## **Extension of Time (EoT) Considerations in Construction Duration Estimate for Public Construction Projects**

S N Ting<sup>1</sup>, V C Darrell<sup>1</sup>, A B H Kueh<sup>1</sup>, Y Y Lee<sup>1</sup> and C K Ng<sup>1</sup>

<sup>1</sup> Department of Civil Engineering, Faculty of Engineering, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak Corresponding author: snting@unimas.my

Abstract. Construction duration is defined as the time frame given by the Client of a project use to complete the project under normal working conditions, practice of construction. However, often times, projects faced time overruns and hence, needing to activate contractual remedies like Extension of Time (EoT). This paper aims to investigate the factors related to award the Extension of Time (EoT) for construction projects in especially in the public sector in Sarawak. A structured checklist was created as an instrument and employed to accomplish the objective of this research. A total of 111 previous public projects which were granted EoT were studied. The findings revealed several detailed factors that had typically led to project delays in the State. These findings are expected to offer the construction project duration estimates and management of construction performances, followed by the appropriate corrective and improvement measures for time management for construction projects.

## 1. Introduction

The construction sector is among the industrial sectors contributing significantly to development and the economic system in the State [1]. However, most construction projects nowadays are much more complex [2] involving many specialised material, equipment, labour and also complicated project delivery and contractual relationship. This has led to more problems and difficulties with construction duration estimation, bringing on board another issue frequently extensive project schedule and timeline [3]. Delays occurrence are becoming more rampant and this may not be cause by mismanagement of the projects but poorer time planning in the first place.

Contractual remedy laid out that if a project delay occurs, contractors are penalised and requird to pay the sum of liquidated damages (LAD) as stated in the contract. And to prevent such loss and to gain additional time for completion of the projects, contractors often times will find ways to apply for extension of time (EoT). The definition for EoT by The Society of Construction Law (SCL) as contained in the Delay and Disruption Protocol (SCL 2002), is "the additional time granted to the contractor to provide an extended contractual time period or date by which work is to be, or should be completed and to relieve it from liability for damages for delay (usually liquidated damages)".

It is not unusual for delays to take place in construction projects, and in other projects which the schedule is used for planning of activities. Delay dictates whether a project or some other date is finished late, such as a milestone. A number of unforeseen incidents during construction can result in a delay in completing the project, or increase the amount of work to be done within a given time frame.

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI. Published under licence by IOP Publishing Ltd 1