

F. MICHAUD, S. LANIEL, M. TOUSIGNANT. **What telepresence robots can do as gerontechnologies.** *Gerontechnology 15(suppl):21s*; doi:10.4017/gt.2016.15.s.836.00 **Purpose** Mobile telepresence robotic platforms have recently been introduced on the market to bring mobility to sensors, actuators and interactive devices into real world settings without having to engineer the environment for their use. These platforms usually consist of a mobile base, a camera, proximity sensors, a screen and microphones, making them mobile videoconference systems, or more commonly referred to as ‘Skype on wheels’¹, used for instance in telehealth applications in hospitals and homes². These products demonstrate that it is now technologically and commercially feasible to bring these products into the market. What is missing in making them effective remote telepresence systems and robotic assistants are the key autonomous capabilities needed in order to provide specific assistive services for seniors, clinicians and caregivers. **Method** Building on our previous work^{3,4}, we are using IRL-1 (Figure 1), a humanoid robot integrating compliant actuators for motion and manipulation, autonomous navigation and obstacle avoidance, facial expressions, gesture, graphical interfaces, people recognition and sound localization and processing capabilities, to demonstrate and explore the capabilities and usages that such robots could have for home care. **Results & Discussion** IRL-1 is being used to determine how much control the remote operator wants to have in navigating the robot, by using functionalities such as waypoint navigation or autonomous docking in the charging station once the telepresence session is completed, autonomous planning and scheduling tasks to be accomplished by the robot, and as an assistance for medication and vital sign monitoring.

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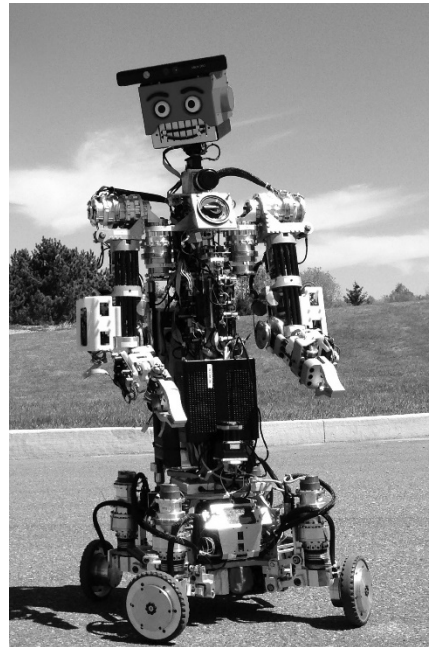


Figure 1. The IRL-1 robot platform