User-Centered Multi-touch Slate Computing Interface Design for EHR

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Abstract

Project Galen is an ongoing student developed, free to use, standards-based EHR that takes advantage of high-performance slate computers with multi-touch capabilities. Project Galen employs user-centered design techniques that reduce the depth of hierarchical structures that are commonly found in menu driven EHR systems. Project Galen looks to reduce medical errors by eliminating post hoc data entry, and by employing real-time data analyses and visualization techniques to allow clinicians to make better-informed decisions.

Introduction

One of the primary goals of moving to an EHR is to reduce preventable medical errors [1]. Current EHR systems however are complicated and unintuitive in nature, creating difficulties in finding and interpreting critical patient information in a timely manner [2]. This difficulty of use is likely to be a source of human errors or omissions.

Several barriers have been identified that are slowing down the adoption rate and full utilization of EHRs, particularly in patient consultations. These barriers include loss of physician-patient eye contact, sluggish EHR software response, inability of the clinician to type quickly enough, and preference for writing long prose, as well as a variety of usability issues [3].

The central goal of this phase of the project is to develop a user-centered EHR interface that is modular in nature and takes advantage of a current multi-touch slate based platform. This interface will minimize the number of steps it takes to perform a given task as well as task time and is expected to streamline clinicians' access and data entry, reducing the potential of human error, while addressing the perceived barriers which prevent EHR from being brought into patient consultations.

References

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