A preliminary review of implementing Enterprise Mobile Application in ERP environment

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***Abstract*—This paper focuses on groundwork assessment of Enterprise Mobile Application (EMA) in Enterprise Resource Planning (ERP) environment which presents implementation challenges to mobile application development framework. Generally, there are five layers of taxonomies of enterprise mobile application such as mobile broadcast, mobile information, mobile transaction, mobile operation and mobile collaboration. But, we need one more layer as a mobile administration to control and monitor users and mobile devices which remotely monitored and controlled by administrators.**

Keywords-enterprise; resource; planning; framework; taxonomies.

I. INTRODUCTION

In recent years higher learning institute has been strongly influenced by global trends, especially as a result of the call by governments for universities worldwide to improve their performance and efficiency. Rising stakeholders' expectations (particularly students and governments), quality and performance requirements, and competitive education environments, along with decreasing governmental support, have pressured universities worldwide to adopt new strategies in order to improve their performance [1]. As a result, the higher learning institute has curved to Enterprise Resource Planning (ERP) systems in supporting them to deal with the changing [2]. Existing management and administration computer systems have been replaced by ERP in these institutions [1], to achieve more efficiency and accessibility for all members and improve end users performance by providing better managerial tools [3].

ERP is basically the integration process for all business functions and processes in the organization – different business modules: HR, FI, Students affair, Inventory, Warehousing, etc… - to achieve numerous benefits by reengineering the organization work flow to achieve the centralization of information, decision-making, and control leads in order of increasing the efficiencies of operations and productivity, as well as coordination between all departments and divisions, this nature of sharing the database provides business managers in the organization with accurate and up-to-date information to make well-informed business decisions.

Using EMA in this field plays main role in achieving much more benefits. EMA has the capability to provide a best solution that needs to make the business available twenty four hours seven days, regarding achieving business richness, remote business and enhance productivity, this leads to have high quality business that enables decision makers making their decision based on real time data deliver to their mobile devices at once anywhere. Nevertheless, we shouldn't neglect the security issue regarding stakeholder permissions, in order to accomplish secure phase of communication.

II. ENTERPRISE RESOURCE PALNNING

A. Introduction to ERP

"Enterprise resource planning (ERP) systems are widely used by large corporations around the world. Recently, universities have turned to ERP as a means of replacing existing management and administration computer systems."[13]

ERP applications are most commonly deployed in a distributed and often widely dispersed manner. While the servers may be centralized, the clients are usually spread to multiple locations throughout the enterprise.

Generally there are three functional areas of responsibility that is distributed among the servers and the clients. First, there is the database component - the central repository for all of the data that is transferred to and from the clients. Then, of course, the clients - here raw data gets inputted, requests for information are submitted, and the data satisfying these requests is presented. Lastly, we have the application component that acts as the intermediary between the client and the database. Where these components physically reside and how the processes get distributed will vary somewhat from one implementation to the next. The two most commonly implemented architectures are outlined below.

B. Two-tier Implementations

In typical two-tier architecture, the server handles both application and database duties. The clients are responsible for presenting the data and passing user input back to the server. While there may be multiple servers and the clients may be distributed across several types of local and wide area links,