FORENSIC PROJECT MANAGEMENT

HOW TO RETRIEVE A FAILING PROJECT

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Forensic Project Management – How to retrieve a failing project!

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Working Papers

Our working papers presents the author’s thinking on project management issues. We encourage your feedback on the ideas provided in this paper to the author.
1. Introduction

In spite of our best efforts, many projects do not finish at the contracted or expected time that the client had paid for. Invariably a dispute breaks out about whose fault it was and what the various reasons were for the failure to perform. All of the parties involved are too close to the wood to see the trees and the whole thing disintegrates in an adversarial and combinatorial process. Nobody gets satisfaction, the lawyers make money and another project bites the dust.

Many clients and indeed many builders and contractors are frustrated by complicated delay claims which end up in litigation at the conclusion of a failed project. So how can you avoid this situation and produce a harmonious result, indeed how do we prevent getting into the mess in the first place. How can we use today's project management software tools such as Micro Planner X-Pert for Windows to simplify the problems prevent them from occurring in the first place, when they occur how to resolve them, and finally combat them?

In the old days before sophisticated project management techniques, ie critical path scheduling, existed or even used by those whose job it was to completing projects on time; most projects were built successfully using only the combined expertise and teamwork of the design professional whether that be an Architect, or Engineer, the builder/contractor, the client. When projects were completed late, it was usually difficult if not impossible to identify why. Very rarely was there a successful claim for the delay, by any of the parties because nobody knew what caused the delay or whether the various changes were to blame or what!

As Critical Path scheduling became more common on construction projects some of the more forceful legal practices and resourceful consultants recognized the opportunities for its creative use in the courtroom. They were quickly able to convince their clients that Critical Path schedules could be used to quantify and prove the right to damages (referred to as either penalty claims or liquidated damages claims or simply delay claims) for the extended time-related costs. Critical Path schedules gave the opinions of the experts a basis of certainty not possible before, and so from the seventies through to today the onslaught of delay claims not only kept the legal profession busy, but the generations of project planning “professional” experts were born.

Over the past few years it has become obvious to the contractors, owners, design and building professionals that there is a high cost and substantial risks associated with taking d legal action for delay claims. As a result the construction and in many cases the IT industries have toyed with new ideas focused on prevention and more efficient resolution. One idea that came into focus in the late 1980’s to early 1990’s to try and mitigate the general resorting to legal action when things went wrong was “partnering”. However it too has had problems in producing a reasonable result. The problems with the relationships established in partnering has attracted some new research by Mr. J.D. Smith (a masters student at the University of South Australia) who states that:-

There have been many instances of adversarial activity in the construction industry, resulting in clients seeking the establishment of more cooperative relationships:

- This has resulted in clients seeking the establishment of a cooperative and synergistic relationship between its own consultants and agents, and those of the contractor. In the late 1980’s partnering emerged as a new contracting philosophy. The partnering type of contract is a conventional contract, to which has been added formal procedures for the
prompt and effective resolution of disputes. Both parties give an undertaking to work together in a cooperative manner, and to consult regularly

- A similar form of contracting was introduced to the Australian construction industry in 1998. This new style of contracting (termed relationship contracting) resulted from research conducted by the Australia Constructors Association. Relationship contracting is founded on the principle that there is a mutual benefit to the client and the contractor to deliver the project at the lowest cost - when costs increase both the contractor, and the client are worse off. It is a process to establish and manage the relationships between the parties, that aims to remove barriers, encourage maximum contribution, and allow all parties to achieve success.

So we know “delays” cost all of us money and the end-user invariably will have to pay for those delays in higher costs and charges. Thus there is a need to create new ways of handling delays.

2. Delay Assessment Techniques

Various delay assessment techniques have come about to combat creatively constructed opinions based on factual determinations of the impact, if any, of the late decisions and other delays that may be caused by design changes that the contractor says are attributable to the architect. It is now possible for informed, practical architects to develop an outcome where the likelihood of delay claims is decreased and the costs of resolving those that do occur are minimized. This of course applies in reverse to claims made by the architect of the contractor not mobilising correctly in order to handle those changes and or delays.

We know that the implementation of Critical Path scheduling techniques has increased over the years, and the construction industry particularly is increasingly aware of the technique's strengths and weaknesses and just what it takes to make it an efficient and relevant project management tool. The same of course is happening in the legal profession. Like other professionals in the construction industry, urbane construction legal practices with their practical experts have learned the deficiencies and assertions intrinsic in the various Critical Path delay assessment techniques and are educating the arbitrators, judges, and when present, jurors. In fact Australia appears to be taking the same route as in the US where a law practice charges fees only if it wins the litigation. It is thus not likely that QC’s will naively accept the opinions of experts based only on complex meaningless evaluations supported by a mountain of laser printed computer-generated outputs with data and results produced from Project Management software tools and then turned into a PowerPoint presentation.

General study of the project management market shows at least three delay assessment techniques have developed utilising Critical Path during the last three decades. These are basically known as “what-if”, “but because of” and “at the time”, and the way that they differ is in whether or not a baseline performance measurement is used as beginning point to measure the effect of the delays. The “what-if” process uses the original “as-planned” Critical Path schedule. The “but because of” process use the “as-built” Critical Path schedule instead. The “at the time” uses the Critical Path schedule updates that are produced while the work progresses or alternatively it breaks the construction time into discrete periods. The “at the time” method tries to determine the impact of the delay on the status of the work when it occurred and to examine the delay impact as the project manager would have at the time.

Contractors have historically used the “what-if” process in an attempt to prove that they are entitled to extensions of time and any additional costs caused by the delay. The project
managers who used this approach insert all the delays of every related sub-contractor into the planned Critical Path schedule. The Critical Path plan is re-analysed to create a “what-if” schedule, which will then show the impact of the delay. The project manager and his team then compare the resulting completion date in the “what-if” schedule with the original date shown in the original planned schedule, and then prepare a claim that either the time difference or that financial recompense is justified. To make this work the “what if” approach has to assume that the builder could have and in fact did construct the project exactly as was planned in the first place. Very few contractors generally create any project documentation during the building process so it is very difficult to contend that the builder never delayed any task on the Critical Path. Thus “what-if” justifications for payment are almost impossible to prove and it can be contended that the builder’s claims are even valid.

The veracity of “what-if” schedule depends heavily on the builder/contractor's “as-planned” Critical Path schedule, its robustness and legitimacy is usually the subject of much debate by experts. Even simple projects can be built in many different ways, and it is usually not practical nor does it make financial sense to schedule them in detail at their commencement. This commonly results in a lack of detail in tasks near the end of the project or anticipated as non-critical by the builder when preparing the planned schedule. More often than not, longer projects are generally built in a significantly different sequence than planned.

Users of the what-if approach generally face bigger problems. Even if the planned Critical Path schedule was reasonable, the practicalities of using Critical Path to schedule projects would usually make it inadequate as a baseline in any time period after the very beginning of the project. There is often simply too little detail in later periods and too big a difference between the originally planned and actual construction sequencing. Delays in other work paths create float in the activities shown as critical in the planned schedule, allowing them to start later or take longer without delaying the completion date. As a result it can be difficult to identify with any certainty what work was critical when. This can lead users of this approach to manipulate late starts or extended duration of particular activities as delays.

3. “But Because - Of” Assessment

As time has passed, the shortcomings of the what-if method have given way to the but-because-of evaluation. Practitioners of this technique identify delays by all parties on the as-built schedule. They then remove the delays of a particular project participant from the as-built schedule to create a schedule that allegedly shows when the project would have been completed “but because-of” delays by that stakeholder. In theory, the difference in time between the actual completion date shown on the as-built schedule and the hypothetical completion date shown on the but-because-of schedule is the length of delay caused by that project stakeholder. According to those that use it, but-because-of assessments are reliable because they are not based on planned schedules of debatable reasonableness and they address the question of when the contractor would have finished its work if the delays had not occurred. But-because-of schedules are hypothetical illustrations, and as such must be developed considering resources and other constraints. A but-because-of assessment is only as good as its user. Its apparent strengths can be deceiving, and most practitioners of this approach do not admit the assertions hidden in its use. Usually, these assertions relate to the type of work, which was critical at particular points in time and what constitutes a delay that should be pulled out of the as-built schedule. Generally one would hope that site diaries were kept reasonably up to date.

As-built schedules are generally only illustrations of when particular work activities are done, and the users of but-because-of schedules need some sort of baseline to identify delays in the as-
built schedule. Despite their declarations to the contrary, users have the planned Critical Path schedule as this baseline.

Using a comparison of the planned Critical Path schedule with the as-built schedule to characterize events or extended duration as delays can lead to erroneous results. Why? Because it is normally not readily apparent which work activities or delay events in the as-built schedule controlled the pace of work, especially on delayed projects when a lot of work was going on at the end. Consequently, using this approach can result in events or extended duration being designated as delays when in fact they had no impact. The identification of the "as-built" critical path and determination of which delays should be pulled out of the as-built schedule control the outcome of the but-for evaluation. Often, by apparent necessity, these crucial determinations are the opinions of the expert. Each party will attempt to identify a critical path going through work activities unaffected by that party and that each will differ in its opinions on what constitutes a delay. For these reasons, the outcome of the evaluation one expert may be different from that of another for the same set of facts. In these cases, the outcome will be dictated by the strength of the expert's credentials and testifying abilities, not by the merits of the case.

4. Contemporary Schedule Analysis (CSA)

Contemporary Schedule Analysis is a reasonably established technique to evaluate project delays; it has only come about as a result of the use of Critical Path to schedule projects. It removes the shortcomings in the others by using contemporary documentation including, if available, the Critical Path schedule updates prepared while the work was going on to identify what work was critical and to measure the impact of delay events. The original planned schedule is used only as the baseline schedule for the initial update time, and the subsequent Critical Path schedule updates serve this function in later times. The "as-built" schedule is used only to illustrate project history and to validate the accuracy of the schedule updates.

Some users of CSA have developed ways to account for approved, chargeable and non-approved delays in a way that accumulates the delay reflected in the most current or contemporary Critical Path schedule update. Critical Path schedules on major construction projects may consist of many thousands of tasks, but CSA makes the evaluation of these complex schedules manageable.

By using the Critical Path schedule updates, the CSA technique identifies the critical path recognized by the project stakeholders at the various "time now’s" throughout the project and presents the critical delays in chronological order as the project unfolds.

CSA is the only Critical Path delay evaluation technique that recognizes the concept of float as a resource to the project. It also allows identification of delays caused because of performance and productivity issues in the speed of the project. Like the other evaluation techniques, CSA is hardly ever as easy as it sounds and should not be performed without due consideration of the facts. The schedule updates created during construction should not be used until the information contained in them is verified using other project documentation, such as the site diary. In some cases, an as-built schedule based on the entire written record could be developed to add credibility to information contained in the CSA updates and, if necessary, to modify them to accurately highlight the status of the construction at the time of the update. The absence of updates which generally occurs so often, does not prohibit the use of CSA because the as-built and as-planned schedules can be used in conjunction to re-build critical path schedule updates, as if regular updating had been performed during construction. It will greatly assist the process if
progress data has been maintained separately. When assertions are made, they should be based solely on the data available at that time, not on hindsight.

5. Where To? Mediation or Court

CSA is particularly suited to satisfy the current needs of a construction project manager. As you are no doubt aware the construction industry learning that there is a high cost and substantial risk associated with going to court over delay claims, thus an increasing number of claims are being resolved in neutral forums, such as private mediation.

These forums do not require the detailed evaluations or the standard of evidence necessary in the courtroom and favours the side who can produce fact-based presentations of key issues with a minimum amount of information.

Because CSA allows the identification of project slippage occurs, it makes it possible for the lawyers and their clients to focus their efforts on these key time times and whether or not changes and or other problems contributed to the delay. This element speeds the evaluation of critical delays, lowers or even removes the legal costs and concentrate on producing a solution through mediation.

It is probably axiomatic to say that delay claims are inevitable. This is generally because of the way projects are planned which usually means no thought is given to preventative processes to avoid delays. Many project planners do get the time to consider alternatives to discover the various things that could go wrong in the project. What can be done? Well, the obvious thing is that all the stakeholders involved in the project, should agree on regular project status and how the responsibility for delays as the project is being built are determined, must be defined in the project charter. In order to make this work there are at least three things are needed to make it happen.

First, good project corporate governance in the form of good management protocols, processes and procedures must have been put in place that allow regular and timely analysis of project status and a quick response to the allocation of responsibility for delays. Secondly, a process or guidelines must be readily available that effects quick resolutions when there is disagreement between the various parties as to who is going to effect changes to prevent the delay from becoming fatal to the end date. More importantly, all the stakeholders must be committed to the process. Partnering, CSA and Project Corporate Governance are the major tools needed to make this happen.

Defined as a formal process Partnering is intended to encourage agreement and cooperation on the project. As those corporate managers and the Project Manager who are responsible for the project’s successful delivery it causes them to acknowledge the need for success that they have in common. Psychologists understand that human relationships are often the cause of problems; so implementing a more positive human communications program amongst the stakeholders, particularly in understanding the project dynamics can solve many of them.

Unfortunately partnering alone will not prevent delay claims; it is hard to maintain trust between the stakeholders because it can be easily abused by the dishonest person. However partnering provides an ideal opportunity in which the stakeholders are continuously involved and informed, simultaneously, of the risks that they may face by not resolving disputes concerning delays. Risk mitigation is the responsibility of everybody, because without cooperation in preventing delays from becoming major risks then surely the project will fail. Once this is done, the partnering
process can also become a method for ensuring commitment from everyone to assess project status and together define responsibility for project delays during the project. The project charter should contain the guidelines defining the various stakeholders’ responsibilities to prevent delays becoming claims. It should show the mechanics on how this will be achieved.

CSA, where it has been implemented has been known to practically eliminate delay claims when it has been used as a project-management tool. Quite often there are only a few tasks that dictate the critical path in a specific progress reporting period and these are normally recalled by everyone end of the progress period. Thus, the project stakeholders as well as the workers make fact-based, and more accurate assessments of delays when required to do it at the time.

Because CSA enforces a rigorous approach it causes the builder to properly update the Critical Path schedules on a regular basis otherwise they will not have a sound foundation for any delay claims. The clients project management team is thus able to more accurately ascertain the veracity of the Builder's requests for time extensions and additional costs that may or may not be justified due to the delay in a judicious manner. Accordingly, both the client’s project team and the builders project team will benefit from more effective scheduling during the building process, and all the stakeholders have the data needed to make able decisions on resource allocations and corrective actions and needs. This is not to say that utilising CSA will prevent disagreement about who is responsible for delays in the project plan but at least it does show the impact of the delay and so should help in preventing costly arguments about their impact.

All of the stakeholders involved in the project must take part in the approach of CSA in an active and above board way for it to be successful. It would be stretching the imagination to believe that all the stakeholders in the project will agree with each other all of the time. It will be particularly difficult for them to agree on the impact of change orders, especially when they are not fully priced, as they should be. Having a dispute resolution mechanism in place will ensure that the benefits of CSA are fully realised, as there will be a much quicker response to the various problems as they arise.

6. Project Neutrals

One way to prevent a project going into costly legal dispute where problems occur is to implement the use of a person who has all the necessary project management skills, but is was not originally involved in any with the setting up or management of the project, in other words a person who is neutral. The use of a “project neutral” is starting to be seen as one of the more effective dispute resolution techniques. The project neutral usually consists of an independent subject matter expert who is used to help in the resolution of disputes. Construction industry disputes are notorious for taking a long time to resolve and consequently causes damage to the industry and invariably escalates all the problems inherent on a project into major problems, project neutrals are very effective when they are permitted to take an vigorous approach in ensuring that disputes are dealt with quickly. It is a sensible insurance policy to use project neutrals.

Many project neutrals, particularly when acting say as a mediation review boards, must be cognisant when trying to resolve complex delay claims that they are not generally available until the end of a project. Because the best use of the project neutral is the project progresses, the project management team needs to careful in the managing of the delay claim and the then current impact on the schedule of that claim. The project neutrals must be well qualified to rule on the responsibility for delay events as well as being experienced in the subtly of analysing delays on complex projects. This expertise allows them to determine the veracity and
responsibilities when complex and the various parties at the hearing present often contradictory delay impact evaluations, to overcome this difficulty, the project neutral will need to utilise the CSA.

7. Conclusion

Many project Managers have learned the lessons of the past and have become tired of ill founded and poorly thought out delay claims. Experienced building and contracting professionals already recognize the benefits from the use of partnering, CSA and the project neutral as well as good project corporate governance. It is the use of these tools, which current project managers should be using their influence to implement on their projects. The success of projects in the future will depend on those boards of directors and project managers, who are progressive in their management style implementing new project corporate culture and the will to succeed in delivering what the client expected and paid for

It will be interesting to see if the results of Mr. J.D. Smith studies at the University of South Australia on Relationship Contracting lead to improvements in the management of projects.