BUSCLIS for Construction Industry

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Abstract. In this research, we focus on software namely Building Submission Checklist System (BuSCLIS) that has been developed to be use in construction industry. An objective of developing BuSCLI is to simplify the management of submission data of building plan approval through online system for the Local Authority (LA) or State Town and Country Planning in Malaysia. We presents the data management of the system through the data dictionary include login, user, contractor, consultant, checklist, location and project. BuSCLI facilitates user by computerized the forms and provide fast, efficient, transparent, effective service to the engineer, architect and contractor. Relevant and timely information managed by sophisticated BuSCLI with the database management system, MySQL.

Keywords: BuSCLIS, building plan, RAD, data dictionary.

1 Introduction

A mechanism is required to promote knowledge sharing among its diverse industry players. To set up a knowledge database for the construction industry would require a huge amount of resources especially in the application of information and communication technology or ICT. Regardless of the potential of Enterprise Resource Planning systems to increase productivity and internal ICT efficiency, construction companies hesitate to adopt these ICT solutions [1]. The construction sector is also not making full use of the potential of collaborative systems for information sharing and coordination with external partners while construction companies do not take advantage of ICT solutions for digital information exchange and sharing documents on-line. Therefore mostly of activities or process in construction industry still using conventional system. The construction industry has been one of the last industries to harness the power of information and communication technology (ICT). With the view that construction is a business like others and clients now expect quality product, this perception should begin to change. Advance in ICT are causing dramatic changes in construction and built environment. Using ICT may helps construction industry such as facilitate integration of various processes in the construction, standardization

of information and faster and fewer flow of information in industry. Most activities or processes in construction industry still using conversional system. Because of utilizing of ICT become wisely, some changes need to do in activities and process in constructions industry.

In Malaysia, application of ICT become wisely because rapid developments of computer technologies have change the way of working environment. To assist in the process, the utilization of ICT and automated software can provide efficiency and effective solutions to the problems of mass data and information handling [1,2]. Object-oriented software engineering methodology the idea object model for the business relates to the use case model of the supporting information system [2]. One of the changes that have to make in construction industry is submission of building plan approval checklist. Before the advent of system, organization kept all their data in manual or conventional files. Basically, the manual system workflow is very inefficient and ineffective. Submission of building plan approval in manual use many forms and consumes time. Thus, it is error prone in endorsement the form.

The need for the system arises as the result of set problem faced by user in the conventional system way of performing the related task. Using conventional system, there are some problems happened. The current practice of a construction project, which involves submission of building checklist plans to the local or municipal authority for approval, is a very tedious and time-consuming process. The time involved can range from weeks to months until the approval time. Besides, Local Authority did not save any data regarding to their client. The submission of checklist process of the building plans to the relevant authorities will require several forms before submission. Such as, standard checklist for building plan approval which accordance to building categories, the fees for temporary building and other forms that related. This will waste time and sometimes user makes mistakes by fulfill the wrong document. User has to bring bundle of checklist paper and related document to be checked. This will damage the papers if it is in bad condition (rainy day) or may lost some of the checklist. By using conventional system, user cannot view the updated report for the approval submission. They have to wait until the approval time.

In this paper, we focus on the software namely Building Submission Checklist System (BuSCLI). BuSCLI facilitate users by computerized all the forms accordance to the building categories, submission, endorsement or approval through online. Heuristic and software engineering method are deployed while developing this system.

2 Literature Review

The submission of building plans to the local or municipal authority for approval in the current practice of a construction project is a very tedious and time-consuming process. The compliance process of the building plans to the relevant authorities require the authorities involved to check in particulars on the building plan for building by-laws non-compliance [8].

Building Plan Approval: Building plan approval is a stage of the approval process spans a whole range of legislative and procedural rules and requirements and necessitates the input of a host of professionals, designer and specialist. There are