Simulating a Contract Closeout Process

Clayton Jerrett Capizzi, University of Tennessee-Knoxville, Knoxville, TN, USA
Joseph Wilck, IV, East Carolina University, Greenville, NC, USA
Xueping Li, University of Tennessee-Knoxville, Knoxville, TN, USA

ABSTRACT

Government defense contractors are burdened by contracts which have ended, but have not been finalized and closed. In order to keep good relations with organizations regulating government contracts, contractors have been forced to devise a strategy to address contract closeouts. Data was collected about a defense contractor’s contract closeout process, and a simulation model of the system was developed to aid in completing the contract closeout process. Using simulation software, the closeout process was successfully modeled under varying resource levels. The simulation model included true worker process times with integrated schedules, including holidays, over the expected period of performance. The simulation produced a realistic model which allows an organization to plan their resources to accomplish their contract closeout process under specified conditions and deadlines. The results are relevant to government (public sector) contracts as well as industrial (private sector) contracts where similar regulations are applicable.

Keywords: Business Process Modeling, Closeout Process, Contract Closeouts, Government Defense Contractors, Simulation, Simulation Software

INTRODUCTION

Closing contracts is a subject that every U.S. government contractor must address. Thousands of physically complete contracts have accumulated among defense contractors over the past decades, but remain open because closeouts were a low priority. Recently the U.S. government has begun to stringently enforce policies and procedures for contract closeouts, forcing government contractors to comply with all rules and complete contracts within specific timelines. Specially, Federal Acquisition Regulation (FAR, https://www.acquisition.gov/Far/4.801-1) which sets time standards for closing out contract files (Moser & Arviso, 2007). Now that the time standards are being enforced they have suddenly become priority to contractors.

Government contract closeout completion is when “all administrative actions have been completed, all disputes settled, and final payment has been made” (Defense Contract Management Agency, 2009). The generalized tasks can be specifically broken into five steps for closing a contract. First, a contract must be reviewed to see if it meets the requirements to begin closeout procedures. This step can...
commence once the contract’s physical life is completed. The next step is to begin any specialized contract procedures; including indirect cost settlement, reconciliation and deobligation of funds, release and return of materials, and closeout initialization. The third step is to ensure that all contracted actions have been completed, and the final payment has been made. Before the final voucher is created for this step, contract documents are reviewed to ensure correct billing information follows the base contract. Once all administrative actions for the contract to be closed have been fully and suitably completed, a Contract Completion Statement is issued to the Procuring Contracting Officer (contracting agency), which in essence “closes” the contract. Oftentimes there is an additional step involved with closeout procedure; issues such as specialty property issues, specialty payment issues, patent and royalty issues, and similar administrative issues are addressed here. A contract closeout checklist is a common way to ensure that these issues have been correctly addressed and completed.

A large portion of government contracts which are facing approaching deadlines to close contracts are defense contractors. For many years these defense contractors would put their main focus on receiving the contract award and physically performing the contract, but not closing the contract. Since these companies did not stress closing contracts the government agencies regulating this area put a deadline to when these contracts must be closed. This means a company could potentially lose millions of dollars if these contracts are not properly closed.

This paper is organized as follows. The next section includes a literature review, followed by the discussion of the modeling approach, and then results of the simulation model. The last section provides conclusions and future recommendations.

LITERATURE REVIEW

Moser and Arviso (2007) emphasize the importance of closing complete contracts in a contracting organization. They outline many of the important FAR clauses, which regulate closeout procedure, and what contributes to a successful contract closeout process. The message that is being emphasized in this article is that an effective contract closeout process requires extensive knowledge about FAR clauses and procedures, solid communication between the contractor and the government, and a strong contract closeout team dynamic.

Forrester (1961) centralized many of the theories and principles underlying the modeling of industrial systems in his book *Industrial Dynamics*. When describing models of industrial systems, Forrester expressed the importance of how mathematical models must be dynamic, address business fluctuations, and uncertainty in the system. Mathematical models are only useful when the model fully explains the real system and is able to predict future conditions. Any vagueness must be eliminated, or else the model cannot be validated. The true value of a mathematical model is derived from the precision of the model, not the accuracy. Forrester outlines the development of a scientific method for process improvement for which he refers to as the “Steps in Enterprise Design.” The steps are as follows:

1. The Goals;
2. The Description of the Situation;
3. The Mathematical Model;
4. Simulation;
5. Interpretation;
6. System Revision;
7. Repeated Experimentation.

This methodology gives a detailed step by step approach into how managers can implement industrial dynamics principles into the improvement of their systems, which was a new concept. Forrester’s methodology was used as the basic template for the approach in this paper.

Forrester (1961) states that the “validity (or significance) of a model should be judged by its suitability for a particular purpose.” This point is important because models are often extended past their initial focus, which can produce false or misleading results. Keeping in mind the ob-
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