### **News Release**



## **Panasonic Corporation**

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## <u>Panasonic to Unveil Innovative Communication Assistance Robot</u> <u>"HOSPI-Rimo" and New Models of Hair-Washing Robot and</u> "RoboticBed<sup>®</sup>" at International H.C.R. 2011

Osaka, Japan - Panasonic Corporation today announced the development of an innovative communication assistance robot named models "HOSPI-Rimo" and new Hair-Washing Robot and RoboticBed®. These robots are designed to support people who need assistance to lead safe, comfortable and pleasant lives. Panasonic will showcase prototypes of these three robots at the 38<sup>th</sup> International Home Care & Rehabilitation Exhibition (H.C.R.2011) to be held from October 5 - 7, 2011 at the Tokyo Big Site.

Combining its expertise in robotics and information technology, Panasonic aims to meet the needs of both of those who give and those who receive care by offering robots as well as robot system solutions that provide total support through collaboration between robots and humans.

HOSPI-Rimo serves as an intermediary to enable comfortable communication between people who are bed ridden or have limited mobility to communicate with other people, for example, their attending doctor in a separate room in the hospital or friends who live far away, as if they were interacting face to face. Panasonic developed "HOSPI" automatic medication delivery robot, which is used in



hospitals in Japan and other countries. HOSPI-Rimo employs HOSPI's autonomous mobility technology and high-definition visual communications technology Panasonic is renowned for.

The new Hair-Washing Robot can complete the entire process of hair washing automatically, from wetting to shampooing, rinsing, conditioning and drying. When the first model was unveiled at the same exhibition last year, it received great response, including requests for additional functions and commercialization. The new model features washing arms with more fingers and improved mechanics than the previous model to give more comfortable washing experience.



RoboticBed<sup>®</sup>, an electric bed transformable into an electric wheelchair and vice versa, also attracted much interest, including commercialization, when it was first introduced at H.C.R. 2009. Since then, Panasonic has made constant improvements by incorporating requests from both caregivers and recipients, as well as by finding solutions for practical and safety issues identified through its activities



under the Project for Practical Applications of Service Robots coordinated by NEDO (New Energy and Industrial Technology Development Organization), an independent Japanese administrative agency. Panasonic has been developing safety technologies and guidelines under the project.

The Robotic Canopy, introduced together with the RoboticBed<sup>®</sup>, also received a number of requests, including easier installation and more user-friendly way of communication. These requests have led the company to develop the new communication assistance robot, HOSPI-Rimo.

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Main features and technologies employed by the three robots are described below:

#### ■ HOSPI-Rimo (Remote Intelligence and Mobility)

HOSPI-Rimo was developed by applying Panasonic's autonomous mobility technology of the HOSPI transportation robot for hospitals, and High Definition visual communication technology. People at separate and distant places can have comfortable communications through this robot. HOSPI-Rimo allows them to talk with other residents and doctors in a care facility and enables families and friends who live far to virtually visit hospital inpatients or the elderly living alone. The robot uses the following technologies.

# 1. Hybrid control technology combining remote-control and autonomous mobility If a location near the target person is specified, the robot can autonomously move to that place, recognizing the surrounding environment and avoiding obstacles in the way. The robot can also be remote-controlled. Further more, in the remote control mode, the robot moves safely while correctly recognizing its surroundings.

# 2. Conversation function using robot's motions and visual communications The shooting angle of the robot's built-in camera can be freely set by remote control. The High Definition Visual Communications System technology has been adopted for smooth, two-way conversations.

#### ■ Hair-Washing Robot

The Hair-Washing Robot has been developed using Panasonic's robot hand technology. It has advanced from the previous model to scan the head shape more finely and perform a series of hair-washing processes, from hand washing through bubble washing and drying, using newly added hand techniques. The robot can even store the data of each person's head shape and preferred washing mode to meet the needs for everyday hair-washing and scalp care.

#### 1. New 3D follow-up mechanism and control technology

The coordinated control of the telescoping washing arms and the back-of-head washing mechanism allows for washing of a wider range of the head. The robot's 24 fingers gently wash the head using a further advanced 3D pressure-control technology.

#### 2. Conditioner and dryer functions

In addition to the existing hand-washing and bubble-washing functions, the robot is equipped with a conditioner function and a simple dryer, meeting the strong demand. With these new functions, the robot can assist the total hair-washing process from washing through drying.

#### 3. Spot massage-washing function

Using the advanced touch-panel interface, the user can specify the spot to be washed, massaging pressure, and washing mode. This function meets users' demands more flexibly.

#### ■ RoboticBed<sup>®</sup>

The RoboticBed<sup>®</sup> was developed by integrating the electric care assistance bed and an electric wheelchair using Panasonic's robot technologies. The Robotic Bed helps people with limited mobility move between the bed and wheelchair on their own initiative, allowing them to get out of bed and maintain an independent lifestyle. Panasonic has made the Robotic Bed more practical to use by adding new functions and sharing the module with the electric care assistance bed with integrated wheelchair, which was announced last year.

#### 1. Common platform for the Robotic Bed to support care giving and self-reliance

The practical functions of the electric care assistance bed with integrated wheelchair were adopted to share the module. The components were standardized to achieve higher practicality and capability of supporting a wider range of users.

#### 2. New tilted wheelchair restoration/separation function

The new power-assisted tilt function of the wheelchair helps distribution of body pressure without slippage during prolonged sitting on the wheelchair. In addition, the wheelchair can be restored and separated in a tilted position, further improving the practicality and comfort level.

#### 3. User-friendly interface

The user-friendly easy-to-control interface allows users to understand how to control the bed at a glance, including mode switching/selection, restoration/separation, and operations for moving in all directions.

#### **About Panasonic**

Panasonic Corporation is a worldwide leader in the development and manufacture of electronic products for a wide range of consumer, business, and industrial needs. Based in Osaka, Japan, the company recorded consolidated net sales of 8.69 trillion yen (US\$105 billion) for the year ended March 31, 2011. The company's shares are listed on the Tokyo, Osaka, Nagoya and New York (NYSE:PC) stock exchanges. For more information on the company and the Panasonic brand, visit the company's website at http://panasonic.net/