

A smart rollator prototype that supports independent living among the elderly

October 1 2015, by Olli Ernvall

VTT has made the traditional rollator smart by retrofitting it with sensors and digital software that analyse user's physical condition and daily activities. This allows the device to collect useful information on user's daily rhythm, walking distances, duration and speed of walking, in addition to hand grip strength. Such information can then be used to monitor user's wellbeing and physical condition.

"Other features can also be developed, such as monitoring of motoric state or fall alarm. The measured data can be compared to the user's own goals and those of a reference group or a friend. Emerging trends can be monitored on a daily, weekly, monthly or yearly basis," explains VTT's Senior Scientist Olli Kuusisto.

It is possible to have the information forwarded to other people, such as family members or care personnel.

VTT's IoT (Internet of Things) expertise enables the installation of intelligent features on any device or space. Separate IoT solutions are already available off-the-shelf, but the greatest benefits lie in connecting solutions to the IoT network and using big data analyses to find out relevant information from a multi-source data flow.

The basic assumption is that sensors will not have a major impact on the price of the end product, but creates possibilities for new services. In the rollator's case, services can enable the elderly to enjoy longer safe and secure independent living at home.

Provided by VTT Technical Research Centre of Finland

Citation: A smart rollator prototype that supports independent living among the elderly (2015, October 1) retrieved 22 July 2024 from <https://phys.org/news/2015-10-smart-rollator-prototype-independent-elderly.html>

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