

Case Study **LivingTECH** Italy



MOBOTIX and LivingTECH: Home Automation Applied to Social Work

In Italy, examples of applied home automation at the service of social work are rare, so that many technicians and potential users of this innovative technology do not consider using it because it is thought to be too expensive, a luxury item only reserved for mansions and yachts, a status symbol for the few.

However, this point of view does not take into account the enormous benefits that home automation can bring to the improvement of the quality of life of persons with special needs and their families, even when considering modest living accommodations of small dimensions.

In fact many persons often find themselves to be completely or partially dependent on their parents or relatives as a result of a congenital disability or a disabling injury (whether permanent or temporary), while in less fortunate cases they depend on others outside family relations, even for carrying out activities that have always been considered to be mundane, such as for example opening the gate or the door of the home, turning on the lights, phoning or requesting for assistance, opening the window, raising and lowering the blinds, turning on the television, etc.

An example of home automation applied to social work

The project implemented by LivingTECH and MOBOTIX - with the support of C&D Elettronica - a distributor from Bergamo certified for all MOBOTIX products - is one of the few Italian examples of automation applied in the field of social work, and was implemented in Bergamo for a 26-year-old girl that became quadriplegic following a work accident. Completely financed by INAIL, this project allows the girl to enjoy more than fifty functions in a simple and integrated manner by using an Apple mobile device (iPod touch) that can be worn both on the wrist and the neck, on which HiDOM was installed, an application designed and implemented by LivingTECH thanks to the capabilities of the MOBOTIX technology, which was developed while specifically taking into account the weaknesses and special needs of the handicapped user.

Five video cameras, a video door intercom, and a wireless network in order to eliminate architectural barriers in the home

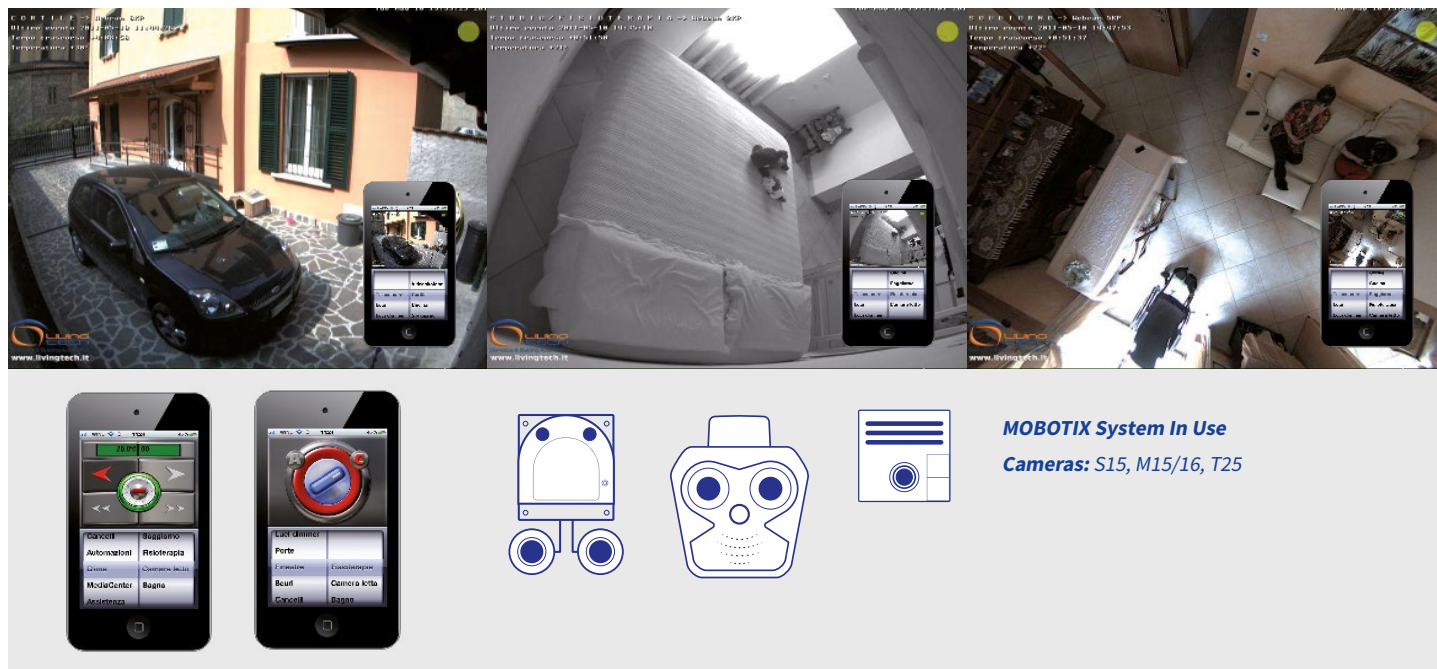
In a period of a few months, Living TECH was able to bring down the architectural barriers in the home, and implement a truly state of the art automation project. In fact, thanks to the MOBOTIX video cameras installed in every room of the home with the exception of the rest room, it is possible to access the images recorded indoors and in the external

courtyard in real time and round the clock. The system includes five MOBOTIX 360 degrees video cameras and an IP Video Door Station connected through a wireless modem/router and an additional range extender to also cover the exterior surroundings of the home and the sidewalk with a wireless network. The system is not based on any control center, so that access to the images is direct and can be freely managed by the administrator by means of a password through the Internet.

360 degrees security: video cameras at the service of the patient and the social workers

In this manner, the parents, physician, and physiotherapist that follow the rehabilitation of the person can access the images directly or as a result of an alert sent by the video cameras programmed to record an 'event', that is every time they detect movement in a particular area of the image (such as for example the door to the room or the orthopedic mat where physiotherapy is carried out every day). The microphones integrated in the video cameras keep the user in audio contact with whoever is accessing the images both outside and inside the home. They therefore operate as a video phone, but also as a 'video door intercom', allowing the girl for example to participate in the daily activities of her mother, while remaining in her room; and the parents to immediately come to the girl in case of need.

The innovative system was conceived not only to



guarantee the parents or the assistance service constant supervision of the disabled person, but also to allow the person to become independent, inasmuch as is feasible in relation to the type of disability, for a series of daily chores that may otherwise be taken for granted, and feel sufficiently safe and secure inside their own home thanks to the continuous and systematic monitoring.

For example, thanks to the environmental temperature detectors integrated in the video cameras, before leaving their home the handicapped person has the ability to view the external temperature on their own iPod, while the physiotherapist can check the temperature of the indoors room dedicated to the rehabilitation exercises.

An integrated video door intercom in the home network guarantees a constant connection with the outside world

No less important is providing the person with special needs with the possibility to remain in constant audio and video contact by means of the iPod, both with the other rooms and with the outside world.

Thanks to the MOBOTIX video door intercom, which is provided with an integrated IP video camera, the handicapped person is able to interact with visitors

by displaying the images on the iPod, interacting with them in real time and being able to transmit electro-mechanical commands, such as for example opening the front door by pressing a button on the touch screen of the mobile device.

Provided with an answering machine function, the video door intercom can record and replay the messages as audio and video, with integrated lip synchronization.

For the purposes of security and video surveillance, the video camera inside the video door intercom can be programmed to record images continuously (even around the clock), or be activated automatically upon predefined events (such as for example a person traveling through a specific area of the monitored location or the detection of sound). The images recorded by the video cameras, including the audio signal, are then archived inside the memory of the system without having to install an external PC for archiving the data.

MOBOTIX, a partner for success

“The choice of MOBOTIX was based exclusively on the technical merits. We chose the best the market had to offer, aiming for excellence”, says Riccardo Comper, owner of LivingTECH. “In addition to the

image quality, which was much better than any similar technology, MOBOTIX video cameras were chosen because of their integrated web server for managing and processing the images, thus limiting the bandwidth and space required for storing the data, without the need to install any additional or personalized software on the PC or other external devices”.

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