



The Analyst

WINTER 2006

Southern Maryland Chapter of The Society of Cost Estimating and Analysis

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PRESIDENT'S MESSAGE



If you've seen the movie Napoleon Dynamite, there is a memorable quote from Napoleon concerning his many talents – "You know, like numchuck skills, bow hunting skills, computer hacking skills. Girls only want boyfriends who have great skills." Well our employers have similar desires – they only want employees with good cost estimating skills. This newsletter introduces the first of what we hope will be many articles written by you the members on skills that let you do your job better. These will not be peer reviewed abstracts of obscure statistical formulas, but rather practical, hopefully useful, items to help you do a better job. They don't always need to be about cost. We'd love to see articles sharing Excel tricks or discussions on emerging technologies that estimators may be asked to cost out.

In another scene Napoleon visits the karate studio of Rex who makes this promise to his students – "I'm Rex, founder of the Rex Kwan Do self-defense system! After one week with me in my dojo, you'll be prepared to defend yourself with the strength of a grizzly, the reflexes of a puma, and the wisdom of a man." Most of us would realize that one week wasn't enough time to develop all of these traits. I fear that our presentation of the certified cost estimator exam training may have come across a little bit like Rex's promise, sit through a couple of classes and you'll be certified. Much like a karate student, only through repetition will the skill become automatic. I would like to see us present some deep dive classes this next year that give you the opportunity to slowly absorb the concept over an extended period instead of a one hour hose job. These classes won't magically materialize by themselves; we need volunteers to help us do this. *With apologies to JFK, ask not what SCEA can do for you, but what can you do for SCEA.*

This is my last article as President. When they asked me to run it went something like this exchange between Napoleon and his new friend Pedro when he was trying to get him to run for class president:

Pedro: Do you think people will vote for me?

Napoleon: Heck yes! I'd vote for you.

Pedro: Like what are my skills?

Napoleon: Well, you have a sweet bike. And you're really good at hooking up with chicks. Plus you're like the only guy at school who has a mustache.

Like Pedro, I appreciate the opportunity that you've given me. We had some successes and some failures but it was always entertaining. I'm handing the reigns over to a very capable board and will continue to be active in the training end of our chapter. I hope you join us for an exciting 2007! *You do want skills, don't you?*

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**2007
Southern Maryland SCEA Board**

CONGRATULATIONS TO OUR NEW BOARD MEMBERS!

A month ago we held our 2007 local SCEA elections and our chapter's new leadership was selected. They have all played active roles in our chapter for the past year and are sure to continue energizing our group through 2007.

Board Members:

PRESIDENT: Mike Thompson
VICE-PRESIDENT: Matthias Kolodziejczyk
TREASURER: Marcella (Marcy) Murphy
SECRETARY: Wesley Graf

Chair Persons:

EDUCATION & TRAINING: Raj Ramaswamy

REMEMBER...The **Society of Cost Estimating and Analysis (SCEA)** is a nonprofit organization which strives to promote and to enhance the profession of cost estimating and analysis. SCEA's primary goal is to foster the professional growth of its members in cost estimating, cost analysis, and allied fields.

To ensure our achievement of SCEA's goals, our local chapter is still looking for candidates to fill the following positions.

Chairs:

MEMBERSHIP
SOCIAL
PROGRAMS
PUBLIC RELATIONS



YOUR CHAPTER NEEDS YOU!!

Pick up the phone and call Mike Thompson or Matthias Kolodziejczyk to discuss your chapter involvement.

INCOMING PRESIDENT'S MESSAGE

As the incoming President for the Southern Maryland SCEA Chapter it is fitting that the chapter membership be aware of what the goals of the chapter are going into the new year.

There are several initiatives that we are sponsoring, among them we will be continuing our dedication to training and developing skills that we have had over the last couple of years. This year as well as providing the Certification Training we will have skills workshops through out the year. So be prepared to be a sponge and apply the skills and information to your job.

We will be kicking off the monthly luncheon speakers in January with Bill Hazeltine, of Tecolote and candidate for SCEA National President later this year, talking about the 2007 National Conference, this year it will be a joint conference with ISPA. Among the subjects that Bill will be discussing will include the submission of papers, the make up of the Tracks, Training Activities, Certification Test, and other activities at the conference. The Luncheon will take place on 24 January at the Cedar Point Officer's Club--lunch at 1130 and the speaker speaking from 1200 until 1300.

In February Greg Wise and Charles Cochran will be speaking on the DoD Inflation Handbook, presented last February at DoDCAS. The planned date will be 21 February at the Cedar Point Officer's Club with lunch beginning at 1130 and the presentation from 1200 – 1300.

A date for the SCEA Golf Tournament is being coordinated with the AIR 4.2 Golf Tournament Committee so that the tournaments won't be too close together.

There are a number of committee chairs and instructor training assignments that are available and no volunteer turned away.

I'm looking forward to the new challenges for the new year.

Mike

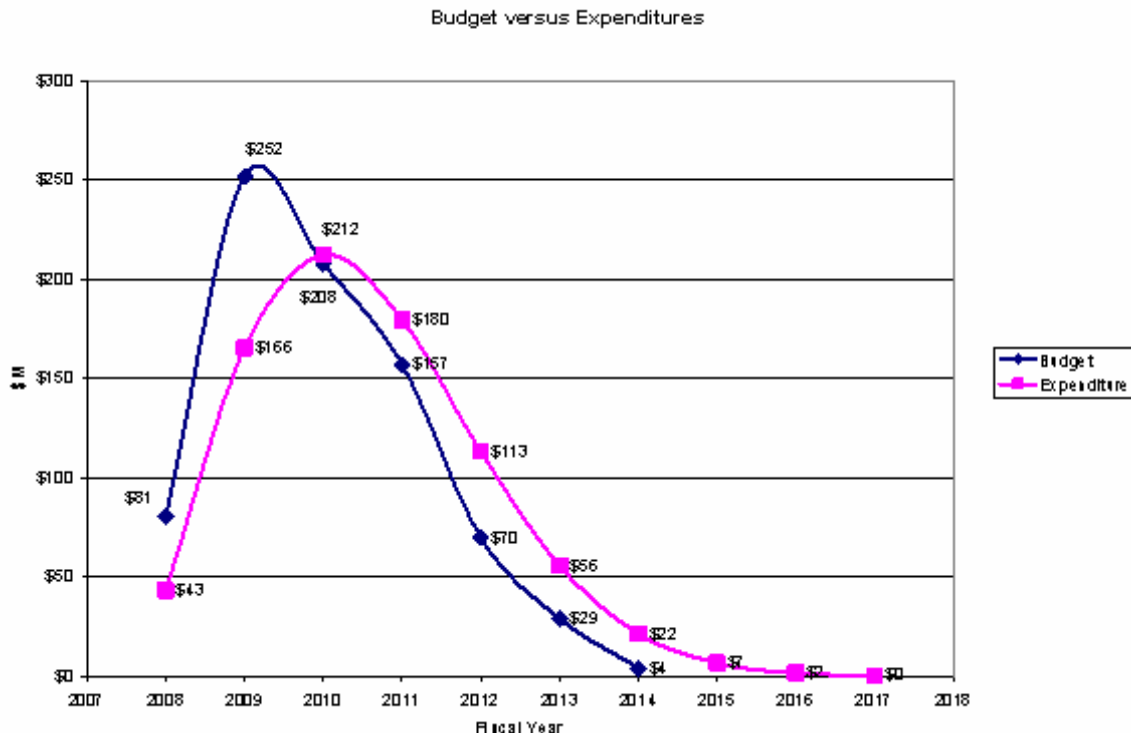
DEVELOPMENT OF A FUNDING PROFILE

Article submitted by Mike Popp

Just as critical as the total dollar value of an estimate is spreading the money correctly by fiscal year. Most analysts spread money by level two of the WBS using the program schedule and “intuition” to arrive at a funding spread. The purpose of this paper is to help fill in some of the intuition and develop talking points to help you defend your profile in discussions with program offices.

Expenditures versus budget. This is probably the single biggest source of conflict with program offices when presented with a notional program funding profile. The frequently heard lament is “The contractor can’t possibly spend that amount of money in that amount of time.” when they see the amount of funds required in the programs initial years. Your response should be “You’re absolutely correct, they can’t. However, our budget needs to account for not just expenditures, but obligations¹ and potential liability. We anticipate that a contractor will only expend slightly more than half the money in the first year.” Figure 1 provides a comparison of the difference between budget dollars and expenditures for a hypothetical program with a 6 year SDD schedule, awarding a contract in the third month of the fiscal year and an estimate of \$800 million. This particular spread was developed using a Rayleigh profile derived from a CAIG study of historical program budgets and expenditures.

Figure 1
Budget versus Expenditure

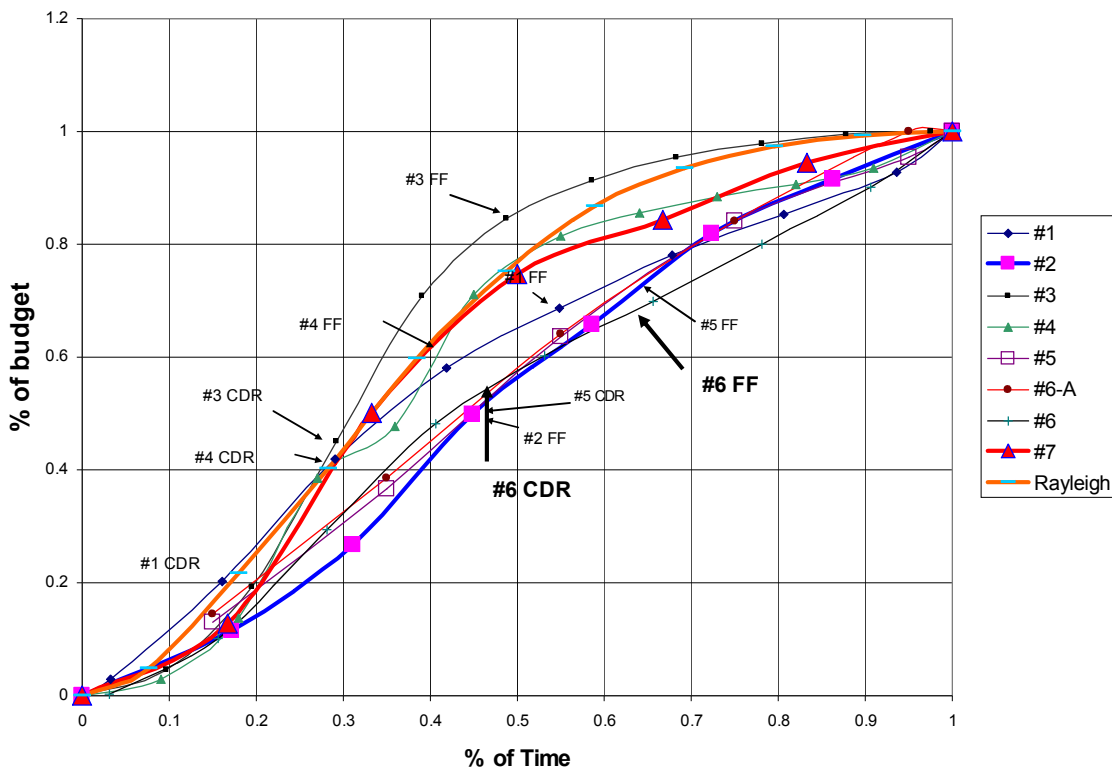


¹ Obligations represent costs incurred or committed by the Prime, subcontractors and vendors that are not expended in the actual fiscal year. Long lead items, subcontract labor, and capital investments are examples of items that require obligation without necessarily expending the cost in a fiscal year.

While there is no absolute right or wrong answer relative to a funding profile it is very important to keep in mind that a program needs considerably more money in the early years than what the program thinks can be spent.

Conceptual Rayleigh versus program budget history – Although the Rayleigh was derived from program history, program managers want to compare theory to actual program data. Figure 2 plots % time versus % spent for a notional Rayleigh program and a variety of actual program histories. The Rayleigh has a clear “S” shape to the distribution and several programs follow that shape and several don’t. More recent programs like #5 and #6 have flatter funding, which while still an “S”, are clearly more uniformly funded than front end loaded. These programs may reflect constrained budget environments vice actual funds needed.

Figure 2
Rayleigh versus Program History



Budget at Milestones – Another way to determine if your budget meshes with your program schedule is to examine the amount of budget allotted by key program milestones. Figure 2 has identified Critical Design Review (CDR) and First Flight (FF) points for several efforts. Notionally 40% to 50 % of a programs budget should be allotted by CDR and 60% to 75% by FF.

Summary – Developing a funding profile is an art as much as it is a science. Your choices on the amount of money to put in a given fiscal year need to be guided by some of the principles of the Rayleigh concept, when your program milestones are planned, remembering that expenditures will not equal budget, and finally the realities of sponsor support. It should not be your primary means of developing a funding profile.

Addendum – People interested in this subject are encouraged to read Determining a Budget Profile from a Development Cost Estimate dated September 1993 by Lee, Hogue, and Gallagher. It is available from DTIC (AD-A275 864). Government employees may obtain a copy from the NAVAIR 4.2 library.