Summary of Today’s Press Presentation

- YRP Ubiquitous Networking Laboratory (UNL) has successfully developed a new model of the Ubiquitous Communicator (UC new model) and will start its production for verification trials.

- The UC new model has had its features greatly enhanced as a tool to communicate with a Ubiquitous environment compared to the conventional UC model.

- A large number of the UC new models will be used in the Kobe preliminary verification trials for the Autonomous Movement Support Project that has been promoted jointly with the Ministry of Land, Infrastructure & Transport.
Release of Today’s Information

- The information distributed today can be found on the following web sites.

- YRP Ubiquitous Networking Laboratory
  
  http://www.ubin.jp

- T-Engine Forum
  

New Model of the Ubiquitous Communicator
Standard Architecture for reading information with UC

UC New Model Features (1)

- Multi-band ucode tag reader
  - Built-in 2.45GHz and 13.56MHz multi-band reader

- One-dimensional and two-dimensional barcodes supported by a built-in 2 million pixel camera
UC New Model Features (2)

- User Interface using a ucode tag reader
  - The display language, character size, etc can be changed with a ucode tag/card.

UC New Model Features (3)

- Wireless peripheral devices made possible by built-in Bluetooth
  - Realizes wireless connection of an external RFID reader/writer, a headset and other peripherals.

- VoIP phone function with built-in wireless LAN
UC New Model Features (4)

- High-speed image processing enabled by dedicated ASIC.
  - Full VGA size MPEG-animation replay
  - MPEG-animation recording with a built-in camera
  - Enlargement/downsizing/rotating of JPEG images

Newly developed dedicated ASIC for the UCs

- Main features
  - MPEG/JPEG encode/decode acceleration
  - Capturing/rotating/scaling of images
  - Coding co-processor (optional)
UC New Model Features (5)

- **uTAD = ubiquitous TAD**
  - TAD = TRON Application Database
  - Standard data format for ubiquitous information delivery
    - XML expression format: XML-based format
    - Binary expression format: Binary compression format to store data in IC cards/RFID

**uTAD/UC Browser**
- XML-based data format interpreted by the UC browser

**uTAD/Contents**
- XML-based data format which describes distributed data content

- **uTAD/UC Browser**
  - (Ex: graphic data format)

- **uTAD/Contents**
  - (ex: geographic information data format)

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UC New Model Features (6)

- Extensive peripheral devices
  - Infrared I/F
  - Built-in wireless LAN
  - 300 thousand pixel camera
  - mini SD slot
  - Headphone port
  - Fingerprint authentication
  - Stereo speaker
  - SD slot
  - Built-in Bluetooth
  - 2 million pixel camera
  - SIM slot (for eTRON)
  - Contactless I/F (2.45GHz & 13.56MHz dual)
  - Expansion connector for a cradle (serial I/F, USB)
UC New Model Specification Overview

- CPU: 32 bit RISC chip
- Display: VGA (480x640 pixel)
- Built-in communication features: Wireless LAN, Bluetooth
- Contactless I/F: Built-in 13.56MHz & 2.45GHz dual antenna
- Card I/F: SD x1, miniSD x 1, SIM (eTRON) x 1
- Camera: 300 thousand pixel x 1, 2 million pixel x 1
- Infrared I/F: Input x 1, Output x 1
- Biometrics: Fingerprint authentication unit x 1
- Audio: Stereo speaker, microphone, headphone output
- Dedicated ASIC: Animation & still image acceleration, video capture, Encryption processing
- External I/F: Cradle connection connector (serial I/F, USB and others)
- Dimensions/weight: 144 x 76 x 15 mm/196g

Ubiquitous Communicator
UC Overview

- Display: 120 x 160 dots, 18mm x 24mm
- ucode support: Images displayed by reading ucodes (multiple images can be displayed)
- Clock functions: Time display, date display
- Design: Design-set change (backgrounds, clock characters, menu)
- Communication feature: Weak signal wireless communication
- eTRON functions: eTRON tag (ISO14443) eTRON1 reader/writer function
- Weight: Approx. 100g (without batteries)