DEVELOPING AN AUTOMATED TENDER EVALUATION SYSTEM FOR INFORMATION TECHNOLOGY PROJECTS (ATES)

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ABSTRACT

Tender evaluation is an important part of a tendering process. The purpose of it is to help an organization in selecting the most suitable contractor to award the tender. There have been many issues on the criterion used in evaluating a tender. This criterion varies from one type of tender to another based on the type of the tender such as for work or IT projects. Currently, lowest price offered is one of the most important indicators taken under considerations by both type of tenders. However, there are also other indicators used in tender evaluation. The ability for the tender participants or the bidder to fulfill the technical requirements is also considered as an important indicator in evaluating a tender. There are other indicators as well such as work experience, qualifications of employees, past performance, financial capabilities and so on that is still need to be taken into consideration in evaluating a tender. This study is done to identify the criterion used in evaluating the tender of IT projects and a requirement model is then proposed based on the criterion found for an automated tender evaluation system. This requirement model is then reviewed by one of the experienced tender evaluation committee members to verify the completeness of functionality, the efficiency and the ease of use of the proposed model through a developed prototype.

ABSTRAK

Penilaian tender adalah satu bahagian yang penting dalam proses tender. Ia bertujuan untuk membantu sesebuah organisasi dalam memilih kontraktor yang paling sesuai untuk diberikan sesuatu tender. Terdapat pelbagai isu tentang kriteria yang digunakan dalam menilai tender. Kriteria-kriteria ini berbeza dari satu tender ke satu tender yang lain mengikut jenis tender tersebut sama ada tender untuk kerja atau tender untuk projek teknologi maklumat. Mengikut amalan semasa, penawaran harga terendah adalah salah satu indikator yang penting yang diambil kira bagi kedua-dua jenis tender. Walaubagimanapun, terdapat juga indikator-indikator lain yang digunakan dalam penilaian tender. Kebolehan setiap petender untuk memenuhi keperluan teknikal juga diambil kira sebagai indikator penting dalam menilai sesebuah tender. Terdapat juga indikator-indikator lain seperti pengalaman kerja, kelulusan pekerja, prestasi kerja, keupayaan kewangan dan sebagainya yang perlu diambil kira dalam menilai sesebuah tender. Kajian ini dijalankan untuk mengenalpasti kriteria-kriteria yang diambil kira dalam menilai sesebuah tender bagi projek teknologi maklumat dan sebuah model keperluan dicadangkan dalam kajian ini berdasarkan kriteria-kriteria yang dikumpul bagi memenuhi keperluan sistem penilaian tender secara automatik. Model keperluan ini kemudiannya disemak oleh salah seorang ahli jawatankuasa penilaian tender yang berpengalaman bagi mengesahkan kelengkapan fungsian, keberkesanan dan kemudahgunaan model yang dicadangkan melalui prototaip sistem yang dibina.

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LIST OF ABBREVIATIONS

ATES	Automated Tender Evaluation System
EU	European Union
IT	Information Technology
iWDSS	Intelligent Web-based Decision Support System
MCDM	Multi Criteria Decision Making
MOF	Ministry of Finance
NSW	New South Wales
RAD	Rapid Application Development
UML	Unified Modeling Language

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Tender evaluation is one of the most important parts of tendering process. The evaluation process plays a major role in helping the tender board members in selecting a suitable contractor to be awarded with the tender. Tender bidding by the participants will be evaluated based on certain criteria and only one suitable contractor will then be selected and awarded the project (Cha, Chiu & Hung, 2007).

As tender evaluation took place at the early stage of the project life cycle, the effectiveness of the process of selecting the winning bidder is certainly important and directly related to the project success and the achievement of specified measurement objectives (Lopes & Flavell, 1998). The procedure is considered crucial and critical where the performance of the project will be affected if the evaluation is carried out without proper and accurate method (Faridah, 2007) thus affecting the organization and contractor reputation in future (Mohamad Noor et al. 2003, 2008). Therefore, the evaluation of the bidders and their ability must be coherent

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