AACE® International Recommended Practice No. 93R-17

SCHEDULE LOGS
TCM Framework: 10.1 – Project Performance Assessment

Rev. April 18, 2018

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INTRODUCTION

Scope

This recommended practice (RP) defines the process for collecting schedule as-planned and as-built information in a tabular log format, and using that data to support ongoing monitoring, analysis and forecasting functions.

Purpose

This RP is intended to provide guidelines (i.e., not a standard) for steps to be taken in order to organize, maintain and use a schedule log, which most practitioners would consider to be a reliable good practice that they would recommend for use where applicable.

This RP is for use by the project team members involved in schedule planning and maintenance for any project type, particularly in industries such as construction where schedules are specified as part of the project controls process. Users should consider limiting or expanding the level of detail needed to suit both their organization’s documentation standards as well as the needs of their projects.

There are planning, organizational and analytical benefits in keeping a detailed log of schedule updates produced during the course of a project. These include:

- Quick reference for project status
- Schedule update highlights
- Overview of the project timeline and
- Schedule trend analysis

The schedule log tracks the project’s path over time and can aid the project team in charting the course to project completion. The schedule log also serves as a useful tool for briefing various project outsiders who may have an interest in reviewing the history of the project schedules.

Description of Schedule Log

The schedule log is a project control tool that collects and organizes contemporaneous schedule data from the various baseline(s) and update submissions generated during the course of a construction project into a single document for tracking, analysis and management purposes. It can also contain the scheduler’s interpretations and observations of schedule-related facts.

A project schedule log is a means of identifying and recording the schedules of record, documenting progress and cost through time, as well as providing data that can be used to forecast project milestone and completion dates.

In its most basic format, a schedule log is a chart that summarizes pertinent information from the baseline schedule and the various updates prepared during the project, such as:

- Data or status date
- Completion date
- Number of activities
- Project percent complete

By adding information such as gain or slip in total float, man-hours and/or cost expended, weather days, and other project data for the period derived from the schedule update, various trends begin to emerge. In addition to aiding
the project manager, the schedule log is a tool for development and analysis of time extension claims. Many industry claims consultants will develop a schedule log prior to embarking on a forensic schedule analysis effort. It ensures working with the proper schedules and helps to quickly identify periods of time that will require further scrutiny. The schedule log also helps ensure that changes in scheduler personnel will not disrupt schedule continuity.

This RP develops the concept of the construction schedule log as a useful project controls tool as well as an aid for exploring the information and statistics that analysis of schedule updates over time might provide [1].

**Review of Schedule Specifications and Schedule Update Requirements: Sources of Data to Include in the Schedule Log**

As described in this RP, the schedule log’s primary purpose is documenting schedule-related changes from update to update over the course of the project. Much of the data that will be compiled in the log are derived from requirements grounded in schedule specifications. Use of a schedule log may be applied to schedule updates during the planning and design stage as well, particularly on design-build projects.

Most schedule specifications require the contractor to prepare and submit a critical path method (CPM) schedule to the owner for planning and tracking purposes. Typically, a project baseline schedule must be prepared by the contractor and approved by the project owner as having met specification requirements and good scheduling practices. Once approved, the contractor is required to submit periodic updates of this project schedule that documents progress achieved during the period as well as the future plan.

The contractor’s schedule update submission to the owner is generally required to be accompanied by a narrative description of what work was done during the period, description of the current critical path, changes to the critical path, if any, and observation of any problems or schedule issues during the period. The narrative should also flag any changes made to the schedule by the contractor such as logic, duration, and/or cost/resource loading. Information that goes into the schedule log can often be gleaned from the written narrative. [2]

Whether or not a contract requirement, contractors are strongly encouraged to actively use and update CPM schedules on their projects and to take advantage of the management benefits available through use of both the schedule data and the schedule log. Once schedule updates may also serve as the basis of identification, measurement and analysis of delays, the schedule log can assist analysts with choosing and verifying the appropriate update files. In addition to required updates, contractors should include in the log other schedules submitted during the course of the project. This would include impacted schedules requesting time extensions, time impact analyses (TIAs), recovery schedules and other “what-if” schedule scenarios requiring the owner’s attention. Finally, in addition to schedule submittals from the contractor, other schedule documents suggested for inclusion in the log are the owner’s responses to the schedule submittals.

**RECOMMENDED PRACTICE**

Tracking of schedule submissions in a schedule log also serves both the contractor and owner as an administrative tool. It provides a quick reference to identify schedules, submittal dates, and respective approval status. This immediately identifies if the schedule updates are submitted in a regular, timely manner and approved in accordance with the contract requirements. Submission and approval turnaround times are critical to the contractor to help use the schedule as a management tool. The log helps to monitor schedule approval status as well as ensures the use of the appropriate schedule for ongoing management of the project.
Schedule Logs Level of Detail

Schedule logs can be basic or detailed, the choice applicable for any given project based on the schedule specifications and/or the level of detail desired. The basic schedule log contains the minimum information necessary to track schedule updates. The detailed schedule log includes additional schedule and resource data that can be used for analysis purposes.

A variation of these logs is discussed in the appendix for those using a bifurcated or half-step update procedure, a process which isolates the effect of actual progress in an update period from changes made to the CPM schedule itself.

Basic Schedule Log

An example of a basic schedule log is shown in Figure 1.

![Figure 1 - Basic Schedule Log](image)

This includes:
- Header Information: Project ID or Contract No., Project Start Date, Original Completion Date, Specification Reference Number
- Schedule Name or Identifier
- Data Date or Status Date of the schedule Update
- Project’s Contractual Completion Date (includes time extensions)
- Current Project Early Finish Date
- Variance between contract completion and current schedule (Total Float) in calendar days
- Slip/Gain (Change in Total Float from prior period) in calendar days
- Number of Activities in the schedule update
- Location of schedule data file or copy of the database at the time of submission (if applicable)
- Schedule update Identification Number or Version
- Date Submitted to Owner
- Date Approved, Accepted or Acknowledged by the Owner

Typically, in scheduling software this information can be collected from the schedule/leveling report and various project summary tabs.

In addition to basic project data, the schedule log in Figure 1 shows two additional columns for administrative tracking purposes: