection control and visitors service using ucodes (The National Museum of Western Art, University of Tokyo)

Professor. Ken Sakamura’s laboratory of the Graduate School of Interdisciplinary Information Studies, the University of Tokyo and the National Museum of Western Art have launched the joint project “Well.com Art Museum” to establish a ubiquitous museum using ucodes. At this ubiquitous museum, each exhibited or collected work piece has a unique ucode number attached to it, to control the collections efficiently and to provide the service to offer information on the exhibits to the visitors.

8. World’s first ubiquitous roof-top garden (Isetan Shinjuku Store)

On June 6, 2006, the roof-top garden “I-Garden” was opened at Isetan Department Store in Shinjuku. Not only for the greening of the roof-top but also for establishing a “Roof-top garden where you can learn”, they installed information plates embedded with ucodes tags in several dozen places to enable the acquisition of information on plants with a ubiquitous communicator. They intend to develop and improve the contents in accordance with the seasons and visitors in the future.

9. Free Mobility Assistance Project (Ministry of Land, Infrastructure and Transportation, etc.)

In FY2006, the Free Mobility Assistance Project is deploying experiments for practical application at 10 sites throughout Japan.

1. Free Mobility Project in Kobe

Kobe City will conduct a demonstration experiment from January to February, 2007. The service, called “Nankinmachi Sightseeing Guide Navigation”, will be developed and demonstrated to provide detailed information to tourists timely in Nankinmachi, which is crowded with stores.

2. Kumamoto Anshin Ido-Navi Project

In Kumamoto Prefecture, demonstration experiment will be performed which links the transfer information for street car and bus passengers and the revitalization of the shopping arcade as well as the demonstration of technology on route guidance for people with impaired-visions. The demonstration experiment is scheduled in February.

3. **World Heritage Site Kumanokodo Navi Project**
Wakayama Prefecture conducted a demonstration experiment of a service to provide sightseeing information in the Kumano Nachi Taisha Area in Kumano Kodo, which was registered as a World Heritage from November 3 to 12, 2006. In addition to the reading of IC tags with UC, QR code with ucodes, which can be read with mobile phones, were used to offer useful information to those unfamiliar with the place including foreign tourists.
4. **Snow Navigation Project in Aomori**
Aomori Prefecture will conduct a demonstration experiment utilizing the features unique to the cold district environment in Hirosaki City from January to February, 2007. They intend to give navigation for people with impaired-vision in accordance with status of the snow coverage on the pavement, shopping arcade, sightseeing and Hirosaki Lantern Festival.
5. **Shizuoka Omoiyari-Navi Feasibility Experiment**
Shizuoka City in Shizuoka Prefecture will launch a demonstration experiment from December 10 for people to move about acquiring appropriate route information in accordance with the weather and their purpose, using the UC which connects the route through the underground shopping mall from JR Shizuoka Station to the municipal building and a complex building "Pegasart" mainly intended for wheelchair users. Prior to the launch, they conducted a demonstration to see information on street performances using UC at the site of "Daidogei (Street Performance) World Cup in Shizuoka" from November 3 to 5.
6. **Nara Free Mobility Assistance Project**
Nara Prefecture is developing a commemorative project to celebrate the 1300th anniversary of Heijokyo scheduled for 2010. As a part of it, it is conducting a demonstration experiment near Nara Park with the themes of "Sightseeing Navigation" and "Rental Bicycle Management" from October to the end of November, 2006.
7. **Sakai City Free Mobility Assistance Project**
Sakai City in Osaka Prefecture is verifying the information transmission technology to users of familiar vehicles such as bicycles and electric wheelchairs for seniors. It is scheduled to be held in February 2007.
8. **Tokyo Ubiquitous Technology Project in Ginza**
Under Tokyo Ubiquitous Technology Project in Ginza, the building of a framework to understand the user needs from the point of free mobility assistance, sightseeing, commercial promotion and disaster prevention for the realization of the world's state-of-the-art ubiquitous city and for its promotion are discussed.
9. **River Walk Assistance System Feasibility Study Experiment**
Arakawa Karyu (Downstream) River Office is conducting a demonstration experiment to verify the information provision support system for visitors to the river.

The second demonstration experiment is being conducted from November 22.

10. **Itabashi-ku Free Mobility Assistance Project**

Itabashi-ku, Tokyo, conducted an experiment to provide information on the railroad crossings and stores to people with impaired-vision near the railroad crossing at the south exit of Oyama Station in August 2006. It contributed to the improvement of timing to provide the information near the crossing, contents of information to be provided and the rule-making of warning signals.