Abstract - Software cost estimation is no longer an art but a science. Since 1980s, software cost estimation models have been developed for academic and commercial applications development. Today, proper software cost estimation not only applicable to standalone applications but also to web applications. In older days, web application development was developed on ad-hoc basis. It required rapid development with minimum time. It seldom followed standard development process. Cost estimation for web application development always followed the rules of thumb and estimation by analogy. Nevertheless, we could not afford to prolong these practices as it will eventually lead to immature software development. Apparently, software cost estimation practice is evolving to web application development. Research and development have been done since the early of this millennium and researchers are busy looking forward to better practice of web application cost estimation.

Keywords: Web application cost estimation, web application cost estimation methods, web application cost estimation models, and web application cost estimation metrics.

1 Introduction

Web application cost estimation is referred to the use of estimated effort and time figures to determine the estimated cost of web application development. The accuracy of web application cost estimation is heavily relied on the proper methods and tools used. There are two methods of web application cost estimation; i.e. Non-Algorithmic and Algorithmic [1]. Algorithmic method is referred as the practice of parametric software cost estimation using parametric software cost estimation model. Parametric software cost estimation model is referred as the mathematical software cost estimation model embedded with formula of effort and time estimation to produce the derived estimated cost. There are a number of parametric software cost estimation tools in the market serving both commercial and academic purposes. Non-algorithmic method is referred as non-mathematical model based software cost estimation. Further elaboration of these methods will be highlighted in the later section.

In this paper, the current applicability of web application cost estimation methods, parametric web application cost estimation models and metrics will be presented, elaborated and discussed. This paper reviews the current practices on web application cost estimation and the relevant web application cost estimation metrics or cost factors for the future development of web application cost estimation tool. A survey has been conducted to identify the existing applicability of web application cost estimation practices in selected countries in Asia. The research finding and analysis will be discussed in this paper.

2 Body

This paper is divided into 4 major sections. Section 1 of the paper will explain web application cost estimation and the existing web application cost estimation methods, models and metrics.

Section 2 of the paper covers the survey being conducted based on the metrics of Constructive Cost Model (COCOMO) II in order to identify the relevant web application cost estimation metrics for web application development. The metrics in the survey is chosen based on COCOMO II model, the most widely used parametric software cost estimation model.

Section 3 discusses the result of the survey on applicable web application cost estimation practices and analysis of the survey result to the practice of software cost estimation particular in web application cost estimation in selected countries in Asia.

Finally in the last section of the paper, the future development of the research is presented and discussed.