Ubiquitous Communicator

Ubiquitous Communicator is the device to request many services from the intelligent house. The device will communicate with the house server and provide a good ambience of sound, light, and air conditioning to fit the timing, location, status of the residents no matter where the residents are and whatever they need. With the device, you will be able to know which room has lamps turned on, your family member's schedule and messages, visitor's record, package delivery & receiving record. In other words, you will be able to get all information of your home from the past, at present and into the future.
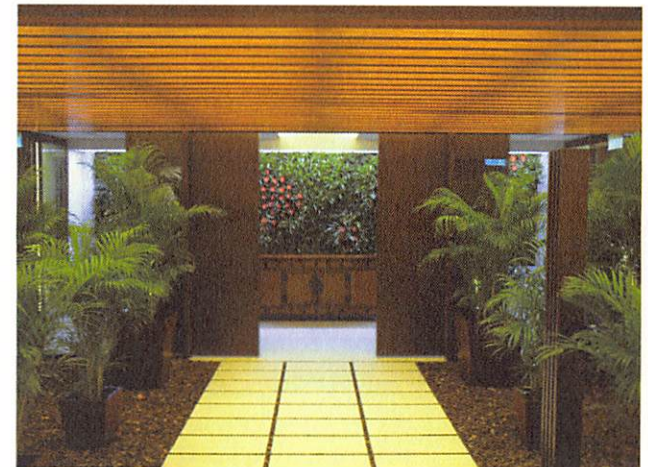
As the whole house is connected to the Internet, it is easy to check the status of your house or the visitor's record from outside. You can easily watch weather forecast or news and confirm your schedule via bathroom's monitor while preparing to go out.

In order to ease the maintenance of the house, there are RFID labels on many of the housing equipments, providing information such as where you can purchase the filters for an equipment and how you can replace them. You can access such information to maintain your house easily and directly by means of the tags on equipments.

home

台灣土地開發股份有限公司

Taiwan Land Development Corporation

Designed by Ken Sakamura

台灣土地

Taiwan Land Development Corporation

Green

"Green" is one of the house design concepts. Green walls of the house will make people feel at ease.

Computerized watering and fertilizing system makes it easy to have green interior environment. The solar ray transmission system can provide sunshine even to plants in the deep corner of the house. Thus, we have realized care-free rich green interior environment.

Midorie

It is a new green system to decorate the wall space with plants and flowers. This system is installed at the entrance in the hallway, bedrooms, and guest rooms. Automatically maintained by computers, it realizes an easy and comfortable living environment.
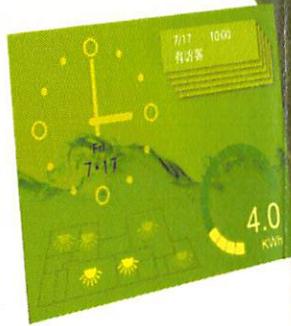
Ecology

To be eco-friendly and save energy, sensor networks within the house keep track of conditions inside the house all the time. Equipments are controlled to save energy automatically. Lamps and air conditioners are turned off when no one is in the room, for example.

Furthermore, the visualization of energy usage makes the residents aware of how much energy is consumed in the house.

Construction of the house uses eco-friendly and maintenance-free materials as much as possible to reduce maintenance cost during the whole life cycle of the house. Such material includes the photocatalytic exterior walls.

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u-home is built by using ubiquitous computing technology, and is one of the most comfortable and eco-friendly houses in the world today.

The home computer network in the house can observe the status of the house and residents, and provide comfortable living environment by automatically controlling the equipments in the house. The computer network monitors the status of the house continuously, and can offer advanced security features while the residents are away from home. The system can record visitors' log and assist the residents to receive packages even during their absence. Through the Internet, u-home can provide the residents with various surveillance and management information when they are away.

The house computer system has been programmed to provide both the comfort and eco-friendly energy-saving features by reducing energy waste based on the constant monitoring of the status of the house.

u-home has realized these wonderful features by the distributed computing system that combines the latest ubiquitous computing technology and the Internet. It has been designed and built so that it can be offered to the market at a resonable price, too. Designing and building u-home has been an interesting challenge.

Computer Architect

Ken Sakamura

Comfort

u-home has a floor layout that separates the private and public spaces completely by placing the entrance at the center. From comfort perspective, the house has an advanced AV room and spacious bathrooms. The design also allows the residents to move in the shortest paths for daily chores, and thus offers them stress-free comfortable living environment.

Dining Room

Room ambience can be controlled by different lighting scene settings.

The lighting setting can be selected by Ubiquitous Communicator or automatically chosen according to the residents' daily schedule.

Home Delivery Boxes

This system can be operated by advanced security IC cards. Only pre-authorized trusted delivery services can use the system. The delivery box can serve as a goods exchange box such as laundry exchange as well.

1. Intelligent Security System

● **Security Camera and Automatic Video Recording**
The intercom cameras and security monitor systems can record visitors' image. Also, the cameras can record suspicious activity nearby for further identification.

● **Video Identification via Security Camera**
You can monitor your house via cameras installed at u-home to learn any security event while you are away.

● **Identifying Visitors via Interior TV**
When visitor presses the intercom button at the hallway, the interior TV will switch to the intercom camera image for the residents to identify the visitor. In addition, you can release the entrance lock via Ubiquitous Communicator.

● **Home Delivery Receiving System (Home Delivery Box) (by uni)**
The system allows you to receive packages irrespective of whether you are at home or not. Only the trusted contracted delivery vendors can have the eTRON security IC cards to open the delivery box. There are two stacks of shelves inside to receive two batches of goods. Once goods are put in the box, the door can not be opened from outside to prevent the goods from being stolen.

● **Unforgeable Electronic Key and Automatic Door**
The electronic key to open the door of u-home entrance is embedded with an IC chip which can not be forged. With easy one-touch operation, the door can be opened when you stand near the door. The door will be locked when you close it. There is no need to worry about losing the key and having it abused because it can be deactivated. You can set up the keys to be valid only for specific date and time and hand them to your guests.

2. Economy / Eco-friendliness

● **Low power and long lasting LED lighting**
u-home adopts LED lighting which uses only one fifth power of incandescent lamps. The saving rate is expected to reach one tenth in the future, or half of fluorescent lamps. Also, the LED lighting features very long life, so there is no need to replace it for a long time. Compared with fluorescent lamps, LEDs are easy to adjust to create a better lighting ambience.

● **Automatic Turn-on of Lighting**
The light will be turned on automatically when the residents enter a room. If the light from outdoor is enough to brighten the room, the light is not turned on to save electricity.

● **Automatic Turn-off of Lighting for vacant rooms**
The lighting in the vacant rooms is automatically turned off to reduce energy consumption.

● **Residential Monitor**
The intelligent touch panel or Ubiquitous Communicator can display energy usage, outdoor temperature, and various sensor data to remind the residents to save power.
The visualization of energy consumption using numbers and graphs has a positive psychological effect that encourages people to save energy. And such effect is known to realize energy saving for real.

● **Smudge Free Phtocatalytic Wall (by Panasonic)**
The exterior wall of u-home can be kept clean and neat all the time because rain cleans the photocatalytic walls when they get dirty. Organic smudges can be decomposed in the presence of light and be washed away by rain.

● **Green Wall (by Suntory)**
There are living plants on the walls in the hallway, master bedroom and guest rooms. The plant watering and nutrition are controlled by computer to keep the plant fresh and provide an indoor garden all the time.

● **Solar Light Transmission (by La Foret Engineering)**
This is a solar ray transmitting system to direct the solar light into the corner rooms. The solar gathering panels are installed outside the house and the light ray will be transmitted into the rooms by optical fiber. No maintenance cost will arise.

3. Comfortable System

● **Refreshing Bathroom**

The main purpose of the bathroom in the master bedroom is relaxation. The bubble and water in jacuzzi-like usage can heal your exhausted body. There are different shower heads for massage, moisturizing, etc. Shower is refreshing in the morning or when the residents are back home. In addition, there is a complete sauna and cold shower to relax the tense body.

● **Audio room for music and movies**

The high picture quality of the big wide screen with 5.1-channel surrounding sound can help you enjoy the audio and video entertainment. Pay attention to the special sofa. It is designed for the residents to see movie or listen to music for an extended period of time without getting tired. The high-quality sound absorbing material eliminates resonant noise and lets you listen to graceful music in a relaxing space.

● **Family Bar**

There is a bar in the audio room where you can listen to jazz and light music, and watch old movies while having cocktail or wine, chatting with friends and having a wonderful time.

● **Background Music Service**

The residents can enjoy background music in the living room, dining room, kitchen or bathrooms for free. BGM is from Internet Radio, and you can select favorite channels from many sources. You can select your preferred channels per room by means of the touch panel on the walls in each room. Or you can choose the setting so that chosen music follows you wherever you move inside the house with Ubiquitous Communicator.

● **Lighting**

You can create proper lighting effects for your daily activity by adjusting the brightness of the indirect lights, projection or down lights and table stand lamps. You can select your preferred preset light setting via the touch panel on the wall in each room or via Ubiquitous Communicator. Automatic setting chooses the best lighting scene according to the time of the day and outdoor brightness.

● **Automatic Night Light System**

When you wake up in the middle of the night, it is risky to walk in the total darkness. If you turn on the bright lamps, however, your sleep goes away completely. The automatic night light system uses a sensor beside the bed to learn whenever someone wakes up, and guides the resident to bathroom by turning on only the dim light along the way.

● **Intelligent Automatic-Flushing Stool, Washlet**

There is intelligent automatic-flushing stool, Washlet, in the bathroom to provide you a comfortable usage experience.

● **Wall with Bamboo Charcoal Lacquer Coating**

There are numerous holes on the bamboo charcoal. When air goes in and out of these holes, substance that causes bad smell or harmful substance is absorbed. This absorbtion results in fresh room air. The charcoal also adjusts the humidity, reduces dew condensation, and deters mold growth.

● **Natural Wooden Floor**

The floor is made of natural wood which can adjust the temperature and humidity to create comfortable living environment.

● **Dust Free Carpet**

Normal carpets tend to catch floating dust in its fiber which can be the nutrient of the bedbugs. The carpets used in the bedrooms are made of polyamide fiber. It does not accumulate dust because the fiber does not catch floating dust, and no fiber falls off this material either. You can use vacuum cleaner to remove dust from this carpet easily. This carpet is safe even for the allergic persons.

● **Weather Forecast Service**

Please look in the mirror in the bathroom. There, you can read weather forecast, news, daily schedule and family messages. This convenient system can help you get the necessary information in the busy morning hours quickly.

● **Ubiquitous Internet Access**

u-home provides wireless network for you to be online anywhere inside the house.

● **Intelligent Touch Panel**

You can control the lighting, curtain, BGM, etc. via the intelligent touch panel. In addition, you can also monitor the energy consumption level and outdoor weather status. The panel is not always on, however; the screen will automatically light up when someone approaches the panel.

● **Ubiquitous Communicator**
(by YRP Ubiquitous Networking Laboratory)

Ubiquitous Communicator is a portable terminal with a touch panel. It can identify where the holder is, and automatically switches the display to show the appropriate control panel of the particular room where the resident is located.

● **Automatic Curtain**

The curtains in the living room and dining room are moved electrically. They can be operated by the touch panel on the wall or Ubiquitous Communicator, or can be controlled according to the scene lighting.

● **Home Information**

There are ucode IC tags embedded in u-home equipments, furniture and construction materials. You can access the manual of the equipment via Ubiquitous Communicator after reading the ucode. In addition, you can read the description including its origin of the furniture, paintings, etc. and learn how to care after them.