THE PROSPECTS OF VOICE-ENABLED HEALTHCARE SYSTEM IN AFRICA AND OTHER DEVELOPING NATIONS

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Abstract

Healthcare, embraces all the goods and services designed to promote health, including preventive, curative and palliative interventions whether directed to individuals or to population and health systems involve all the activities whose primary purpose is to promote, restore or maintain health.

People search websites and read books for their health concerns and for loved ones. Access to quality healthcare in the developing countries is either limited or nonexistent. In Nigeria and in other developing nations, people die of minor illnesses that could have been prevented with simple medications and healthy lifestyle. Low literacy level has been equated to early death sentence and the less affluent and the less educated are also invariably less healthy. However, in the advanced societies and to a certain level in the developed countries, life expectancy has been increasing, but the increase according to research is noticed more in the better-educated groups.

In the developing countries where the level of literacy is low, in places where reading culture is low or absent and where the ratio of doctors to population is brazenly too small, there is a need to find alternative means of providing quality health information and healthcare for the people through a more accessible means to bridge the existing gaps. Fortunately, the number of mobile phone users in Africa continues to rise steeply, making the continent an alluring target for both network operators and handset manufacturers, as well as bringing positive knock-on effects for economic development.

Although there are existing e-health portals that provide health information resources and healthcare services, however, the resources provided by these sites are not within the reach of the low-literates, the blind, the visually impaired and those that are not computer literate. There have also been several initiatives of speech-based eHealth systems, but none is patients-centered. Also, generally, none has made use of any reasoning technique especially the dementia disease screening system. This work exploits the increase in the usage of mobile devices in the developing nations and Africa particularly and discusses the prospects voice-enabled healthcare system that incorporates the use of rule-based reasoning technique to diagnose diseases and that enables access to health information such as diseases and their prevention, treatment of diseases, specialist doctors directory, alternative therapy, fruits therapy and medical researches results through voice user interface (VUI) so that those not catered for in the use of graphical user interface will have access to the same information and services through phone for self-care.