CONTRACTOR SUPPORT, HOW CAN WE ENSURE TRAINING DEVICE AVAILABILITY?

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Abstract

Phase-out of the simulator maintenance career field in the United States Armed Forces is now well under way. Whether or not contractors can successfully maintain the military's training devices is not at issue. Instead, tomorrow's challenge will be providing cost-effective and timely support for military trainers while ensuring trainer effectiveness and configuration management of the devices. If we are to meet that challenge, straight forward contracts that require trainer availability must become commonplace. Support contracts that include incentive and penalty provisions will benefit both government and industry. From the user's perspective, this paper discusses the need for guaranteed trainer availability within the Armed Forces aircrew training community, and proposes methods of implementing contractor support for existing and future aircrew training devices without sacrificing trainer availability. The author focuses on available methods to successfully transition from either organic support to contractor maintenance to full contractor logistic support. Benefits of contract support along with pitfalls of current support techniques are examined. The author also explores the need for enforceable contracts that will enable both the government and industry to capitalize on a successful transition to contractor logistic support.

Definitions

Contractor Logistic Support (CLS): A support technique in which the contractor provides total logistics support for a system or subsystem throughout its entire life cycle.

Contractor Maintenance (CM): A support technique in which the contractor provides only the labor to support a system or subsystem, all other items are provided through the federal supply system.

Quality Assurance Representative (QAR): The government individual who exercises surveillance over the quality of a contractor's work to ensure it is within the contract specifications.

Recompetition Package: A support package which includes the minimum spares, peculiar support equipment, technical data, hardware and software baseline documentation needed to perform the CLS contract. The package will be bonded to and maintained by the contractor. It will be returned to the government at contract termination.

Training System Support Center (TSSC): The TSSC will be used to manage configuration of the total system's software, documentation, hardware, firmware, technical publications and engineering drawings, also known as the product baseline.

Introduction

Contracting for support of training devices is not a new concept of the eighties. Contractor maintenance has been used by the Army to support their training devices for years. In 1982 the Navy made a decision to delete their military training device technicians and contract for support. Although the Air Force had considered contract support for a number of years, the Navy's decision prompted the Air Force to study conversion of most of the simulator maintenance career field to civilian contract in order to conserve military sortie-producing skills. In 1983 the Air Force decided to secure contractor support for EF-111A, B-52 and B-1B aircrew training devices. Direction to implement contractor support for all other new and existing training devices followed in 1984. In 1985, aircrew trainers belonging to the United States Air Forces in Europe were transitioned from organic support to contractor maintenance. Currently, Air Force Systems Command (the primary acquisition command) is working to standardize an approach for providing contractor support of training devices in acquisition, while Air Force Logistics Command (the primary supporting command) is developing a plan to transition existing systems to contract support. The contractor's ability to successfully maintain our training devices is no longer the key issue at hand. Instead, we are faced with the challenge of providing cost-effective contractor support that will meet our military aircrew training needs. If we are to meet that challenge we cannot expect to continue procurement practices that were designed to meet the requirements of an organic maintenance concept. A total analysis of all the possible practices requiring change is beyond the scope of this paper. However, changes identified do provide an adequate departure point from the way we do business today.

The Need for Training Device Availability

Two factors now drive our need to expect and require a contractor to provide sustained quality support. They are operational costs and mission effectiveness. If a trainer is repeatedly not capable of meeting its scheduled mission, then crew attitude, training effectiveness and mission performance will be degraded. The end result would be a waste of both man-hours and defense dollars. With these two factors in mind let's discuss how we can maximize training effectiveness while minimizing risks for both government and industry.

Effective Support Contracts

In order to obtain effective support, we must write contracts which meet the needs of both industry and government. The support contract must be fair to the contractor while affordable and enforceable by the government. To ensure an affordable contract which is attractive to industry, the government needs to explore the use of both incentive and penalty clauses since penalty clauses alone only tend to drive up contract costs. Although cost is an important factor in procuring contract support, it should not be the single most important factor. A contractor's past performance must also be considered as a primary weight factor for selection on any future contracts. In addition, it is essential that the Air Force establish and maintain the ability to recompete support of the training devices. This will provide incentive for the contractor to achieve and sustain maximum availability and performance. Fairness to the contractor will be achieved by providing realistic goals and specific responsibilities. As a minimum, identification of specific contractor and government responsibilities must be included in the statement of work. Depending on whether CLS or CM were being contracted, the following items would be the responsibility of either or both contracting parties.

a. Personnel qualifications and training.

b. Logistical support including replenishment, management and maintenance of spares.

c. Documentation for maintenance actions including consumption, repair, condemnation, data and service reports.

d. Trainer baseline and software media support including documentation and configuration management.

e. Availability, schedules, performance requirements and standards of measurement including progress appraisal meetings.

f. Support equipment including inspection, calibration and maintenance.

g. Maintenance and currency of the technical data, publications and documentation.

h. Audits, reviews and certification procedures.

Contractor Performance Assessments

Training device availability and effectiveness have always been used to evaluate the quality of in-house maintenance and support. However, reporting systems used the by services to measure that quality were inadequate, and training devices were sometimes reported as fully mission capable even though some subsystems were not functional. The same inadequate system must not be used to measure and report a contractor's performance. Therefore, standards must be developed by the services for measuring performance. The primary goal should be to have a 100% effective trainer available for the scheduled missions. Trainer acceptance tests should be run at initial delivery and after every major modification to verify the baseline and effectiveness of the trainer. Trainer acceptance tests should also be run when the support contractor is changed. The QAR must perform routine quality assurance inspections on the simulator, spares, documentation and support equipment to prevent unauthorized modifications or improper short cut maintenance practices. Monthly functional check flights performed by standardization evaluation crews would also assist in determining simulator performance and configuration compatability with the weapon system being simulated. In addition, a simulator certification (SIMCERT) program should be developed to ensure quality training is being provided. Under SIMCERT qualified aircrews perform an initial certification of trainer performance and training tasks that can be accomplished on the simulator. Once completed, the SIMCERT would become the baseline for annual testing to determine both trainer fidelity and training effectiveness.

Minimizing Risks

Trainer availability must be the yard stick for measuring contractor performance. To minimize the risk for both parties, we must eliminate possible government actions which would adversely impact the contractor's ability to successfully perform. Potential pitfalls and possible solutions follow:

a. The government must insure a recompetable support package exists for the training device. This package must include spares, peculiar support equipment, technical data, hardware and software baseline documentation. The recompetable package can be assembled out of current government supply assets for existing trainer systems. For new training devices, a recompetable package that meets best commercial practices vice mil

standards, should be procured as part of the basic acquisition. Once established, the package would be maintained abreast of trainer updates and modifications.

b. As a result of the current DOD competetive procurement directives, the probability exists that the incumbent CLS contractor will not accomplish all updates and modifications to the training device. Since new or modified parts will not be in the existing recompetition package and we cannot realistically expect the incumbent CLS contractor to do advanced provisioning for another contractor's modifications, some method of spares provisioning will have to be developed. Consideration should be given to including the CLS contractor as a participating member in the provisioning group. In addition, it may be prudent for the government to procure some spares as part of the modification kits. These parts would be used without liability to the government until the CLS contractor can provision the parts required to meet his availability contract. These spares would be maintained by the CLS contractor, but the government would retain title to them.

c. The method of contracting must be determined. For some Army, Navy and Air Force training devices, contracting by the base may provide the best support. However, since aircrew trainers for aircraft such as the F-4, F-15, F-16, F-111 and A-10 are assigned to various commands and maintained in common configuration with their respective weapon system, they could be more effectively supported if contracted by weapon system. In addition, this would provide for more efficient configuration management.

d. A centralized management agency should be identified to administer CLS and CM for existing and new training devices. In the near term each service should identify a centralized management agency which, in conjunction with the user, would write, negotiate and administer training device support contracts. Once all branches of the service have converted to CLS on all training devices, consideration should be given to establishing a joint DOD management agency to administer the support contracts.

Implementing CLS

As previously indicated, both Army and Navy conversions to CLS are already well under way. Therefore, the following implementation techniques are directed primarily at the Air Force conversion.

Existing Training Devices

For existing training devices, the transition to CLS should be accomplished concurrent with the first major trainer update modification. Modifications considered of major magnitude include: embedded computer replacements, avionics configuration updates and incorporation of simulated/stimulated aircraft subsystems. Older antiquated training devices of the analog era which have a limited remaining service life should be converted to CM instead of CLS. CM is desirable since spares are only available within the federal supply system, and it would not be reasonable or affordable to require a contractor to provision obsolete technology. Regardless of whether CM or CLS is used, the contracts should include clauses identifying provisions to provide adequate interface between the supporting contractor and any modification contractors. Associate contractor responsibilities should also be identified.

New Training Devices

Contracts for the acquisition of new training devices and training software support center (TSSC) should include provisions for providing CLS as part of the initial buy. Included in the CLS package should be spares, peculiar support equipment, technical data plus hardware and software baseline documentation needed to perform and recompete the CLS contract. In addition, TSSC equipment should also be included for CLS. The government would retain title to all items procured as part of the CLS package. The CLS contract should also contain clauses to insure adequate interface between the supporting contractor and any modification contractors. Associate contractor responsibilities should also be specified.

Summary

The success or failure of CLS will depend on four key items. First, we must insure that a recompetable package for both existing and new training devices is procured and maintained. Second, a means of assessing a contractor's performance must be developed to ensure that a trainer is not only available, but is capable of providing the training for which it was designed. Third, in order to meet the needs of both the contracting parties, the CLS contract must be fair, affordable and enforceable on both parties. Fourth, risks must be minimized for both the contractor and the government. We need to eliminate possible government actions which adversely impact the contractor's performance in order to place the burden of meeting required availability rates on the contractor. If the services and industry are prepared to use creative/innovative contracting and support practices, the goal of providing efficient, effective contract maintenance and logistic support at reasonable costs can become a reality.

About the Author

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