Project Achievements

CELTIC Telecommunication Solutions

HIgh PERformance teleMEDicine platform

HIPERMED offers a high performance telemedicine platform based on a unified Service Oriented Architecture providing media services, SIP-based plane services and network services over the Internet Protocol, which supports remote consulting, tele-teaching and distributed consensus decision-making on treatment programs and with the possibility of implementing any sort of healthcare unit. HIPERMED platform is open to third parties to integrate their eHealth solutions for both Professional-to-Professional and Professional-to-Patient scenarios.

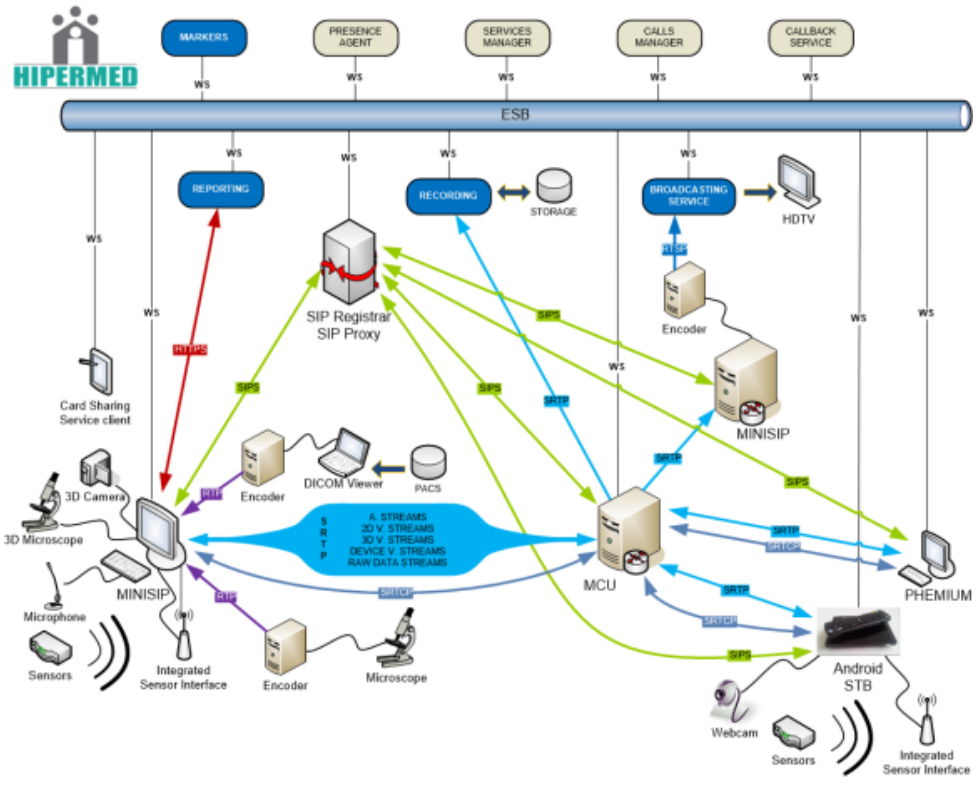
Main Focus

The project exploited and extended the results from the HDVIPER CELTIC project (www.hdviper.org) and has been tested and validated in the Professional-to-Professional healthcare scenarios (teleconsultation second opinion on diagnosis and treatment, remote support during surgery and education) proving a stable and reliable solution for integrated telemedicine services.

Services: integration of high definition videoconferencing, video streams from endoscopes and other medical instruments, stereoscopic video streams providing true depth perception, measurement data from sensors on patients and sharing of high resolution digital medical images.

Network: high performance low cost network solution based on open source software, selected standard hardware components and virtualized network resources supporting the HIPERMED communication services between hospitals and homes of patients and stand-by health workers.

Vision: HIPERMED's vision aimed to be



HIPERMED

Project ID: CP7-007

Start Date: 1 July 2010

Closure date: 31 December 2013

Partners:

Androme Ibérica, Spain

Borderlight, Sweden

Fundació Privada I2CAT, Internet I Innovació Digital a Catalunya, Spain

Informática El Corte Inglés S.A. (IECISA), Spain

Innova IT Solutions, Turkey

Karolinska Institutet, Sweden

Kungliga Tekniska Högskolan, Sweden

Merkum Energética, Spain

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Project Website

www.celticplus.eu/project-hipermed

www.hipermed.org

THE STANDARD telemedicine high performance solution delivering services from a healthcare provider or wellness service to the citizens, among health professionals or among citizens and family members.

Approach

Telemedicine is not a specific technique or piece of equipment; it is a process of delivering healthcare services. It involves combining traditional medical care with the efficiency of current telecommunications technology to deliver health care on a global scale.

The union of health care and ICT provides the opportunity to expand the availability and affordability of health care services, - and particularly the access to specialists. Telemedicine's benefits include: improved quality of care, more educational opportunities for health care providers, lower costs and the potential for economic growth.

The services that the HIPERMED platform is covering - features on the client, recording, multiparty service, reporting tool and secure sessions, medical image sharing with markers integration, cards sharing, sensors integration, SIP registrar, broadcast control and HDVIPER legacy services - are so easy to use that Ph. D. Gallet from CHU Nancy stated during the Final Review that he is considering deploying the HIPERMED solution for a network of hospitals in the east of France.

Achieved Results

The HIPERMED platform has demonstrated to give positive responses to the challenges Health Systems are facing:

- Provide responses to Europe's (and worldwide) changing demographics, disease patterns and overcharging health care capabilities.
- Help to deliver better care for less money while fostering technological innovation.
- Involve all the stakeholders such as National Healthcare, health professionals, industry and patients.
- Interoperate with the different standards giving a solution of interconnecting the number of different health systems' structures and services.
- Information-sharing and best practice identification involves specific topics such as security, privacy, data protection and safety, using the appropriate regulations and protocols.

Also new prototypes and services have raised up during the project such as:

- New cardio-respiratory telerehabilitation capabilities to be exploited with specific hospitals.
- E-health applications for Interactive Set-up box on Android.
- Specific TV devices and TV internal hardware.
- Specific inertial low consume rehabilitation sensors able to capture patient movement information and deliver to another device for storing and data treatment.

Impact

HIPERMED has been the first cross-domain project involving eHealth professionals from definition to validation. All the scenarios have been validated with a common methodology involving final users (doctors, professors and patients) to validate HIPERMED both in technical and usability aspects got good acceptance, with positive responses to the usefulness of the system.

HIPERMED allows reusing in-home infrastructure in the professional-to-patient scenarios minimizing the deployment costs.

HIPERMED is based in one common OPEN platform providing services to professionals and patients.

Professional-to-Patient users are willing to accept to pay for the services.

Professional-to-Professional scenario tests conclude that the utilization of the HIPERMED platform will save resources and reduce time and costs.

Five products have been improved while 7 new products are in the market thanks to HIPERMED project. The expected project ROI is over 100 times its development costs.

27 presentations, publications and conferences attended by the consortium members.

HIPERMED leads the standardization process on video coding for medical purposes. The results of HIPERMED will be used in the frame of E3 Celtic-Plus project labeled on November 27th 2013 C2013/2-4, aiming to design an E2E platform able to allow Everybody access to E-health services Everywhere.

About Celtic

Celtic is a European research and development programme, designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. Celtic is currently the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

Timeframe: 8 years, from 2004 to 2011

Clusterbudget: in the range of 1 billion euro, shared between governments and private participants

Participants: small, medium and large companies from telecommunications industry, universities, research institutes, and local authorities from all 35 Eureka countries.

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