

SYNOPSIS

A REVIEW OF THE VALIDITY OF CURRENT PROJECT PERFORMANCE REPORTS AND THE IDENTIFICATION OF AREAS NEEDING IMPROVEMENT

Christopher Stimpson is a Senior Project Management Consultant and Implementation Consultant for Catalyst, Inc. His background is primarily in heavy construction ranging from transportation to heavy industrial projects with the majority of his career in the latter. While Christopher was helping manage the construction of a new, large electricity generation facility in Colorado he obtained a graduate degree in Construction Management with an emphasis in Computer Information Systems from Colorado State University.

As partial fulfillment of the degree requirements he conducted an extensive literature review of over 300 books, journal articles, academic papers, theses, dissertations, and unpublished works on measuring performance on project schedules in design, engineering, and construction. Christopher's employer supported the study and in return the study was tailored to an audience of one of the largest deregulated electricity producers at the time.

The result of this literature review is a voluminous work on the fundamentals, details, analysis, and pitfalls of the common methods of performance measurement as they pertained to this company. Christopher has taken this work and modified it to meet the needs of a more general audience. It is not intended for this document to be a high level narrative or overview of performance measures, but a detailed analysis of the inner workings and application of performance measures on large industrial projects and its feasibility.

This paper is broken down into five key sections. The introduction is a review of the problem being addressed in the document. Following the introduction is a literature review of the publications at the time of writing (2004) and the presentation of concepts associated with various methods of performance measurement.

A methodology was employed to make this study as objective as possible to provide unbiased results. The methodology employed is presented to allow the reader to make determinations on the feasibility of the findings and summary. The analysis section describes how the data was analyzed with the results. Findings and interpretations are then drawn from the analysis on particular measures. The conclusion is a summary of the hypotheses tested for the company (in generic terms), and suggested use of performance measures in the future.

The original paper focused on several performance measures that were unique to the company and were found to be invalid for the general audiences. Therefore, it will appear that sections of the paper are missing, and that is true. The omission of these sections will not be a detriment to the reader of the paper in any way.

Performance indices and metrics are explored in depth for the following measurement regimens:

- Earned Value
- Critical Path Analysis
- Earned Schedule