

SPES TECHNOLOGY

We are listing examples of technological solutions from Košice and Ferrara pilots.

Kosice implementation

Technology available and tested within the Košice pilot is represented by a SPES platform and Košice pilot specific software components implemented by Technical University of Košice team. Libraries for communication with medical devices were designed to be simple and fast tools for easy extraction of stored measurements on the medical devices. They handle specificities of communication protocols and data formats. Measurement manager provides most of the requested features collected from users' feedback. The two most wanted features were the ability to add manual measures to the list and the ability to print and export stored measurements into pdf format and style sheet application. Real time chat module was designed to be an easy to use application for on-line communication between SPES Košice pilot users and also between users which use popular communication providers, mainly Google. Module for sharing information through patient's wall (message board) allows for writing interesting short messages

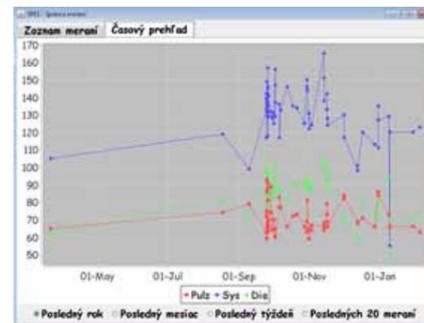
and post hypertext links. RSS aggregator was designed as a standalone application for gathering RSS feeds from multiple sources and dividing articles into several categories by pre-defined configuration, while offering familiar and easy to use interface. To streamline feedback process, a simple questionnaire application was designed to provide ability of the online set up questionnaire and online collection of results. The module has been designed as a web application running on a dedicated web server, and integrated into the SPES platform to allow for streamlined use.



News displayed in user interface of Kosice pilot

ID	Dátum	Čas	SYS	DIA	Pulz
003	2013-09-09	10:30	99.00	70.00	79.00
007	2013-09-09	10:30	99.00	70.00	79.00
040	2013-08-17	06:42	119.00	81.00	74.00
063	2013-03-21	09:13	105.00	62.00	65.00
066	2013-02-04	09:14	121.00	67.00	76.00
069	2013-02-04	09:13	92.00	56.00	55.00
072	2013-02-04	09:12	93.00	56.00	59.00
075	2012-12-19	09:09	104.00	58.00	63.00
078	2012-12-18	15:14	96.00	55.00	57.00
081	2012-12-18	15:13	96.00	55.00	57.00
095	2013-09-24	06:14	133.00	97.00	63.00
098	2013-09-24	06:15	142.00	107.00	59.00
099	2013-09-24	06:16	117.00	76.00	72.00
103	2013-09-24	06:41	139.00	83.00	75.00
108	2013-09-24	19:14	137.00	88.00	93.00
110	2013-09-24	19:15	135.00	76.00	86.00
114	2013-09-24	21:56	149.00	94.00	59.00

List of blood pressure recordings



Visualization of blood pressure in Kosice pilot

Ferrara implementation

- The home gateway is composed by:
1. A touchscreen netbook Acer Iconia W501 Windows 7 OS
 2. A Bluetooth saturimeter
 3. A spirometer
 4. A dedicated ADSL internet connection

Touchscreen netbook

- The touchscreen netbook allows the system to:
- Collect data locally from the medical devices
 - Store them until they can be sent to the HUB
 - Properly and safely send data to the central HUB
 - Show some basic functionalities to the user (for instances a list of measurement correctly sent, etc.)



Spirometer sensor used in Ferrara pilot

Bluetooth saturimeter

The Bluetooth saturimeter allows to:

- Monitor oxygen concentration in patient's blood to assess respiratory conditions

Spirometer

- Monitor respiratory functions, assessing airflow obstructions.

Bluetooth saturimeter for oxygen concentration monitoring



Contact and information

For further information subscribe to our mailing list and receive the SPES newsletter or contact the Lead Partner:
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SPES newsletter



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Final Conference SPES

Friday 16th of May 2014

under the auspices of the Executive City Councillor for Public Health and Social Affairs
Vienna City Hall
 1010 Vienna; Friedrich Schmidt-Platz 1, City Senate Hall

AGENDA

Time	Item	
09:00	Registration	
09:30	Welcome	Marianne Klicka, The Third President of the Viennese Provincial Parliament
09:30	Welcome among SPES partners	Olga Štěpánková, Christine Petioky, Karin Kienzl-Plochberger, Marek Lenart
09:45	Welcome	Lubor Jusko, CENTRAL EUROPE Programme, Joint Technical Secretariat
10:00	SPES in the context of Central Europe	Gianluca D'Agosta
10:20	Keynote Speaker	Anna Wanka (University of Vienna, Department of Sociology)
10:50-11:10	Coffee Break	
11:15	Presentation of the 4 pilots	Jan Kolouch: Brno, Matias de la Calle: Ferrara, Štefan Daňo: Košice, Christine Petioky: Vienna
12:40	Film about SPES	
12:50	Life demonstration of the use-cases of the 4 pilots	
13:15-14:15	Lunch Break	
14:20	Overall results	Gianluca D'Agosta
14:40	Political Roadmap - outlook	Karin Kienzl-Plochberger
15:00 - 15:20	Coffee Break	
15:20-16:20	Panel discussion with members of the Strategic Political Committee	Moderator: Gianluca D'Agosta
16:20	Résumé of the Conference and the project: Enhancing the quality of life of Central Europe citizens with technical solutions	Olga Štěpánková, Peter Brezany
16:45	End of the Conference	

Conference language: English
Moderator: Olga Štěpánková (Czech Technical University in Prague)

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Localization of the partners

Why SPES?

Brief introduction

EU Project SPES (Support Patients through E-Service Solutions) is aiming at transferring the positive approach and results achieved in the e-Health sector to 4 cities in the Central Europe Area. It offers a solution for 4 different target groups in 4 different local contexts, namely users with respiratory problems in Ferrara (Italy), with dementia in Vienna (Austria), with different disabilities in Brno region (Czech Republic) and users endangered by social exclusion in Kosice (Slovakia). The SPES project implemented a technology platform, connected to different medical devices and installed at patients' home, thus creating both a link towards medical care providers or towards other patients and a system able to monitor the patients' health status or to provide help to people, i.e. suggesting activities to do.

Political road map

The Roadmap on "Promoting the adoption of telemedicine services in the Central Europe area" is mainly based on the findings, results and contributions achieved during the Strategic Political Committee's meetings and on the findings or observations described in a questionnaire that all the partners were asked to fill in.

In the four regions of the SPES-project (Austria, Czech Republic, Italy and Slovakia) specific strategies at national and local levels to promote the implementation of assistive technologies (e-Health, AAL and telemedicine) have been developed.

The different legal frameworks and policies as well as the varying composition of stakeholder networks contribute to differences in the status quo concerning the state of implementation. The key aims of the stakeholders in all four countries are raising public awareness, realising projects and establishing test cases, implementing standards and interoperability, ensuring technical and financial means as well as commitment by policy makers. Also a set of different risks concerning the implementation of e-Health, Telemedicine and AAL are mentioned such as affordability, loss of contact and communication with clients and stake-

holders, personalisation of products and data protection. The paper gives in its conclusions not only a review of the present state but it proceeds by recommendations for further steps.

Green paper:

"How Central Europe can contribute to achieve the goal of a European e-Health area?"

This is the question that has led to the development of SPES project: how to contribute to improvement of the quality of life for European People. We are convinced that the introduction of telemedicine solutions in the care provision is a way to improve quality of care services and, then, quality of life of population in general. The Green Paper produced by the project individuates key concepts and requirements collected from the analysis of other initiatives active on the same territorial contexts of SPES. These requirements are split in three main groups: Community, Operational and Strategic requirements. Each group focuses on different success factors on a telemedicine project: which type of community is beyond the project, what technical solutions can be used and why this specific project is necessary. The Green Paper presents the results of the survey made with the contribution of the partners and the participation of several stakeholders.

White paper:

Implementing a telemedicine project, even if not really innovative from the technical point of view, may have a real innovative impact on several elements of care provision. In particular it impacts the people involved in the project, doctors and patients, families or caregivers and organizations facing to innovations.

Several times, these all projects have to face with external frameworks, like, for example, economic situation and legal constraints, that regulate the project and influence the final results.

The White Paper produced by SPES wants to identify the constraints that limit the borders of space where a telemedicine project can move and to understand if some of these barriers can be removed or, at least, defined

in a shared and common way among Member States.

The experience made in SPES, during the last three years of activities, provides several lessons learned, including also topics related to the legal aspects of dealing with private data in a shared context. This experience may raise the attention to different issues that have to be faced by politicians and decision makers in the future to reach a European e-Health Area.

List of interesting projects

The main objective of SAAPHO is to support Active Ageing by assisting seniors to participate in the self-serve society preserving and enhancing independence and dignity through the application of innovative ICT-based solutions

www.saapho-aal.eu

HAIVISIO wants to enhance visibility and awareness on the results generated from eHealth, Active Ageing and Independent Living projects, supporting a community building around these results, through a series of communication activities and synergies exploration.

haivisio.eu

Netcarity supported older people living alone at home by using innovative technology and systems to provide security, wellbeing, independence and confidence.

www.netcarity.org

The objective of the MonAMI project is to demonstrate that accessible, useful services for elderly and disabled persons living at home can be delivered in mainstream systems and platforms.

www.monami.info

HomeSweet project supports the daily activities of elderly people, keeping them in contact with friends and family with the minimum possible intrusion into their life, unless, of course, the system detects that help is required.

www.homesweethome-project.be

GOOD PRACTICE FROM PILOTS

Vienna Pilot

In recent months, the focus of the Vienna Pilot has been placed on further development of the IT application for older persons with dementia that includes a specific user interface and modules for access to the internet, brain stimulation games, radio, clock, private appointment books and personal memory books. User-centered design has been strictly applied: the development team has been in continuous contact with the test persons so as to obtain the optimal user friendliness.

In the field of orientation support, a technical solution was found ena-

bling localization devices to communicate with the PC so that persons who have become lost can also be localized via a PC screen. To prevent dangerous situations, visual and acoustic alarm systems were linked, and in the areas 'Talking Key' and 'Finding Things Again' extensive efforts were made to accelerate the functions and make them more audible to the test persons.

We could observe all the time that many persons with dementia like dealing with the computer, provided they receive individual assistance and can reach the content of their interest in a simple manner. They

enjoy this as an opportunity to access their interests, e.g. their favourite music on YouTube, pictures of their places of origin or a non-complicated game. If working on the PC is fun, this has a stimulating and activating effect on people in many respects. Further Viennese test cases, such as 'Preventing Dangerous Situations', enable ensuring safety of persons with dementia in accordance with the Vienna Act on Residence in Homes while restricting their liberty as little as possible. This result has been confirmed in many tests over the past months as well.



User interface of Vienna's pilot



Social event promoting health and welfare of senior citizens organized at Villa Reginna in Ferrara

Ferrara pilot

Ferrara Pilot successfully concluded by the end of April 2014. Over 25 patients with respiratory disease, in charge of AUSL Ferrara, were involved in the health monitoring through telemedicine. A high percentage of patients (more than 80%) has performed the assigned duties and activities and has reported the good capacity to interact with the system.

In addition, patients have appreciated the possibility to visualize and store their clinical data measured with the provided device in a very easy manner. They confirm to feel more self confident, mainly for two reasons: (1) patients feel safer and serene because they perceive that the specialist constantly monitors his or her health conditions; (2) pa-

tients refer to be better able to self monitor their health parameters. Patients feel to have more control on their lives by having their health parameters self monitored at home.

Košice pilot

The Košice pilot aims to provide an interesting combination of hardware and software for elderly in order to support their social inclusion. The offered package contains a laptop with OS Windows 7, USB modem for 3G mobile internet connection with prepaid internet plan for the duration of the pilot and two supported medical devices (glucose monitor or blood pressure monitor). For the software part, the SPES platform specifically tailored for the Kosice pilot is provided. It offers a number

of social and communication services which were designed based on collected requirements and expectations of identified target group. Main outcomes identified through collected questionnaires within pilot target group are overall improvements of IT skills; increased frequency of e-services usage and more possibilities to monitor and manage the health status. Main technological outcomes are two device driver libraries for the communication with medical devices and five software modules (chat, measurements manager, RSS aggregator for accessing local news, information wall for sharing short messages, questionnaires) fully integrated within SPES platform.