

Computing for Human Services

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Mobile Web Model to Serve Healthcare

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25.1. Introduction

The Internet, with its powerful penetration and scalability, has become an increasingly popular medical information resource. It plays an essential role in linking all the participants in the health community. Over the past few years, telemedicine has made considerable progress. According to a study from research firm Pike & Fischer, wireless and mobile applications and devices will account for 70 percent of a U.S. telemedicine market that's expected to reach \$3.6 billion a year by 2014 [1]. With the development of mobile phones, the services based on mobile communication are becoming more attractive and promising than traditional Web services. Analyst firm Nielsen Online has found that the mobile internet usage is growing while the number of people going online via PC is slowing. Only during the second and third quarters of 2008 some 7.3m people accessed the net via their mobile phones. This shows an increase of 25% compared to a growth of just 3% for the PC-based net audience – now more than 35m [2]. Many of the current Malaysian medical information and emergency systems are still paper-based and stand alone systems that do not fully utilize the Internet, multimedia, wireless and real time technologies. Even though some of the medical centers use electronic medical storage system for storing patients' information, mostly those systems are not shared between hospitals and they are not integrated with the emergency system [3]. The current medical information, healthcare, and emergency systems in Malaysia have several drawbacks that can be summarized as:

- They are mostly local, stand alone, and paper-based systems. Patient medical records cannot be shared or viewed by other hospitals or health care centers; this result in doctors from different hospitals or healthcare centers are not able to view patients' historical medical records in, which is very risky specially in emergency cases.
- Lack of real-time and mobility access in both emergency and medical information cases. This doesn't enable people to getting immediate assistant in the case of emergency.
- The existing systems are mostly window – based, costly and do not fully utilize open source technology.