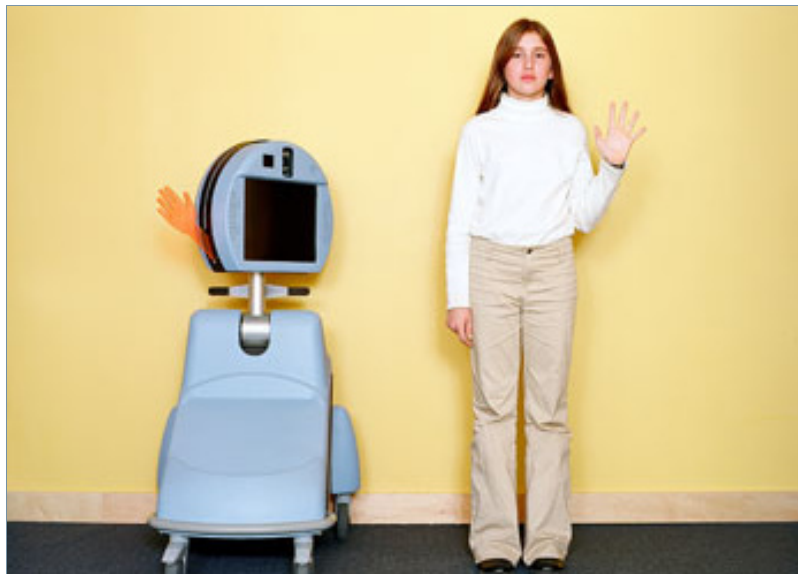


IBM CUSTOMER FACING SOLUTIONS

Telbotics - PEBBLES

Remarkable robots a "lifeline" for remote children



Challenge

For some children, treatment for acute illness or injury can mean weeks or months in the hospital. These students lose contact with what is going on in the classroom. Missed work piles up, often adding to the stress caused by their medical conditions.

These students feel isolated. They have no social interaction, which is part of school. Even after they are better, they may feel reluctant to return to school and their classmates may be confused by their mysterious absence.

Solution

The PEBBLES (Providing Education By Bringing Learning Environments to Students) project was the result of 5 years of research and development by Telbotics Inc. in cooperation with the University of Toronto and Ryerson University. The current version of PEBBLES has been redesigned and manufactured in partnership with the IBM e-access department.

The world's first robotic student uses two child-sized robots to connect a homebound or hospitalized child with their own classroom. The child gets a robot in his or her room. The robot's head includes a monitor and camera. At the child's school, a second robot sits in his or her class and broadcasts real time audio, video and documents back to the hospital. A hand-held controller allows the child to participate in the class by rotating the robot's head and raising the robot's hand.

The PEBBLES solution includes:

- Custom telepresence application
- IBM Consumer Device Services middleware
- Custom robot kiosks

Results

PEBBLES is easy to operate, allowing teachers to focus on the needs of all students. Students both in the classroom and in the hospital love it.

It serves as a bridge for hospitalized children in facilities across Canada and the United States. It has been used in Toronto's Hospital for Sick Children and the Ronald McDonald House. In the United States, PEBBLES units are installed in a number of hospitals including Yale-New Haven Children's Hospital, UCSF Children's Hospital, Mt. Pleasant-Blythdale UFSD (NY) and Cleveland's Rainbow Babies and Children's Hospital. Each robot is engineered with IBM technology, balancing outstanding technology with simplicity of operation.

PEBBLES was a recipient of a 2006 DaVinci Award from the MS Society for Innovation in Assistive Technology and a winner of the 2003 Most Innovative Product of the Year Award by Kiosk Magazine