



Personal Health Service Framework

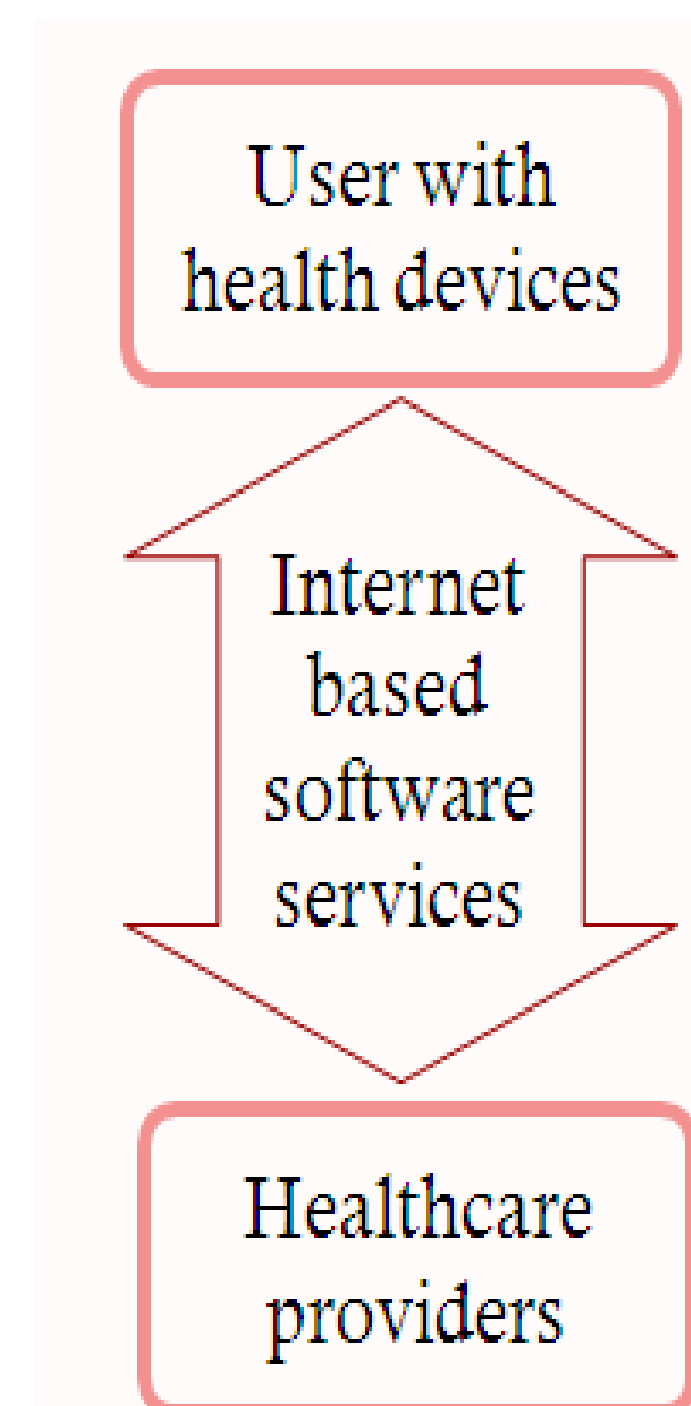
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PHSF

Motivation

One of the most important issues in e-health is the linkage between data obtained from a personal health device and health-care providers. The motivation of this research is to provide this linkage by proposing architecture for mobile healthcare that provides real-time data transmission of the health status of patients to the appropriate provider and helps manage and use these information.



Introduction

Along with improvements in Cloud Computing, service oriented architecture, and Electronic Health Record (EHR) -as a territorial database- the need for having a more pervasive health system can be felt that makes use of these new advancements to glue together health monitoring sub systems in a more practical way, and form a concrete connection between health-care providers and patients, that is not limited to specific providers. In our proposed solution, we suggest a framework called personal health service framework (PHSF). PHSF consists of a set of WEB services, each of which is responsible for special monitoring tasks. These services are integrated as an intermediary component and together cover all the functionalities needed for patients and providers communication.

PHSF consists of a set of Internet-based software services that are integrated to support functionalities needed for bridging personal health devices and healthcare providers

Responsible for communicating with personal health devices.

- Health data collection services
- GPS services
- Trigger monitoring and stop monitoring services

These services are server side intermediary services, and communicate with services on lower layers, such as store and retrieval services.

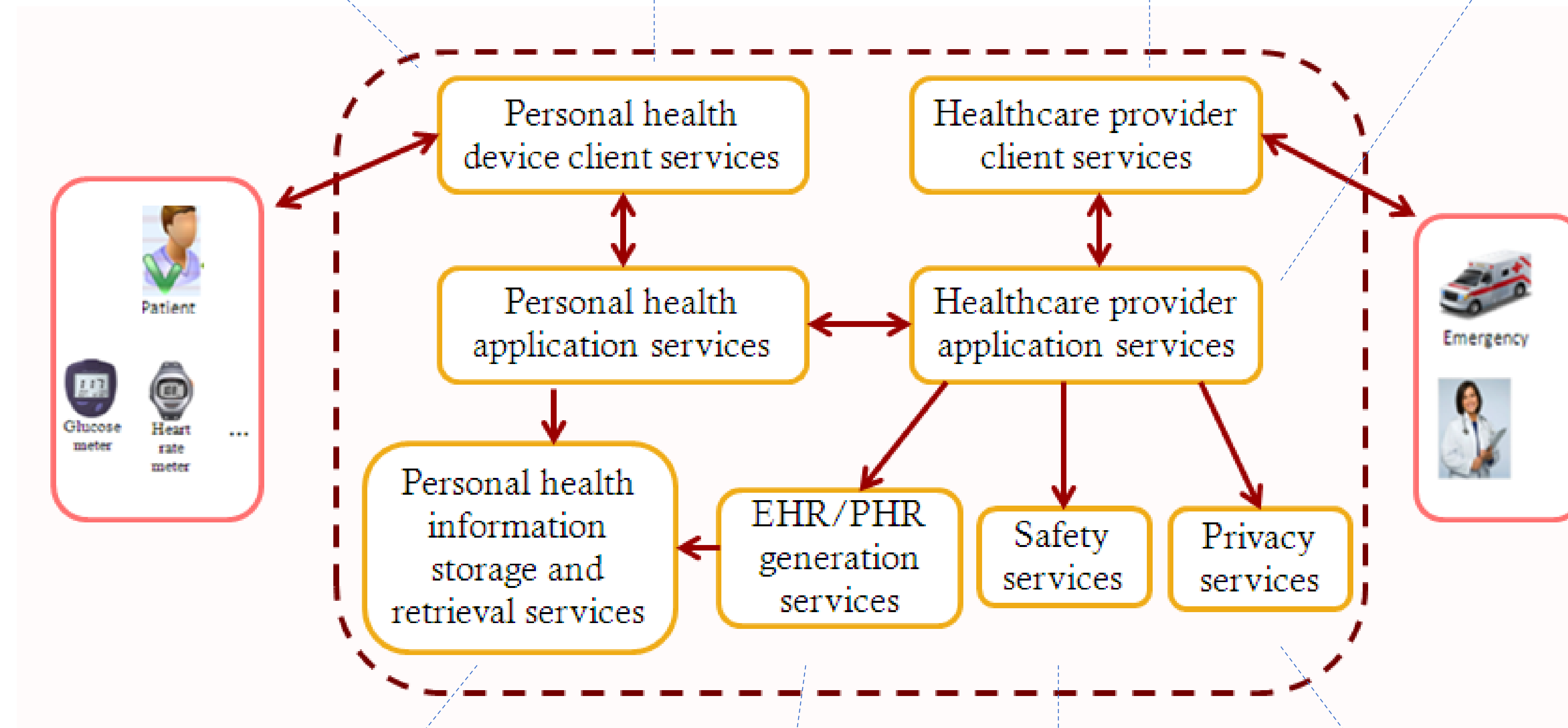
- Registration services
- Feedback, alarm and reminder services
- Emergency call services

These services are responsible for communicating with and gather data from healthcare providers.

- GPS services

These services are server side intermediary services, and communicate with services on lower layers, such as safety and privacy services and PHR/EHR generation services to retrieve data.

- Registration services
- Feedback and alarm services



- Retrieval services
- Transformation services
- Storing services

Transformation services (To generate EHR or PHR from inputs retrieved from Information Storage and Retrieval Services)

To make sure that any instructions from health care providers to operate personal health devices do not cause safety problems for patients.

To make sure patient's personal heal information can only be accessed by proper and authorized health care providers.

Applications

- Virtual Remote Nursing System
- CardioNet: distributed healthcare system
- ISISEMD: delivery of ehealth services for elderly people with mild dementia
- Medication treatment management in chronic care
- E-health services for the elderly at home and on the move
- Personal healthcare modules

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