



Objective Weekly Earned Value

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Introduction

Earned Value Management (EVM) evolved from a monthly government reporting requirement to a widely accepted management technique, effectively integrating work scope, schedule and resources with risk management. The former McDonnell Douglas Aircraft Company (later acquired by The Boeing Company) pioneered weekly EVM in its Integrated Management Information Control System (IMICS). IMICS helped to achieve unprecedented management success on several programs, beginning with the Navy's F/A-18E/F Super Hornet.

"Weekly EVM" soon became a catchphrase in defense industry. Encouraged by the success of the Super Hornet program, government project managers embraced weekly EVM to address management issues encountered on their programs and incorporated it as a contract requirement.

In its original IMICS version, weekly EVM was restricted to labor performance, measured in hours. It is impractical to use weekly EVM performance information for fully burdened labor cost in dollars or for material, both of which need actual cost information obtained from the accounting system on a monthly basis. Government managers may not appreciate the distinction.

Industry's response to the government's requirement for weekly EVM depended on each company's internal EVM Systems solution. This paper addresses the two extremes. While some well-integrated systems could accommodate weekly EVM, others had to cobble together a solution that appears on the surface to meet the requirement but that in fact compromises the objectives of EVM.

The Issue

At the core, EVM should support internal management needs. Control account managers (usually an Integrated Product Team), build plans reflecting well-integrated scope, schedule and cost metrics. The same managers status their progress objectively as work is performed.

The cycle time for the process should be based on the contractor's needs. It may be weekly, biweekly or monthly – and also should consider other stakeholders, for example, prime/subcontract relationships and the external customers' needs for information. And it is crucial that the contractor's management system be able to support the cycle.

Unfortunately, some contractors cannot reconcile the external demand for weekly EVM and the internal management cycle. This is especially evident when contractors use large Enterprise Resource Planning systems whose architecture is based solely on monthly planning. The producers of such systems have developed a technique that effectively disguises their weaknesses while simultaneously appearing to satisfy the customer's requirement for weekly EVM.

Here's how it works. Assume an IPT plans to perform its work over the next five weeks based on the following plan, representing resources of 1,000 labor hours:

	Week 1	Week 2	Week 3	Week 4	Week 5
Plan	100	200	300	300	100

The system takes the planned value for work to be performed during the accounting period (Budgeted Cost for Work Scheduled, or BCWS) and divides it by five (or four, depending on how many weeks are encompassed by the accounting period). So BCWS now looks like this:

	Week 1	Week 2	Week 3	Week 4	Week 5
BCWS	200	200	200	200	200

At the end of Week 1, the team completes the planned 100 hours of work but must report that its progress (Budgeted Cost for Work Performed or BCWP) is indeed 200, according to the averaged profile. While the system will show no schedule variance, performance will be overstated by 100% relative to the true planned resource consumption. And if we assume the actual cost incurred for Week 1 is 150, the system distorts performance further by creating a false positive cost variance of 50 (BCWP 200 – ACWP 150).

The inevitable result is time wasted explaining away “false variances” caused by “average” plans that do not represent how work was planned to be accomplished. It also requires additional effort to analyze and understand variances because control account managers do not have the ability to plan and status objectively their own work.

When all the control accounts are summed, the net result may (or may not) represent an objective measure of progress – but there is no way to be sure. And at the control account level, performance measurement in any given situation more than likely will be distorted. This begs the question whether such management systems can comply with the customer’s contract requirements for weekly EVM. Worse, the customer may rely too much on the contractor’s reports based on a false sense of security that weekly EVM is being implemented properly.

A compromised management system like this may well fill the bill for external reporting but is an unacceptable compromise when used for internal management.

The Solution

Dekker TRAKKER®, our best of breed EVM engine, accommodates objective EVM planning and statusing on any cycle that meets the contractor’s needs, whether it be daily, weekly, monthly or any other period. TRAKKER has been specifically designed to integrate with contemporary accounting systems to accommodate transactions from job cost to the integrated project plan; job cost typically represents the source information for hours and cost data. The product is completely designed around Activity Based Cost Management criteria established by the Institute for Management Accounting (IMA) and provides Earned Value Management and reporting in accordance ANSI Standard 748. Coupled with Dekker iPursuit™, our new management analysis product, TRAKKER provides true project status to all project stakeholders when needed.