



Supporting Independently Living Citizens

The **SILC** Project aims at the development of an innovative and intelligent wrist-worn system to increase safety and independence of independent living not only of elderly but also disabled citizens.

The **SILC** Project is an European Project in IST (Information Society Technologies) part of the Fifth Research and Technological Development Framework Programme (Contract Number: IST-2000-27524).

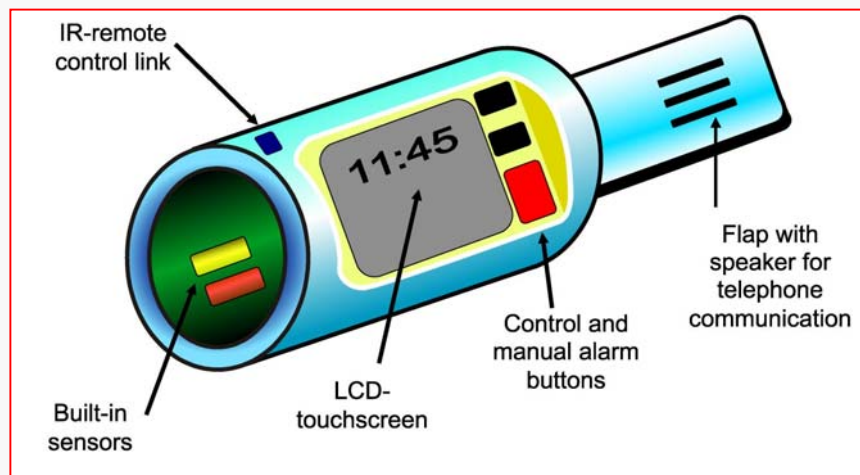
SILC Project duration: from 1st January 2001 to 31st December 2003



SILC - Supporting Independently Living Citizens

The percentage of the old and very old population is increasing in most European countries. At the same time most ageing persons want to live in their own home as long as possible. As many old persons live in single persons households, means and ways have to be found to ensure personal safety and to support activities of daily living.

The project objective is the creation of an **innovative kind of alarm device** which will be a **wrist-worn tubular device** as shown in the following schematic drawing.



SILC will be an alarm system based on a wrist-worn electronic device with integrated innovative biometric sensors, monitoring pulse, temperature and acceleration; other sensor signals can be added. Via a telecommunication link an alarm call can be triggered in case of critical conditions detected. Increased value as an encouragement to permanent usage is provided by integrating cordless telephone operation and environmental control functionality under a user-friendly interface designed to support disabled and elderly people.

The main innovation of the **SILC** alarm device will be the inclusion of a set of **biometric sensors**. These sensors could monitor:

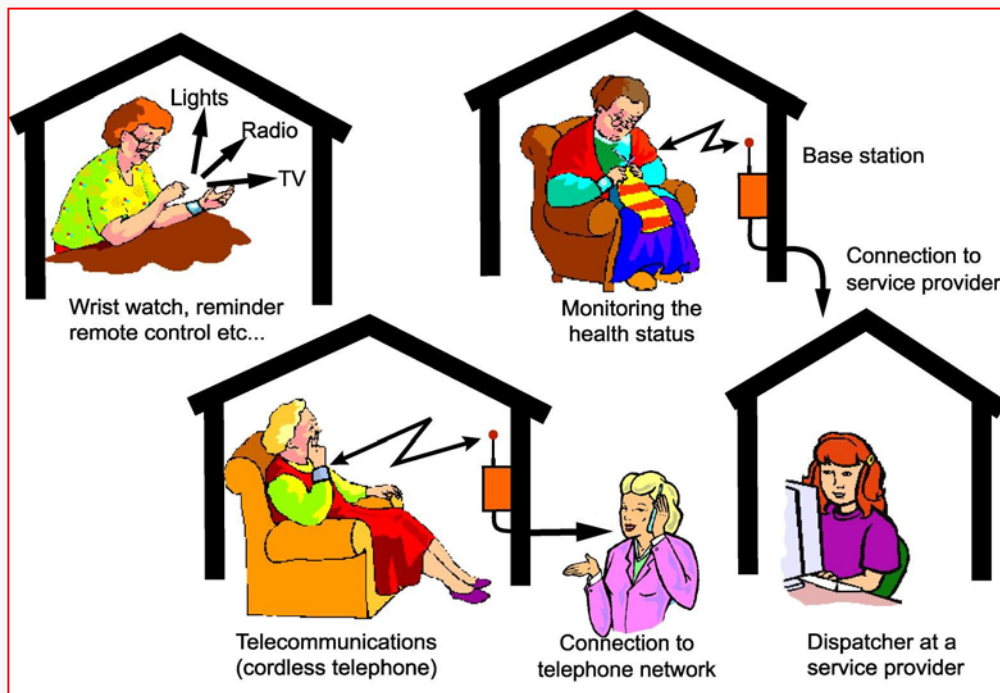
- the heart pulse rate including the variation of the pulse
- the body **temperature**
- the **spatial orientation and acceleration** of the device (and thus the user's forearm)
- the **ECG signal**
- a new non-invasive method for **blood glucose level** measurement.

To make **SILC** an indispensable device for everyday life a range of **additional features** could be fostered. Thus the user would be motivated to use the device permanently.

- Built in cordless telephone
- Clock and alarm clock shown on the display.
- Simple Personal Digital Assistant (PDA) especially as a reminder for medication.
- Programmable infrared remote control for various household appliances (TV, VCR, door lock, lamps ...).

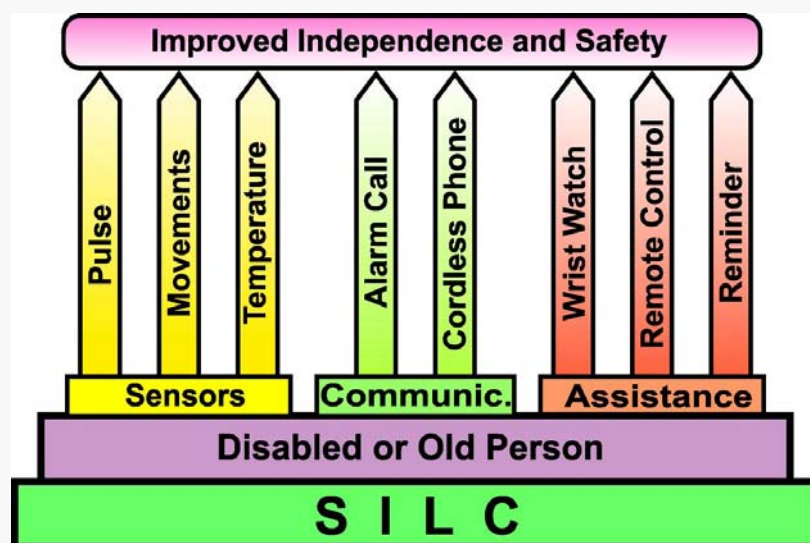
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SILC will achieve a system which will become the state-of-art in accessibility of such "safety-wearables". The system will be usable by elderly people with a variety of disabilities, including short-term memory loss, low vision, and deafness. **SILC** will foster and facilitate a ***prolonged stay of senior citizens in the own household*** before institutional care will become necessary.



SILC will combine newest sensor technologies with innovative decision taking strategies to allow monitoring of critical body functions combined with a reliable alarm trigger in a wrist worn device. In case of an alarm, biometric data is available to the alarm centre and such to the rescue team.

The **modular structure** of **SILC** will also offer the possibility to upgrade the device with others sensors as soon as they become available. By using a cordless RF-link external sensors can be connected with the telemetric unit of **SILC**.



The SILC Partners:

Austria

TECWINGS Industrialisierung und Elektronikproduktion GmbH (2)

Contact: johann.zoebinger@tecwings.at

Joanneum Research (1)

Institute of Noninvasive Diagnostics

Contact: dietmar.messerschmidt@joanneum.at

Municipality of Vienna, Health Planning Department (3)

Contact: win@mal.magwien.gv.at

Johanniter-Unfall-Hilfe in Österreich (3)

Contact: robert.heindl@johanniter.at

United Kingdom

Knowsley Metropolitan Borough Council,

Social Services (3)

Contact: tony.foy.dss@knowsley.gov.uk

Cardionetics Limited (2)

Contact: pneedham@cardionetics.com

Cloudworld Limited (2)

Contact: jn@cloudworld.co.uk

Spain

Ajuntament de Callús (3)

Contact: ramonfv@callus.org

CHC Vitae, S.A (3)

Contact: marimon@chc.scs.es

Italy

Regione Veneto, Direzione Servizi Sociali (3)

Contact: lorenzo.rampazzo@mail.regione.veneto.it

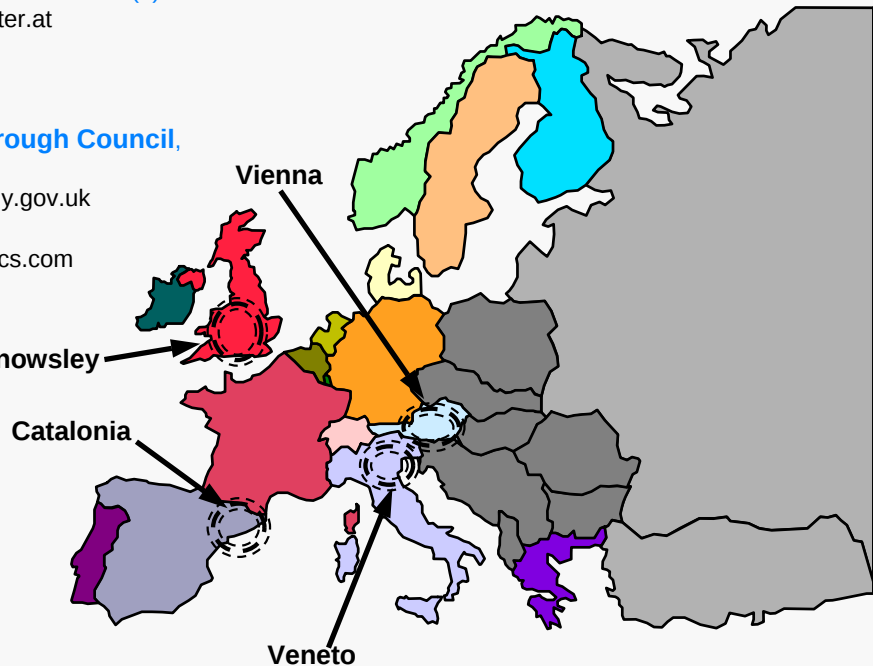
TESAN S.p.a. (3)

Contact: tesan@assind.vi.it

(1) Research partner

(2) Industrial partner

(3) Users representative partner



Project Coordinator:

fortec

Institute of Industrial Electronics and Material Science, forttec (1)

Research Group for Rehabilitation Technology

Favoritenstraße 11/366-1B

A-1040 Wien

Contact: silc-fortec@fortec.tuwien.ac.at - Tel. +43-1-58801-76615, 76616

www.fortec.tuwien.ac.at

SILC Project: www

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