Research Review

Network Operation Cost Model to Achieve Efficient Operation and Improving Cost Competitiveness

CS4457 Networks II

Gurpreet Singh

 # 250674134

Prof. Haque

Summary

The authors of "Network Operation Cost Model to Achieve Efficient Operation and Improving Cost Competitiveness" intended to communicate the lack of development in cost estimation methodology in telecommunication operations and improve it with their new Activity-Based Costing (ABC) method. The paper evaluates as-is network cost models and derives an improvement plan with a new cost estimation method.

Before introducing their method, they begin by explaining some of the costing characteristics used in the telecommunications industry. The characteristics were: high facility cost, more overhead expense than direct expense, cost estimation is limited, and government regulations. Some cost models that are explained in more detail are: Fully Distributed Costs (FDC), Long Run Incremental Costing (LRIC), Glide Path, Element Based Model, Activity-Based Costing (ABC) and Building Block Costing (BBC). With this information the authors provided an adequate amount of background detail for me to understand the topic and problem they are focused on solving.

In the next section of the article the authors begin explaining their proposed "methodolgy". Kwak et al. [2011] It is a slow start to their explanation as there is a lot of repetition of background information here. The 4 principles that their methodology is based on are: Efficiency, Forward Looking, Fairness, and Actual Time-Based. Analyzing the descriptions of these points I can derive the essence of the methodology. The proposed changes result in setting a standard cost to each item, instead of aggregating historical information, and applying activity-based costing to the model. At this point in the article they have not provided any convincing data or statistics to prove the direction they are going is working. Therefore, I am not believing that ignoring historical data is beneficial.

The figures that are provided on page 1110 are undescriptive and provide no real value to the article. One of the tables is cut in half and the article does not adequately describe what it is showing. There is a figure showing the different stages of their model, which are: define activity, measure, estimate cost, analyze cost. In this figure it is visible how vague their process is.

Technical Analysis

In the cost elimination steps outlined in part B of section 3 its seen that the authors are attempting to use feedback data from the system to determine what the best figures are. This process feels like using ABC but eliminating all previous historical data and starting to gather new data from scratch. This cannot be good for large telecommunication companies because they would lose too much money at the start of the cost

elimination process to make it worth the switch.

The authors define a very vague process that can be interpreted in many different ways. In essence the process is to define a unit activity that costs money in a company, measure how many resources it consumes, make a cost estimate for it and then after completing the unit activity, update the existing model with the real cost. The goal with this model is to keep increasing the amount of data available to the model so it can make more informed decisions about the company's costs. This seems like an achievable goal. If the article provided more concrete details on how it can produce this better than ABC already does, it would have been more convincing.

There are some comparisons to the existing ABC model after the model description, explaining how their model has more data and is more accurate in showing the largest costs in a company. This is interesting but the main purpose of the paper is to reduce the costing, and although these are related points, they don't directly link it to a large reduction in costs. This sounds too similar to ABC for the authors to even have a basis for research.

From reading their technical details, I do not believe this model would help telecommunication companies improve cost efficiency because of the upfront costs associated with putting the model in place.

Suggestions and Presentation

The presentation of this article was very poor. The general readability of the article greatly suffered due to lack of proofreading which was seen throughout the article. There were many grammatical errors that made the article almost unreadable. Sentences had poor cohesion and it was not easy to determine the topic of each paragraph. On top of the poor English that was observed in the article, there was also a lack of figures describing the model they are proposing. Due to these qualities, the true meaning of the article is hard to understand. The validity of the paper suffers because of the many different ways each paragraph could be interpreted.

The authors could have greatly improved this article by getting it proofread and reorganizing their thoughts. From an article that is proposing a new way of approaching an old costing method, I would have expected direct comparisons to ABC and quantitative proof of how they can improve upon it.

References

Eun-joo Kwak, Gi-eung Kim, and Jae-hyung Yoo. Network operation cost model to achieve efficient operation and improving cost competitiveness. In *Advanced Communication Technology (ICACT), 2011*

13th International Conference on, pages 1107–1112. IEEE, 2011.