

Smart-Money Guide to the RP/FSA CDR-1056

The Least Cost Way to Achieve Good-Faith Compliance

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January 31, 2012

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A. Introduction

AACE's 29R-03 Recommended Practice for Forensic Schedule Analysis (RP), introduced in 2007, continues to gain industry adherents who use it voluntarily to standardize in-house delay analysis procedures. While the RP is praised for its thoroughness and its detailed recommended procedures [1] some perceive it as creating too high a bar for compliance on delay disputes involving modest claims and for use in pre-litigation settlement venues. I believe this to be an erroneous perception by those who may be familiar but not sufficiently knowledgeable of the document. In fact, the RP provides guidelines for use of CPM schedules that are applicable to all forensic contexts regardless of the size or complexity of the dispute.

This paper presents some tips in achieving optimum economy in performing forensic schedule analysis (FSA) using the RP.

B. General Principles

During the initial drafting process, allowing flexibility of the use of FSA in relatively small disputes was a major concern. If the RP were too restrictive and elaborate in its prescribed procedures it would create problems for those who use simplified and abbreviated implementations for quick settlement negotiations or in small delay disputes.

The RP has an exception for 'simple cases' as stated below in Section 1.3.h at page 11:

“This RP deals with CPM-based schedule analysis methods. It is not the intent of the RP to exclude analyses of simple cases where explicit CPM modeling may not be necessary, and mental calculation is adequate for analysis and presentation. The delineation between simple and complex is admittedly blurry and subjective. For this purpose, a 'simple case' is defined as any CPM network model that can be subjected to mental calculation whose reliability cannot be reasonably questioned and allows for effective presentation to lay persons using simple reasoning and intuitive common sense.

However, cases that are not 'simple' within this definition but nevertheless relatively small in disputed amount is more problematic. The various provisions of the RP were carefully drafted in a way that it does not unintentionally create a claim forfeiture scenario for use even by these small claims.

Section 5.4 on page 128 is a good place to start:

“Factor 4: Size of the Dispute

One of the primary factors the forensic scheduler should keep in mind is the size of the dispute or the amount in controversy. In most situations, the choice of the forensic schedule analyst is constrained by how much a client has to spend to increase the probability of successful resolution of the dispute. This is most often determined by how much money is at stake. For example, if the delay damages being sought by the client are approximately US\$100,000, then the forensic schedule analyst should recommend a relatively inexpensive forensic scheduling method that is still effective for its intended purpose. On the other hand, if the delay damages sought are US\$50,000,000 then the range of methods to be considered is substantially expanded because of the greater scope and costs associated with analyzing a substantially larger claim. The forensic schedule analyst needs to recommend a forensic schedule analysis method that is both cost effective and suitable for the size of the dispute.”

While it clearly allows for use of the RP in smaller cases, for many readers, there is still the big question of determining what is involved in recommending “a method that is both cost effective and suitable”.

Section 5.6 on page 129 is another key provision in this regard that gives a little bit more guidance:

“Factor 6: Budget for Forensic Schedule Analysis

If the client is prepared to spend only a small amount for a forensic schedule analysis effort, then the forensic schedule analyst should consider using less expensive forensic scheduling methods or cost saving alternatives – such as using the client’s in-house staff for certain tasks rather than outside consultant staff. Or, the forensic schedule analyst may find a method contained in this RP which is appropriate for the situation, but which does not require that all of the validation protocols be performed. If the forensic schedule analyst is required to take short cuts or rely upon the work of others to stay within a very tight budget, the forensic schedule analyst should advise the client and client’s legal counsel of the potential risks of proceeding in this manner.”

Two examples cited above as being cost-saving were, the use of the client’s in-house staff, and the abbreviation of validation protocols. The language goes on to say that the client and the legal team should be advised of the “potential risks”. Essentially, the risk is that of the expert witness testimony be excluded or discounted on the basis of inadequate foundation for the expert opinion. Namely, if the expert relied completely on the client’s in-house staff to prepare significant portions of the analysis, the whole analysis can be shown to be based on a foundation of sand created by those interested in the outcome of the dispute.

Section 5.6 on page 129 finishes by saying:

“The forensic analysis should keep in mind that if insufficient funding is available for the analysis that would be required to investigate and analyze the case, it may be proper and prudent for the analyst to refuse to undertake the assignment rather than knowingly use a methodology that is not appropriate.”

The task force concluded that the budgetary consideration is one that required a fine balancing act between quality and budget because there is a limit to the scalability of the analysis effort in relation to budget and at the same time maintaining the integrity and the competence of the resulting opinion. In other words, budget alone cannot be the determining factor for the requisite forensic quality of work. Thus, as you can see from the last sentence in the quoted paragraph, in extreme cases a given budget may become so restrictive that the analyst has no choice but to decline the assignment.

But there are many alternative before it gets to that. FSA has been expensive since before the introduction of the RP in 2007. Even with the RP, performing the work does not have to be cost prohibitive.

It is important for both the practitioner and the client to be able to distinguish appropriate methodologies and implementations from those that are not. It is equally important to be aware that what is ‘appropriate’ may depend on many factors, even within the parameters of a given case.”

The following pages present some money-saving tips, many taken directly from the RP.

C. Top Money Saver Tips

1. Read and Understand the Contract

What does the contract have anything to do with the RP? Actually, a lot. Section 1.3.f, on page 11 says:

This RP is not intended to override contract provisions regarding schedule analysis methods or other mutual agreement by the parties to a contract regarding the same. However, this is not an automatic, blanket endorsement of all methods of delay analysis by the mere virtue of their specification in a contract document. It is noted that contractually specified methods often are appropriate for use during the project in a prospective mode but may be inappropriate for retrospective use.

What this tells you is that the specific contract language may override the recommendations in the RP as being the appropriate method. However you must be able to distinguish whether that required method is specifically for use only during the project or after-the-fact, or both.

Further, Section 5.1 on page 126 says, in part:

Factor 1: Contractual Requirements

“Thus, the first factor to be considered is the existence of an unambiguous contract requirement describing the documentation or method to be used to support requests for time extensions or time related compensation. Forensic schedule analysts should adhere to the requirements of the contract and to the applicable codes and laws under which the contract is governed. However, it is not uncommon that requirements set forth in contracts are unclear or ambiguous (such as a contractual reference to a ‘but-for TIA’) or patently erroneous references such as contract language requiring the use of an ‘impacted as-built analysis’. ... The forensic schedule analyst may want to use this RP as a mechanism to discuss the issue of differing forensic analysis methodologies with the client, legal counsel, and the other parties and help all focus on an appropriate method to be used.”

Therefore reading and understanding the scheduling and delay measurement provisions such as the time extension clause by the entire claim team is essential in selecting the method and implementing the analysis. This step is essential in avoiding a costly rework after the analyst mistakenly uses a non-contractual method. The analyst and the attorney, by contributing their expertise in FSA concepts and contractual interpretation respectively, should come to an agreement as to whether the contract requires a certain method for after-the-fact claim purposes that overrides the RP.

For example, many contracts issued by the California Department of Transportation (Caltrans) specify that a time impact analysis using fragnet insertion (MIP 3.7) be used to determine schedule impact of an owner event, and that to the extent that the inserted fragnet impacts the critical path, the Contractor may be paid for time-related overhead (TRO). Concurrencies are not an issue under this method. This specified method for establishing compensable delay is far less stringent than that recommended in the RP which calls for a test for concurrent delay. If the analyst is not aware of this specification it is very likely that a more expensive method that test for concurrencies will be used.

Also, review of the contract language regarding scheduling at the outset of the assignment is often a good way to determine the types of source data that exist in the project files. For example, although less likely these days, if the contract does not specify a CPM schedule, you may not find a CPM baseline, let alone regular updates. On the other extreme, there are specifications that require an as-built schedule that contains not only as-built dates but as-built logic. In such a case you may find that there is already a good start towards a collapsible as-built in the project records.

In practice, there are some contractual provisions that allows the analyst to determine the particular float philosophy (longest path or negative float) or concurrency theory (literal

or functional) preferred by the Owner. Knowing this in advance clarifies the direction to take right from the outset of the assignment.

2. Learn to Use the ‘Flex Provisions’

“Flex Provisions” is the terminology for statements and concepts in the RP that provide for flexibility in the analyst’s implementation. In achieving good-faith compliance with the RP, it is important to locate, identify and understand the full implications of these flex provisions.

a. RP Not Prescriptive

One of the biggest misconceptions about the RP is that it is a prescriptive standard and that it removes the analysis process from liberal use of expert judgment. In fact the opposite is true. The master provision appears in two places in the RP. The first is at section 1.1 “Introduction” at page 9:

“The RP/FSAPG is not intended to establish a standard of practice, nor is it intended to be a prescriptive document applied without exception. Therefore, a departure from the recommended protocols should not be automatically treated as an error or a deficiency as long as such departure is based on a conscious and sound application of schedule analysis principles. As with any other Recommended Practice, the RP should be used in conjunction with professional judgment and knowledge of the subject matter. While the recommended protocols contained herein are intended to aid the practitioner in creating a competent work product it may, in some cases, require additional or fewer steps. ...

Forensic schedule analysis, like many other technical fields, is both a science and an art. As such, it relies upon professional judgment and expert opinion and usually requires many subjective decisions. One of the most important of these decisions is what technical approach should be used to measure or quantify delay and identify the effected activities in order to focus on causation. Equally important is how the analyst should apply the chosen method. The desired objective of this RP is to reduce the degree of subjectivity involved in the current state of the art. This is with the full awareness that there are certain types of subjectivity that cannot be minimized, let alone eliminated. Professional judgment and expert opinion ultimately rest on subjectivity, but that subjectivity must be based on diligent factual research and analyses whose procedures can be objectified.”

This concept is essentially repeated at a second location in Section 1.3.i at page 11. There is also Section 1.3.a, on page 10, that states:

“This RP covers the technical aspects of forensic schedule analysis methods. It identifies, defines, and describes the usage of various forensic schedule analysis methods in current use. It is not the intent of the RP to exclude or to endorse any method over others. However, it offers caveats and considerations for usage and cites the best current practices and implementation for each method.”

These provisions, taken together, give an experienced and qualified analyst (see Section 1.3.d at page 10) a lot of leeway in crafting and performing the FSA in a way that the analyst finds appropriate as long as certain basic scheduling principles are maintained. The more experienced and qualified you are in FSA, the more expert judgment you can use to economize on the analysis effort.

b. MIPs are Prototypes, not a Full Catalog of Methods

Note that the nine MIPs are prototypical methods, and not instances particular to any individual practitioner. Your particular method does not have to fit exactly into one of the nine molds. Therefore first determine which of the nine prototypes best describes the particular method that you use, then compare and contrast the recommended protocols for that particular MIP in the RP with those that you perform.

In the introductory paragraph to Section 3 (page 38) the RP says:

“The intent of the Method Implementation Protocols (MIP) is to describe each forensic schedule analysis method identified in the Taxonomy and to provide guidance in implementing these methods. The user is reminded that the focus of this RP is on procedure as opposed to substance. Adopting a method and using the recommended procedures do not, on their own, assure soundness of substantive content.

This paragraph essentially says that the RP is not a ‘cookbook’. It is more a manual of theory that offers blocks of analytical concepts to guide the practitioner in arriving at a sound result. To arrive at that sound result, plenty of expert judgment must be utilized.

c. Lack of Case Authority Creates Flexibility

In response to the criticism that the RP does not cite any case law as legal authority, Section 1.1 at page 10 states as follows:

“The RP discusses certain methods of schedule delay analysis, irrespective of whether these methods have been deemed acceptable or unacceptable by Courts or government boards in various countries around the globe.”

Practically speaking, the reason why the RP does not cite case precedents rests in the fact that, because AACE is an international organization, it must consider that many international jurisdictions do not give weight to case precedents, let alone American case

law. But a more important underlying principle is that in most if not all jurisdictions, the law must defer to reason and competent science for technical evidence. And reason and the science of CPM are the main, stated focus of the RP. Section 1.3.b at page 10 states:

“The focus of this document is on the technical aspects of forensic scheduling as opposed to the legal aspects. This RP is not intended to be a primary resource for legal factors governing claims related to scheduling, delays, and disruption. However, relevant legal principles are discussed to the extent that they would affect the choice of techniques and their relative advantages and disadvantages.”

Even if the jurisdictional coverage were focused on the U.S. many lawyers recognize the difficulty of researching and updating case cites, since there is very little CPM law, especially outside the Federal jurisdiction. The scarcity is due to the fact that many technical cases do not go to trial and that only a portion of the ones that do are published [5].

Reading just the language of the published opinions may be misleading in some cases because the underlying facts of the case and the expert analysis are often only summarized in the opinion. In addition, it is almost impossible to obtain the trial exhibits and testimony transcripts years after the conclusion of trial. Also, methods are often criticized for poor implementation and not necessarily for faulty theory [5].

In view of this, the fact that the RP does not cite case law is a flex provision. The absence of legal references gives plenty of room for attorneys for legal maneuvering, given that case law is not fixed or consistent. At least one legal commentator agrees, saying that, “perhaps it should be that way [1]”. This is not to say that the industry is disinterested in providing legal authority for FSA. In October 2011, the American Bar Association Construction Industry Forum and AACE signed a Memorandum of Understanding and Cooperation in October 2011. One of the first projects under this agreement is to establish proposal for the daunting task of developing a legal commentary on the RP for U.S. law.

3. Pay Attention to Source Data Validation

While the heart of the RP rests in Sections 3 (Methods) and 4 (Interpretation), the gatekeeper for competent analysis reside in Section 2 (Source Validation). The savvy, sophisticated users understand that problem projects tend to have messy source data.

In the introductory paragraph to Section 3 (page 38) the RP says:

The use of the Source Validation Protocols (SVP) discussed in Section 2 is integral to the implementation guidelines discussed [in Section 3]. Therefore a thorough understanding of the SVP is a prerequisite to the competent use of the MIP.”

Thus, before one proceeds too far in the analysis itself, make sure that the source data have been validated per Section 2. This will prevent costly rework of analyses that mistakenly utilized the wrong or flawed schedules as the starting point. Remember: Garbage in is garbage out.

However there is a practical limit to how much validation one can build into contemporaneous project data, as discussed in the following caveat in Section 2.0 at page 18:

“The approach of the SVP is to maximize the reliable use of the source data as opposed to assuring the underlying reliability or accuracy of the substantive content of the source data. The best accuracy that an analyst can hope to achieve is in the faithful reflection of the facts as represented in contemporaneous project documents, data, and witness statements. Whether that reflection is an accurate model of reality is almost always a matter of debatable opinion.”

There is a point of diminishing return for data validation. The RP is drafted in such a way that the analyst is given quantifiable guidance on when that point may have been reached.

The following subsections give examples for each type of source validation.

a. Baseline Validation Tips

As with the general rule of source data validation quoted above, the first concern in validating the baseline schedule is to achieve functional utility. Section 2.1.A at page 19 states:

“Note that validation for forensic purposes may be fundamentally different from validation for purposes of project controls. What may be adequate for project controls may not be adequate for forensic scheduling, and vice versa. Thus, the initial focus here is in assuring the functional utility of the CPM baseline schedule for purpose of analysis as opposed to assuring the reasonableness of the information that is represented by the data or optimization of the schedule logic. Functional utility refers to the usefulness of the schedule data for quantitative, CPM-based calculations as opposed to a more subjective, qualitative assessment of the reasonableness of the baseline schedule. So, for example, the validation of activity durations against quantity estimates is probably not something that would be performed as part of this protocol. The test is that if it is possible to build the project in the manner indicated in the schedule and still be in compliance with the contract, then do not make any subjective changes to improve it or make it more reasonable.”

Unless the analyst's scope is the optimization of the baseline schedule or for formulating alternate schedule sequences and mitigation measures, it is not necessary to second guess the validity of the duration and logic as long as the above-quoted test can be met. Doing any more is not cost-effective.

b. As-Built Validation Tips

As the RP states, it is important to accept the fact that the accuracy and the reliability of as-built data are never going to be perfect. The RP gives the following advice in Section 2.2.A at page 23:

“Rather than insisting on increasing the accuracy, it is better to recognize uncertainty and systematize the measurement of the level of uncertainty of the as-built data and document the source data. One of the simplest systems is to call all uncertainty in favor of the adverse party. However, it may be more defensible to use a . . . consistent set of documentation for the as-built. Of course the most reasonable solution may be for both parties to agree on a set of as-built dates prior to proceeding with the analysis and the resolution of the dispute.”

This is especially applicable in cases where the fully progressed update schedule is being used as the primary source for the as-built schedule. If the contemporaneous procedures for collecting as-built progress dates for updates were reasonable, it follows that the actual dates may be acceptable without much rectification.

At Section 2.2.B.2 at page 24, the recommended protocol is to:

“Perform a check of all critical and near-critical activities as defined by this RP and a random 10% sampling of all activities against the reliable alternate source to determine whether a more extensive check is necessary.”

This tells you that it is not necessary to check all as-built dates unless there is specific reason to believe that the dates are not accurate.

The task of validation can be further streamlined by adopting special procedures for creating an as-built activity consisting of only a set of significant activities (Section 2.2.D.3) and for summarizing schedule activities (Section 2.2.D.5). In reducing the number of as-built activities that must be analyzed, they are both designed to “streamline and economize the as-built analysis process without compromising the quality of the process and the reliability of the results”.

c. Update Validation Tips

Contemporaneously produced schedule updates are one of the most valuable source data in FSA. If they exist, very serious consideration ought to be given for the use of analysis

methods that rely on these updates. Most practitioners agree that methods that rely on contemporaneous schedule updates return the best value in terms of the credibility of the resulting product measured against the cost of the effort.

One of the most frequent challenges in using the updates is that the validity and reliability of the updates themselves is often in dispute and is a central issue of the claim. The RP states in Section 2.3.D.3 at page 3 that:

“Due to the complex nature of construction projects and the fact that CPM schedules are models of reality, not reality itself, the analyst will inevitably encounter an instance when the contemporaneous project schedule contains an anomaly that could affect the assessment of critical project delay.”

It further states in Section 2.3.D.3 at page 32 that:

“The analyst must also remember that most schedules are models and, hence, perfection is not the standard.”

Therefore:

“The fact that the contemporaneous schedules were rejected by the owner is not automatically dispositive of their value. This is because where delays are present during the project schedules are often rejected for reasons other than their technical reliability as a schedule, but for reasons of contractual compliance regarding the completion date.” (Section 2.3.D.3 at page 30)

So, just because there are some imperfections in the schedule updates, analysis methods relying on these updates need not be abandoned. The RP notes in Section 2.3.D.3 at page 32 that:

“... some significant errors in the underlying analysis schedules may not substantially affect the ultimate conclusions of the analysis.”

Therefore, the rectification can be and ought to be minimized to only those that affect the outcome of the analysis.

d. Delay Data Validation Tips

The section for the identification and quantification of discrete delay events and issues contains a very specific recommendation for an economical approach to performing the task. In Section 2.4.A.2.a at page 34, it states:

“a. Two Main Approaches to Identification & Collection [of Delays]

i. Cause-Based Approach: This approach starts with the collection of suspected causes of delays and then determining the effect they had on the baseline schedule and individual schedule updates. It is a ‘causes in search of effects’ approach. This is often used in the additive modeling methods. For example, an analysis may review the monthly reports, searching for issues that may have caused delays to the project.

ii. Effect-Based Approach: This approach is the opposite of the cause-based approach. It starts by compiling a set of ALV’s (activity level variances) and then identifies the causes of those variances. Specific documents that are associated with the time-frame, activity description, and amount of ALV’s are reviewed to see if they could have created this variance. This approach is applied in the observational and the subtractive modeling methods. In the majority of the analysis scenarios, the effect-based approach is the more economical approach.”

The effect-based approach is more economical because it tends to narrow the number of issues and events that must be investigated to only those that impact or explain the critical and near-critical paths of the schedule model.

Another area of economization that is often overlooked is in delay entitlement research. There are numerous expert reports and testimonies that contain expert opinion regarding contractual and/or factual entitlement even though other experts are being used specifically for that purpose. In most cases, evidence to establish legal or contractual entitlement are not presented solely by the FSA expert. This results from miscommunication between the expert and the client-attorney on the exact scope of the necessary expert opinion. The RP states in Section 2.4.A.5 at page 36:

“When the forensic schedule analyst does not possess adequate information to make an independent determination of responsibility for the delay, the analyst may have to proceed with the analysis based on an assumption. Such assumptions should be noted and clearly stated as part of the final analysis product along with the basis of such assumption.”

It is not improper to proceed with the delay analysis based on assumptions that a successfully case can be established for entitlement. This eliminates the time and expense necessary for independently analyzing for entitlement for each delaying event and issue.

e. Assure Compliance During the Job

The ideal money saver is to perform validation of key source schedules and other data during the job by using the RP SVP guidelines as the QC standard. To this end you should introduce the RP to your regular clients as a money-saving, claims readiness measure so that the necessary source data can be delivered to you from the jobsite in a clean usable state.

4. Select the Method(s) With a Long View

In Section 5 at page 125, , the RP provides eleven selection criteria for the selection of the best method for each particular case. The RP does not rank the methods, let alone recommend the best, one-size-fits-all method because:

“ ... each claim is unique in that each deals with a different project, different contract documents, different legal jurisdictions, different dispute resolution mechanisms, and different fact patterns among other project execution factors. Likewise, each method discussed in this RP is different and each has certain technical factors to consider, including advantages and disadvantages. Because of the uniqueness and the need to consider multiple variables it is impossible to recommend one method that is the “best” method, or to rank the methods in order of preference.”

Using more than one on a separate, redundant basis, hybridized or on an ensemble basis are is legitimate. Section 5 at page 126 says:

“There is no requirement that the analyst select only one method to analyze a project. Some cases would necessitate the use of different methods for different phases of the project based on factors, including but not limited to, such as the nature of the claim (compensability versus excusability) and source data availability.”

A practical example not contemplated in the above paragraph is that in many cases the necessary source data such as a full set of official updates may not be immediately available until discovery is completed. In such a case, you may consider first implementing a different method, such as an abbreviated as-planned vs. as-built method (MIP 3.1 or 3.2) and gain knowledge of the project and issues while waiting for the updates to become available.

Such a layered or a phased process of analysis results, at the end, in multiple analyses using different methods which may have different outcomes. That is to be expected since the different methods measure different aspects of delay. The important thing is to be able to explain the differences in outcome using sound CPM principles and the fact of the case.

Achieving economy by performing more than one analysis may be counterintuitive, but if you consider the incremental learning curve obtained by a careful selection of the sequence of methods implemented and the source validation that can be applied from one method to another, the added cost is offset by the overall value.

Whatever the selection, it should be carefully considered. You are advised not to come to an automatic, knee-jerk selection of your favorite method. Even if a certain method is

believed to better than others in your experience, there should still be a systematic way of selecting the right method for a particular assignment.

5. Phased Implementation for Phased Resolution

It is important to be cognizant of the intended forums of resolution. Because arbitration or trial of a complex delay and disruption case is very expensive, these disputes undergo a period of informal resolution such as negotiation and mediation. Because of the interest in avoiding expensive fees, most clients will not be inclined to authorize a full implementation of a court-ready forensic schedule analysis, but nevertheless want some authoritative analysis to use as negotiation leverage during informal resolution.

Addressing this consideration, method selection factor 5.9, at page 130 the RP reads:

Factor 9: Forum for Resolution and Audience

During initial discussions concerning the potential engagement, the forensic schedule analyst should seek advice from the client and its legal counsel on the most likely dispute resolution forum. What the forensic schedule analyst should seek is an opinion from those involved in the project, and their legal counsel, on whether the claim is likely to settle in negotiation, mediation, arbitration (and if so, under what rules), or litigation (and if so, in which court). If there is good reason to believe that all issues are likely to be settled at the bargaining table, or in mediation, then the range of options for forensic scheduling methods is wide open as the audience is only the people on the other side and they may be motivated, persuaded or willing to make decisions based upon a forensic schedule analysis method different than that specified in the contract. Almost any option which is objective, accurately executed and is persuasive is legitimately open for consideration. On the other hand, if legal counsel believes that the issue will end up in court or a government agency board, then the range of options available may be considerably narrowed because many courts and boards have adopted their own rules concerning forensic scheduling.

Not only does this give leeway in methodology selection, but also it allows the implementation of the methods with abbreviated source validation procedures. Performing multiple, successive passes of the analysis by adding more stringent SVP and enhanced features may be more cost effective than doing it all the first time around. That is, a more exhaustive procedure for validating baseline schedule, as-built dates, progress data and delay identification may be deferred until the negotiation fails. Because the source validation process in any FSA assignment is often a significant portion of the billable work an abbreviated process will save money if the matter settles after presenting the analysis in a negotiation presentation or mediation.

An example of such abbreviation is to assume, for the purpose of a rough-order-of-magnitude analysis, that the actual start and complete dates on the last CPM update are accurate without verifying them against a second source of as-built dates. These dates would be used to form the as-built schedule used in the analysis while a full validation effort is still underway. Unless allegations of deficient updating practices are central to the dispute, this is a reasonable approach given the preliminary nature of the forum of resolution. Thus the results are presented as the likely outcome if the necessary source validation were fully implemented.

Another example is to skip the process of quantifying alternate outcomes, as recommended in the RP, where critical choices (hindsight versus blindsight, as-is versus rectified logic, literal versus functional concurrency) have been made in the course of implementing the methods.

Whenever the important steps are deferred for later implementation, it is essential that the client attorney is informed of such decisions. The level of disclosure of the deferred steps in negotiation or mediation is a decision to be made by the claim team on a case by case basis. But the paramount concern is that of protecting and enhancing the credibility of the eventual expert opinion and to maintain at all times professional integrity under the applicable canon of ethics.

6. Let the RP Do the Heavy Lifting in the Expert Report

The RP is very useful in presenting and discussing analysis methodology in a presentation or the expert report because it allows the expert to simply refer to the RP where the method is described, rather than describing the full method in the Report. Let the RP do the heavy lifting [3].

In discussing the method, the awareness of the distinction between ‘method’ and ‘implementation’ is important. In forensic schedule analysis, ‘Method’ refers to the generic tool of schedule analysis. The nine prototypical method implementation protocols are methods. ‘Implementation’ refers to how the analyst applies the methods to the specific facts and data of the case. It is the expert’s particular technique in using the tool. If used according to recommendations, methods are rarely at fault for a flawed opinion. The fault usually lies in faulty implementation of the method or a skewed interpretation of the results, or both [3].

In my expert reports, implementation of the method is discussed in the main narrative to the extent that certain aspects of it are non-standard. If there are key assumptions or limiting conditions that are non-standard, this is the place to list it. In other words, I state only exceptions from the standard RP protocols. If the analysis was performed using associates or with other experts, the rules and conventions used during the collaborative segments of the analysis ought to be listed [3].

7. Embed It In Your Operation

Establishing standard operation procedures and practice templates save on the effort to reinvent the wheel in applying the RP to each case. The following examples were recently gathered from various industry meetings and conferences as well as the practice at my own firm:

a. Use it to Estimate Work Effort

The RP is a good estimate checklist. In fact, it is possible to evaluate the overall budget for the assignment by using an in-house experiential distribution of total hours that apportions expected hours into the various tasks recommended by the RP. For example, see the spreadsheet below:

MIP	2.x SVP				3.x MIP		4.x Eval			TOTAL
	2.1	2.2	2.3	2.4	Format	Model	Crit	Quant	Integ	
3.1	15%	-	15%	15%	10%	-	10%	20%	15%	100%
3.2	10%	-	15%	15%	15%	-	10%	20%	15%	100%
3.3	5%	15%	10%	10%	15%	-	5%	15%	25%	100%
3.4	5%	15%	10%	10%	15%	-	5%	15%	25%	100%
3.5	5%	5%	10%	10%	15%	10%	5%	15%	25%	100%
3.6	20%	-	10%	15%	-	15%	10%	5%	25%	100%
3.7	5%	15%	10%	10%	-	25%	5%	5%	25%	100%
3.8	5%	5%	10%	20%	-	30%	5%	5%	20%	100%
3.9	5%	15%	10%	10%	-	30%	5%	5%	20%	100%
All MIP Average	8%	8%	11%	13%	8%	12%	7%	12%	22%	100%
	40%				20%		40%			
Observ. MIP Ave.	8%	7%	12%	12%	14%	2%	7%	17%	21%	100%
	39%				16%		45%			
Model. MIP Ave.	9%	9%	10%	14%	0%	25%	6%	5%	23%	100%
	41%				25%		34%			

The percentage values in the yellow cells are experiential apportionment of total hours into RP-based task categories. Once the appropriate prototypical method (listed in the first left-hand column) is identified, this spreadsheet can be used to approximate the overall cost by providing an estimate for one of the task elements or can be reversed to determine the hours to perform the subtasks, given an overall total. The reverse function is useful to evaluate whether the overall budget given by the client is adequate for the selected MIP.

Note that in this hypothetical apportionment, tasks for implementing the analysis itself, under Section 3 constitute, on the average, only 20% of the overall effort. Once the billing codes for timecards incorporate the RP sections, it is a matter of time before a reliable in-house experiential apportionment can be generated.

b. Method Selection Triage Workshop

In a recent AACE presentation by one of the principals of a consulting firm, he talked about how his firm internalized the RP into their operations and used the factors discussed in Section 5 to perform “Claim Triage Workshops” to select the appropriate schedule analysis method for each assignment [4].

c. Use it to Train Staff

One of the best ways to meaningfully incorporate the RP it into your practice is to use the document to train and educate staff. There is no lack of training materials for a very comprehensive and in-depth forensic schedule analysis training of not only in-house staff but also of your client-attorney and clients’ scheduling staff.

D. Conclusion

If there were to be only one money saver tip, it would be, “Enhance It. Don’t Fight It.” The use of RP/FSA adds value and reduces the cost of forensic schedule analysis. The key is in becoming sufficiently knowledgeable with the scope and caveats contained in the document. Therefore as a FSA practitioner you owe your clients or your employer the due diligence of carefully considering the RP. A prominent construction law firm, in a recent newsletter said:

“... notwithstanding ongoing debate and uncertainty regarding proper application of the RP, it is important to be aware of the RP’s existence and how it may be used. Ultimately, effective handling of the RP, whether offensively or defensively, must be contingent upon thorough understanding, consideration of all circumstances and factors that could impact its applicability, and above all, consultation with counsel and forensic schedulers who can best determine whether and how the RP should be utilized or addressed in a given case. [1]”

Do not take the expensive decision to go against the flow or buck the trend. If you do not agree with the RP, do something better, not just something different. And if you believe that the RP can be a significant part of your consulting practice, you can exert greater control over its destiny by taking an active part in the ongoing enhancement of the RP.

In the fifth year after introduction of the RP, the evolution of the first generation of RP-users into a more sophisticated and knowledgeable “User 2.0” is currently underway. Implementing the smart-money tips contained in this paper will qualify you as a User 2.0.

E. References

1. “Right On Schedule: Discussing Recommended Practice 29R-03” Brian R. Dugdale, Watt, Tieder, Hoffar & Fitzgerald, LLP Newsletter Fall 2011.

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3. “The Streamlined Expert Report”, Kenji P. Hoshino & Kelly R. Wallace, 2011 AACE International Transactions.
4. “Use of Claims Triage Workshops to Choose an Analysis Method”, Robert D. Kelly, Robert D. Kelly Jr., Christopher W. Carson, 2011 AACE International Transactions.
5. “Past, Present & Future Status of RP-29”, John Livengood & Kenji Hoshino, unpublished presentation slides, Construction CPM Conference January 23, 2012, Orlando FL.