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Incentive Arrangements for Space Acquisitions

Presenter: James Gill

Executive Summary

Disclaimer: The views represented in this report are those of the author and do not reflect the official policy position of the US Air Force, the Department of Defense, or the Federal Government.

Space Systems acquisition has experienced a paradigm shift in its approach toward the use of contract incentives. This shift in the use of incentives is a matter of tremendous importance to those who develop and buy major Space Systems, but, more importantly, to the industry partners that deal with the Space & Missile Systems Center. This shift began under the Bush Administration and, based upon initial signs, may accelerate under the Obama Administration.

What are some of these changes, and what will be the impact of revising the government's business strategy? In order to get some perspective on the reasons for the changes, it is necessary to understand the history of the use of incentives in the acquisition of major systems by the DoD.

How does the DoD incentivize contractors to perform this important job? What do they use to motivate performance, and how do they monitor that performance to ensure that this fee is truly earned?

In the acquisition business, we face these questions on almost a daily basis. We get them from the media. We get them from the Congress. We get them from the senior leadership within the Executive Branch, right up to and including the President of the United States.

Why can't we get answers to these questions? To some degree, it is because incentives are a part of human nature, and their effectiveness is somewhat relative. We use them in daily life to varying degrees of success. Would your son or daughter do their homework every night if you provided no incentive? What form of incentive works more effectively: positive or negative? How do we know? Some would work, some would not. It seems intuitive that people respond to stimuli, both in positive and negative forms.

If that is the case, then why is there even a question as to whether incentives motivate performance? Perhaps the more important question goes to the effectiveness of the incentive applied. If we read the GAO Report entitled *DOD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes* (2005, December), the GAO does not believe the Department of Defense uses incentive arrangements very effectively.

The discussion must depend upon the definition of effectiveness. There is a difference as to the relative importance of cost, schedule and technical elements of incentive arrangements to those assessing the performance of the Program Offices that are responsible for the acquisition of these systems. Program Managers have tended to view technical performance and mission success as the more important criteria, while Congress looks at cost and schedule for validation on a program's success or failure. On the other hand, the user wants it when he needs it and wants it to work.

The beauty of the DoD acquisition process is both in its simplicity and its complexity. The President has articulated his vision of the federal contracting process and has stated his goals, which are consistent with the regulatory directions found in the *Federal Acquisition Regulation*. There should be a preference for fixed-price contracts; cost overruns are never a good thing, and profit should be tied in some manner to successful outcomes.

The simplicity of those thoughts articulated in his Executive Order (2009) becomes complicated in their application to major defense programs—especially major space systems development, which has enormous complexity and technical challenges. Many of these systems require pushing the state-of-the-art well beyond previous capabilities and into areas that have not been attempted in the past.

Why has this issue become so important? To some extent, it has always been a matter of pressing urgency, but recent economic circumstances have made our ability to get more "bang for the buck" a national emergency. One way to add to the capabilities of the warfighters, while reducing the dollars required supporting them, is to more effectively manage the money expended in the procurement of major systems. This may be accomplished through a more effective use of incentive techniques.

The GAO Report (2005, December) focused attention on the problems that the DoD has had in using award and incentive fees in the development and production of major systems. It was highly critical of the use of award and incentive arrangements and recommended a number of changes to the use of award-fee contracts.

This Report was followed by a number of policy directives issued from the OSD, the Secretary of the Air Force, Major Air Force Commands and respective Buying Organizations and Program Offices. This article will focus on the impact that the GAO 2005 Report has had on the way that the Air Force, and most specifically, the Space & Missile Systems Center, has addressed contracting concerns.

After receiving direction to implement several of the recommendations of the GAO Report from AT&L and SAF, the PEO for Space (General Hamel) issued a policy directive implementing a series of changes and mandating the development of an Incentives Guide. A follow-on initiative by the SMC Commander was that a course on incentives would be created to train the SMC workforce on the theory of Incentive Contracting.

In the Air Force, there had been a preference for the use of award-fee contracts for a period of 15-20 years. Acquisition Plans would not be approved without the use of award fee as the primary incentive arrangement. This dependency upon award fee was predicated upon two basic theories: first, that fee has a significant ability to influence performance on the part of a contractor, and second, that award fee can be used to leverage performance immediately. The decision of the Fee Determining Official was not initially deemed to be subject to the “Disputes” remedies, so it gave significant leverage to the Program Manager, as Fee Determining Official, over the behavior and performance of the contractor.

Why was this so important? Well, in conjunction with the normal budgetary turbulence associated with the acquisition of a program worth billions of dollars, the era of acquisition reform had turned over responsibility for development to the contractors, often through the use of an approach known as Total System Performance (or Program) Responsibility (TSPR). TSPR was a natural outgrowth of several factors, not the least of which was the “Peace Dividend” and the resultant reduction in the DoD workforce. In order to save dollars, the concept of TSPR allowed the government to eliminate many of the positions that were linked to the “Oversight” of contractor performance. It also eliminated the need for many of the “overly demanding” specifications and standards that industry had suggested for many years were not necessary and were overly burdensome.

The concept of “Insight not Oversight” was a mantra that was repeated almost as a solution to all of the problems that were associated with the development of major DoD systems. Unfortunately, it became apparent that without this oversight, many of the processes that had contributed to the technical successes were no longer utilized. The initial reports on systems such as SBIRS were overly optimistic and did not recognize the problems that were being experienced until hundreds of millions of overrun dollars had been incurred.

The incentive structure (award fee) was designed to give the government the opportunity to monitor performance and to provide direction, especially to those programs experiencing cost, schedule and technical problems. The Award Fee Review Board would evaluate performance against the Award Fee Plan and distribute each award fee based upon the contractor’s performance. The GAO Report (2005, December) indicated that this approach did not always result in successful acquisition outcomes as anticipated.

Accordingly, under a “Back to the Basics” approach, there has been a move away from the CPAF paradigm. The shift in approach has taken SMC to a slightly different strategy. There is now an emphasis upon ensuring successful outcomes though the use of more mission-success initiatives and of more objective criteria both in CPIF arrangements and when appropriate, within the Award Fee itself.

To facilitate this shift, the Incentive Guide was published March 2007, and the first Incentives course was held in November 2008. The basics of incentive contracting has not changed; the emphasis on utilizing the correct strategy for each acquisition is now a mandatory requirement for all Acquisition Strategy Plans. Leadership now requires a cogent use of a number of incentive techniques when managers are formulating the strategy for the development of major systems. File documentation reflects the degree of analysis that was used in formulating the incentives approach.

So what is the change? The change will most likely be one of emphasis. This emphasis has manifested itself in several ways, the first of which highlights the nature of the relationship between the government and the contractor. Since the onset of the Acquisition Reform period, the concept of teaming has been the norm. The Integrated Program Team demonstrates the concept as a practice, with the members of the team working toward a common end: delivery of the system.

The focus on Incentive arrangements is now one of accountability and outcome-based arrangements. How will this translate into contract language? It is likely there will be a shift in the payment of incentives; they may become more back-loaded, giving the government the opportunity to see what the outcome will be prior to payment of much of the fee. A second possibility would be a form of payback in which fee already paid will be tied to the eventual successful demonstration of the program. This approach has been used in the past, most notably by NASA to varying degrees of success. It does cause some accounting issues for contractors in the manner in which they are able to book profit.

Other areas that are under consideration include the use of negative incentives. These may be used to offset positive incentives such as on-orbit satellite incentives. We have used these in the past, and the results have been mixed. Most of the satellite systems have exceeded their life expectancy, but that begs the question as to how reasonable were the initial requirements against which the incentives were based?

The most apparent consequence of the shift in policy is that there will be some difficulty in getting approval for the use of CPAF-type arrangements with subjective criteria. This, in itself, is not a bad thing. It is reasonable to challenge any approach that does not use a firm-fixed-price type of contract. The *FAR* requires it. In the arena of major space systems, there can be a broad spectrum of contract types and incentives that should be considered before deciding upon a specific type.

These include the cost-plus-award-fee type of contract. It may certainly be reasonable to advocate this type of arrangement for the development of high-risk/ high-reward type of programs. The supporting rationale should stand up to close scrutiny by reviewing bodies. In some cases, we have been able to find more objective criteria that can be used to show that performance has been accomplished; such data contribute to supporting the desire for outcome-based incentive expectations.

There has also been a shift in the approach to the development process in two ways: first, a return to the basics—including a more vibrant systems engineering process, a more diligent cost-estimating approach and more oversight on the contractor. In conjunction with these changes, we will be tying the earning of fee to cost, schedule and performance criteria, in part through a more robust earned value system. One fault in the acquisition reform process is the lack of visibility into performance that had been available to the government through the Cost Schedule Control System Criteria

(CSCSC) prior to the reform period. Earned Value is a high-emphasis program for tracking contractor performance, and incentives may be tied more closely to this system in the future. The caveat to this approach is the potential for gaming by the contractor, a fix for which could be the payback mentioned earlier.

Another initiative that has been implemented is the use of Block upgrades. This is a form of evolutionary acquisition in which higher-risk technology is not incorporated into the system until it has been demonstrated through the use of risk-reduction efforts phased into the system in later iterations. This may impact incentives, as it should reduce the program risk from a technical standpoint and allow for better cost and schedule predictability. This reduced risk should allow for a high confidence in predicting contract parameters and may allow for different incentive structures.

So what else lies ahead for contract incentives? It seems likely that more accountability will be incorporated into new incentive arrangements. There will be some pressure to use more fixed-price arrangements. The use of negative incentives will be more prevalent. Consistent with recent legislation, there will be a push to define what constitutes minimum performance against which no fee will be earned. If award fee is used, objective criteria should be developed. Performance-based work statements should help define the criteria against which fee may be evaluated and paid.

This brings about a question as to incentives for a service-type activity. There has been a great deal written concerning the appropriate use of incentives (most notably contract type) for major systems. There has been less written with regard to the use of incentives for service-type effort. Space systems have historically been oriented toward supply type of deliverable end-items. We launched space vehicles that were delivered as hardware (Atlas, Titan, and Delta) and accepted delivery of these rockets. Now, we are launching via service-type contracts, buying a delivery of a satellite into an orbit.

As the DoD shifts from supplies to services, it becomes even more important to define incentives for these services. We have found that future business opportunities are at least as important as fee to these types of arrangements.

But the key question is how will the new Administration put its stamp on the incentives process? As the new leadership assumes its role, we are certain to find out more, but it is safe to bet that there will be some change in the near future. The fundamental philosophy will remain the same: a quality product, delivered on time, for a reasonable profit. The devil will be in the details.

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