

ELECTRONIC FACILITATION OF BILL OF QUANTITIES

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ABSTRACT

The measurement of building works and civil engineering works for preparation of Bill of Quantities has traditionally been a primary and distinct function of the Quantity Surveyors. As we all notice, construction industry is cost conscious and labour intensive. In order to overcome this situation, Quantity Surveyors have devoted a lot of time and effort to the development of computer systems for the production of Bill of Quantities. This leads to automation is absolutely one of the main areas where ICT is able to create a strong impact. That is the reason why understanding the advancement of ICT into automated preparing Bill of Quantities in current Quantity Surveying industry is very vital. Thus, this study is conducted to investigate the extent of adopting ICT in preparing Bill of Quantities. Two hundred sets of questionnaires have been sent to the Quantity Surveying firms in all around Malaysia. The scope of this study is limited to the ICT usage during the preparation process of Bill of Quantities. The raw data obtained are analysed using frequency analysis, ratio analysis and Likert scale analysis. At the end of this study, it summarise the types of hardware, software and infrastructure used by Quantity Surveying firms to prepare Bill of Quantities. In addition, this study will investigate about the investment, maintenance, advantages and disadvantages of preparing Bill of Quantities by adopting ICT.

ABSTRAK

Pengukuran kerja bangunan dan kerja kejuruteraan awam untuk persediaan Senarai Kuantiti adalah fungsi utama Juru Ukur Bahan secara traditionalnya. Seperti yang kita semua dapat memperhatikan, industri pembinaan mementingkan kos dan pekerja. Untuk mengatasi situasi ini, Juru Ukur Bahan telah mencurahkan banyak masa dan usaha demi pembangunan sistem komputer untuk penghasilan Senarai Kuantiti. Hal ini menyebabkan automasi tentunya merupakan salah satu bidang utama di mana ICT boleh memberi kesan yang kuat. Oleh sebab itu, pemahaman tentang kemajuan ICT terhadap persediaan Senarai Kuantiti yang semakin automatik di kalangan Juru Ukur Bahan hari ini adalah penting sekali. Dengan sedemikian, kajian ini dilakukan untuk menyiasat sejauh mana pelaksanaan ICT dalam menyiapkan Senarai Kuantiti. Dua ratus set borang soal selidik telah dihantar ke firma Juru Ukur Bahan di seluruh Malaysia. Ruang lingkup kajian ini adalah terhad pada penggunaan ICT sepanjang process persediaan Senarai Kuantiti. Data yang diperolehi dianalisis dengan menggunakan analisis frekuensi, analisis nisbah dan analisis skala Likert. Pada akhir kajian ini, ia dapat meringkaskan jenis peranti keras, perisian dan infrastruktur yang digunakan oleh firma Juru Ukur Bahan untuk menyiapkan Senarai Kuantiti. Selain itu, kajian ini akan menyiasat tentang pelaburan, penyelenggaraan, kelebihan dan kelemahan mempersiapkan Senarai Kuantiti dengan menggunakan ICT.