Evolving Mobile U-Health Service System

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1. Introduction

On the other hand, we can offer healthcare services such as blood sugar, body fat, heart rate, stress, and fatigue management using mobile terminal. We can also get various bio data such as ECG, pulse rate, blood sugar level, and body fat ratio through existing sensors[1-2].

In this paper, we propose a new approach for design of mobile u-healthcare system by defining an essential service group of mobile healthcare services. In addition we choose common service elements for the proposed u-healthcare and design the service platform. Especially we focus on automatic urine sensing u-health system to prove the effectiveness of the service platform.

2. Mobile U-health Service

Although there can be different definitions for mobile u-health service according to their points of view, we define a real-time service that can be obtained from a mobile terminal while we are moving. In other words, we can get, store, manage, and analyze the mobile bio data to apply the corresponding user to do a proper follow-up at proper time or directly cure the disease as an advanced service. In addition, mobile u-health system is defined as an integrated scheme including bio sensors, terminal, and related software and hardware, which needed to provide mobile u-health service defined above.

Mobile u-health system generally consists of the following core elements and their corresponding technologies, although there are other kinds of systems in our initiative u-health world [3];
• Framework for collection of bio data
• Framework for storage and management of bio data
• Framework for analysis of bio data
• Framework for mobile u-health service

Based on these cores, we pictorially present our structure of mobile u-health service as shown in Fig.1.

In this section, we present the architecture of mobile u-health service platform with its core elements and their roles. We explain the capabilities of the platform in connection with applications, expert system, and their related databases. Fig.2 shows the structure of mobile u-health service platform offered from this point of view[4].

We design and implement a u-health service which automatically senses feces and urine of patients and informs to their guardians through mobile text transmission service based on the concept of mobile u-health service platform represented in the last section. We also present that the system can realize functions such as patient monitoring, informing abnormal phenomena, communication between bio terminal and server, receiving the messages and analyzing them to achieve the original purpose of u-health service[5-7].
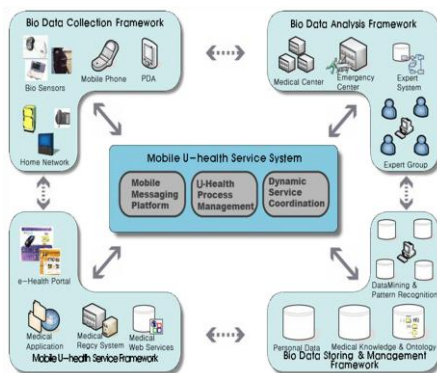

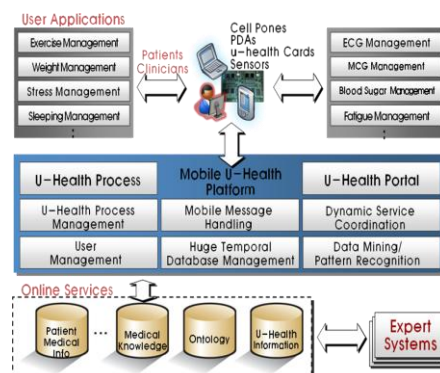Fig.1 Structure of Mobile U-health Service

Fig.2 Mobile U-health Service Platform

3. Conclusion

We proposed a new scheme of u-health service platform and we designed and implemented our u-health scheme based on feces and urine sensing capabilities in this paper. We also prove that the propose scheme is useful in the area of u-health system for the handicapped, the elderly, and patients.

In addition we offered common service elements for mobile u-health and the service platform. Especially we focused on automatic urine sensing u-health system to prove the effectiveness of the service platform. Experimental results show that our system can be used for the real world u-health purpose with the advanced developing tools for application or service developers.

We can expect a higher usability of the mobile u-health system if they are connected with the corresponding expert systems. This is our future research topic.

4. References

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