Chapter XII

Using Continuous Voice Activation Applications in Telemedicine to Transform Mobile Commerce

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ABSTRACT

This chapter is designed to relate the rationale used by the Department of Defense (DoD), for the military to adapt the principles of Mobile and Voice Commerce to meet increasing global crises and to find ways to more effectively manage manpower and time. A mobile Telemedicine package has been developed by the Department of Defense to collect and transmit near-real-time, far-forward medical data and to assess how this Web-based capability enhances management of the battlespace. Telemedicine has been successful in resolving uncertain organizational and technological military deficiencies and in improving medical communications and information management. The deployable, mobile teams are the centerpieces of this telemedicine package. These teams have the capability of inserting essential networking and communications capabilities into austere theaters and establishing an immediate means for enhancing health protection, collaborative planning, situational awareness, and strategic decision making through Web-based internet applications. In order to supplement this mobile commerce aspect of telemedicine, U.S. Navy ships have been utilized to integrate voice commerce interactive...
technologies to improve medical readiness and mobility. An experimental group was tasked to investigate reporting methods in health and environmental surveillance inspections to develop criteria for designing a lightweight, wearable computing device with voice interactive capability.

This chapter is also designed to relate the rationale used by the Department of Defense and the Test and Evaluation (T&E) Integrated Product Team, in order to determine the military utility of the Joint Medical Operations—Telemedicine Advanced Concept Technology Demonstration (JMO-T ACTD) and continuous voice activation applications. Voice interactive computing devices are used to enhance problem solving, mobility and effectiveness in the battlespace. It improves efficiency through automated user prompts, enhanced data analysis, presentation, and dissemination tools in support of preventive medicine. The device is capable of storing, processing, and forwarding data to a server. The prototype devices have enabled quick, efficient, and accurate environmental surveillance. In addition to reducing the time needed to complete inspections, the device supported local reporting requirements and enhanced command-level intelligence.

This chapter further focuses on developing a holistic model of implementing a strategy for mobile telemedicine. The model synthesizes current thinking on transformation into a holistic model and also explains the integrative influence of vision on the other four model components: environment, people, methodology, and IT perspective. The model was tested by Testing and Evaluating (T&E) the JMO-T ACTD. JMO-T ACTD has developed a very successful training program and is very aware of the importance of planned change. Top military officials, such as the Commander in Chief (CINC), are actively involved in change and are committed to people development through learning. The model served an applied purpose by allowing insights into how well the military organization fit current theory. The model also fit a theoretical purpose by organizing a holistic, comprehensive framework. Accordingly, we have organized and synthesized the literature into five interrelated components that act as a fundamental guide for research. The model also helped to identify a theoretical link and apply it to the internal operations of the military and its adaptation of mobile e-commerce principles to more effectively deliver telemedicine benefits to military personnel.

**INTRODUCTION TO TELEMEDICINE, MOBILE AND VOICE COMMERCE ISSUES**

Telemedicine is an approach of providing care for patients that are geographically separated from a doctor. Telemedicine allows a doctor and a patient to interact with each other using computer networks. Telemedicine, when used in military, has
The Impact of Age on Electronic Commerce Participation: An Exploratory Model
www.igi-global.com/article/impact-age-electronic-commerce-participation/40248?camid=4v1a