

Internet-enabled Home Robot MARON-1

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Abstract

Responding to the recent demand for personal robots, a variety of robots including pet robots is being marketed today. Robots are expected to be widely used in the fields of living, welfare, medical services, public services, etc. They are also expected to be more involved in supporting people's day-to-day living at home. Fujitsu Laboratories Ltd. has successfully developed an internet-enabled home robot called MARON-1 (Mobile Agent Robot Of Next-generation) as the first step in its effort toward realizing practicality-oriented household robots. MARON-1 can be remotely controlled from a mobile phone to monitor home security and operate household appliances.

Technology

• Remotely controlled from a mobile phone

MARON-1 can:

- take pictures of the inside of a house and transmit the images for display on a mobile phone,
- freely move forward or backward, or rotate right or left, according to instructions received from the owner,
- autonomously move to a designated point inside the house by avoiding obstacles or crossing over uneven surface levels based on preinstalled floor maps,
- move to the instructed point on an image displayed on a mobile phone,
- operate air-conditioners, TV sets, VCRs, etc., which can respond to infrared remote control signals.

• Home security monitor

When a moving object is detected in front of its cameras, MARON-1 generates an alarm sound and calls preset phone numbers.

• Hands-free phone set

MARON-1 serves as a hands-free phone set and allows you to place a call with a single push.

• Preset actions at preset times

MARON-1 can be programmed to take pictures for home security by setting preset actions for preset times.

Application Examples

Home monitoring during absences from home, monitoring the conditions of people at home who require nursing care, office security monitoring during the night hours, etc.

MARON-1 Basic Specifications

Dimensions (W × D × H) / weight	36 × 36 × 32 cm / 5 kg
Moving components	2 driving wheels (right & left), 1 crawler drive, 2 camera actuators (panning & tilting) with 5 degrees of freedom
Sensors	1 infrared receiver/emitter (for remote controls), 2 cameras, 1 proximity sensor, 2 bumper switches
Power source	Built-in nickel-metal hydride batteries



MARON-1