

NDIA Acquisition Reform Project

“State of the Practice” (SOP) Working Group Update

Divergence of Government-Unique and General Private-Sector Practices

29 Jul 2014

v2.4
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SOP WG Central Theme – Warfighter #1

- Keep the “Main Thing, the Main Thing” – Customer Identification: Soldiers, Sailors, Airmen & Marines – (sic. The DoD Acquisition System [**Provider**] and the Defense Industry [**Supplier**] are **NOT the customer**) – *Customer needs Collaborative Advocacy.*
- DoD & the Defense Industry need each other to succeed for the warfighter, period – the stakes are too high (understatement).
- “The Budget is what the budget is” – and it must be enough; no top line relief - top line may continue to come down – *effective collaboration is critical.*
- Industry doesn’t want to build something DoD can’t afford or support, needs fair competition; Industry losses = no industry.
- DoD needs an affordable, technically superior product, does not want to suppress Industry profit; DoD loss on the battlefield = no U.S.A

Valorize: (Merriam-Webster): **val·o·rize** – **verb** – \ˈvɑ-lə-ˌrīz\

transitive verb

1: to enhance or try to enhance the price, value, or status of by organized and usually governmental action <using subsidies to valorize coffee>

2: to assign value or merit to : **validate** — val-o-ri-za-tion \ˈvɑ-lə-rə-ˈzā-shən\ noun

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SOP WG Term Definitions

- **“State of the Art”:**
 - Highest level of general development in (a): device, technique, system design, operating behavior / performance level, scientific field, process, procedure or business practice achieved at a particular time, within the common methodologies employed at that particular time. Can be difficult to transition / absorb for early adopters, often a strategic business decision in industry.
- **“State of the Practice”:**
 - Current **Commercial Practices** in the application of (a): device, technique, system design, operating behavior / performance level, scientific field, process, procedure or business practice. **Presents DoD acquisition innovation opportunity for better performance, at lower than programmed cost.**
- **“Obsolete Practice”:**
 - Older / no longer in general use in **Commercial Practices**: below “tradecraft” standards; **results in higher than programmed costs & lost innovation opportunity for better performance, at lower than programmed cost.**

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SOP WG Central Thesis



DoD Acquisition & Defense Industry *convergence* to
"State of the Practice" / Optimal Tradecraft
= **Affordable Valorization** of the Product for the warfighter

Product Delivered:
... at the Right Price / Right Time / Right Capability

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SOP WG Limits

Outside of SOPWG Scope:

- **Contract Award (Agency / GAO) Protests**
- **Cost Accounting Standards: 48 CFR Chapter 99:**

SOP WG Issue Areas

The “Use Cases”

- **Supply Chain Management**
- **Industry Self Funded R&D**
- **Commercial Item Determinations**
- **Government Unique Requirements**
- **Business Case Decisions / “Rent vs. Buy”**
- **Innovation to Affordability**

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Supply Chain Management (SCM)

Concise Problem Statement

- Driven by intense competition **Commercial Industry** continues rapid advancements in comprehensive integrated Supply Chain Management (SCM): **Current “State of the Practice”** centers on **software intelligent agents / algorithms** - dramatically reducing overhead costs / raising competitiveness – enabling total asset visibility / subcomponent competition / reducing idle inventory investment / automated collaboration / reduced disruption, smoothing demand to delivery process, cutting across programs and business lines – **Product Performance (not unique buyer) centric**
- **SCM Automation has significantly improved subcomponent competition – lowering market rate costs & pricing**
- Accordingly, integrated **SCM – provides Govt. significant value (at market price)** but inherently incompatible with Govt. cost accounting / obsolete practices – cost traceability compliance--- **generally required by the oversight community** is difficult (understatement) / expensive / slows transactions
- DoD acquisition: In pursuit of cost traceability (often for its own sake, sometimes due to apprehension of SCM disruption), DoD continues push (devolution) toward SCM disaggregation – false premise (not evidence / business case based): Govt. can manage more cost effective supply chains.
- Supply chains do not lend themselves to government cost accounting efforts

Concise Root Cause Analysis

- Limited Govt. understanding in commercial SCM “State of the Practice”
- Mixing of commercial and DoD parts / services (commerciality); DoD Cost accounting impediments
- Govt item manager SCM disruption fears.

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Concise Solution Proposal

End state condition: mutual trust – characterized by Industry willingness / Govt. acceptance of market price reasonableness and appropriate SCM transparency

Congress require a DoD (in execution year) Business Case Analysis (BCA) study to examine benefits of Industry SCM Best Practices, with recommendations / guidelines for DoD Acquisition to:

- Examine for DoD application (and CBO BCA score), the scale of potential savings in the use of modern commercial “State of the Practice” resilient SCM systems. CBO scoring of DoD applied modern commercial SCM projected savings should use “State of the Practice” assumptions from comparable commercial applications.
- Limit DoD SCM overreach for non-obsolete products / easily obtained. With process recommendations for Industry to nominate (for relief) current Govt SCM items – including Industry cost savings evidence / BCA rational and SCM disruption risk mitigation.
- Introduce criteria / cost avoidance goals to reducing items for which DOD must own the supply chain (to include intellectual property), to risk mitigate potential SCM disruption.

DFAR should be amended to reflect that the government should not be using taxpayer dollars to duplicate a supply chain that has been established using private dollars and resources unless there is a compelling national security objective in doing so --- ie The bar for DOD to own a supply chain should be set very high so that only products that are obsolete or for which there could be no supplier are wholly owned by the government.

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Industry Self Funded R&D

Concise Problem Statement

- Current DoD policies discourage self-funded development of products with military applications at a time when DoD wants its industrial base to invest more in R&D - **DoD has limited insight into the opportunity cost of this behavior**

Concise Root Cause Analysis

- Narrowing of commercial item acquisitions: requires laborious / onerous FAR Part 15 procedures - moving default “fair & reasonable” price determination from price analysis to cost analysis.
- DoD Cost analysis (as is), does not compensate industry for self-funded technology investment - industry R&D costs reimbursed on a one-time basis with a “normal” markup (or not at all). “One size fits all” treatment appropriate for cost-plus DoD-funded R&D – **but a bad fit for self-funded R&D**
- DoD practical range of allowable profit is inadequate to provide appropriate compensation.
- DoD aggressively seeks data rights on items developed largely or entirely at private industry expense, even undertaking reverse engineering efforts under some circumstances.
- DoD refuses to accept price analysis based on prior governmental purchases, directly contrary to FAR §15.404-1. For military items, this approach almost always negates price analysis.
- Private sector companies often spend 10+% of their *total* expenses on R&D activities. DoD Contracting Officers (using cost analysis), lack the authority to add 10% or more to supplier profit margin for self-funded development, and in practice, would likely never add profit % even if granted the authority.

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Industry Self Funded R&D

Adverse Consequences

- Companies with self-funded R&D technologies for commercial or for dual use (military and commercial) will avoid DoD work, even with financial incentives. (This condition already exists in domains such as Robotics, where Google has avoided Govt markets). In other technological domains **“State of the Practice” advancements are accelerating** - entirely driven by private R&D: e.g., 3-D printing, electronics, software, and space services.
- If unchecked, DoD will increasingly rely on dwindling internal R&D (normally slow, with lower transition efficacy to production / fielding). Industry spends 9X over Govt. on R&D; DoD budgeted RDT&E has dropped from 22% to 17%. DoD market cannot attract talent / capital if no means to earn market-level return. Defense contractor margins are significantly lower than other sectors (except public utilities). DOD is able to use the In-Q-Tel model to fund R&D without any new authorities using non-FAR based contracting for disruptive technologies.

Concise Solution Proposal

- Use price (vice cost) as the default “fair & reasonable” price determination for all products developed exclusively or primarily at private expense. For dual use items developed at private expense, use price analysis for the base product, with cost analysis for the military delta / adaptation.
- Prior government purchases of the same or similar items are an adequate basis for price analysis, absent material changes in circumstances or evidence that prior pricing was not representative; Restore “of a type” and “offered for sale” branches of commercial item acquisitions in Section 831 guidance - Use MPNDI authority (2011 NDAA, Section 866) where applicable.
- Price analysis should reveal competitive products that are fairly priced. Contracting officers should negotiate a price they consider too high, particularly if a similar product(s) are in the marketplace.
- Respect intellectual property rights, seeking only limited rights when a product is developed entirely or substantially at private expense.
- Congress require (an in execution year) study on costs & risks (e.g., industry exit) of this behavior.

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Commercial Item Determinations (CID)

Concise Problem Statement

- The process that DoD uses for Commercial Item Determinations (CIDs) is inefficient and does not support the statutory preference acquisition of commercial items.

Concise Root Cause Analysis

- Procurement of items with a CID is far easier, cost-effective and efficient for the warfighter than using other methods. However, DOD departed from this best-practice by narrowing the definition within this category. Consequence: reduction of DODs stated preference for commercial products.
- The current law is adequate for CID. FASA provided statutory definition of Cis, promulgated in FAR part 2 - **definition was intended to be broad.**
- Because of “grey areas” / dual use products, CID definition has been incrementally narrowed & is applied in the most conservative way possible.
- Industry very vocal in concerns.
- The narrow definition does not represent the best interests of the taxpayer & warfighter.

Concise Solution Proposal

- Congressional oversight of CID definition and establishment of standard for CID. **Promote DOD to reuse other CID's for similar products.** Instruct the Director of Defense Procurement to: support the statutory preference for commercial items as established by FASA; develop guidance & training to price CIs.
- Require Congressional committee notification & consent for proposed changes to definition of CID
- Permit DOD to raise the allowable profit margin for DOD contractors to be equal to those of commercial companies.
- Congress should solicit input from industry to determine where industry has started to shun government business and solicit solutions from those industries.

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Government Unique Contract Requirements

Concise Problem Statement

- When DOD makes a decision to buy a commercial item, it will insert clauses into the procurement contract that makes the procurement much more difficult than is necessary. Many of these clauses are items that would never appear in a commercial contract and are unnecessary for the procurement in question.

Concise Root Cause Analysis

- DOD has some flexibility in which laws it applies to which procurements. However, the determinations as to which laws to apply to a procurement is not transparent nor subject to any meaningful appeal. Most procurements appear to defer to the personal experiences of the contracting officer. The result is a very arbitrary series of rules that is applied each time the government buys a basic product.
- The best guidance available is 41 U.S.C. 430 & 431 which allows the FAR Council to find that a law should be made applicable to commercial item acquisition if it is in the best interests of the United States. This leaves many procurements in a grey area for which procurement officials are not necessarily properly trained.

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Government Unique Contract Requirements

Adverse Consequences

The continued applicability of government-unique requirements to contracts and subcontracts will continue to increase costs of doing business with the Government and will result in companies exiting the government market.

Concise Solution Proposal

Congress should sort through provisions that could be included in a procurement and demand that the FAR be adapted to remove items that are inapplicable to contracts for the procurement of commercial items. FAR and DFAR part 252 contain very generic guidance on instruction for using provisions and clauses. Additional guidance must be provided to remove onerous, unrelated or unenforceable provisions wherever possible in contracting.

Some solutions, such as the multiple sets of books required to be kept for DCAA audits, demands of intellectual property and source code and such are outside the scope of this working group, but are relevant to the discussion.

Congress initiate CBO scoring study on the risks / savings opportunity and solicit inputs from industry on what items are particularly onerous and unreasonable to comply with --- for reform of FAR/ DFAR part 252 Solicitation Provisions & Contract Clauses.

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Business Case Based Decisions – Capital Investment vs. Performance Based Acquisition

Concise Problem Statement

- Performance-based Acquisition (PBA) represents the current and expected future “State of the Practice” in commercial domains. DoD PBA has been long articulated in regulation / policy, but only modest progress; items below the Simplified Acquisition Threshold (SAT), DoD PBA is rare.
- DoD suboptimal (Obsolete Practice) of buying capital assets when unnecessary (such as in the case of laboratory test equipment) results in: sustainment (modernization / obsolesce) risk transfer to Govt.; hinders DoD’s ability to access technological advances as they occur, and normally lower than commercial standards for utilization.

Concise Root Cause Analysis

- Administrative burden: FAR 207.401 --“If the equipment will be leased for more than 60 days, the requiring activity must prepare and provide the contracting officer with the justification supporting the decision to lease or purchase; and personal preference.

Adverse Consequences

- Equipment is bought (even if used once); Capital funds tied up for short-term needs with low utilization. New capital assets must be sustained / maintained. Limited or poor access to technological advances. In the case of test equipment Govt labs default to the available capital asset, vice the added capability, precision of latest technology – increasing test costs. Govt labs cannot borrow a test device any easier than they can rent. If another government lab already owns the test equipment, then the established practice is to buy the device all over again.

Concise Solution Proposal

- Congress require DoD PBA study to examine behavior consequence in cost / risk.
- Congress should require that DOD issue a policy mandating rent-vs-buy cost/benefit analysis for all COTS test and measurement equipment in support of RD&TE programs and activities; OR require a change to DFARS requiring rent-vs.-buy cost benefit analysis in advance of authorizing purchase of all COTS test and measurement equipment.

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Innovation to Affordability

Concise Problem Statement

DoD programs are increasingly unaffordable to acquire, maintain and operate. A significant part of this problem stems from a failure to fully apply commonly accepted, state-of-the-practice engineering innovations - widespread in commercial industry.

While obsolete engineering practices are prevalent in DoD, they are most problematic in major programs. As a consequence, MDAP / large MILCON programs regularly integrate outmoded technologies, using outdated design architectures, based on obsolete COTS components - resulting in systems that are needlessly more expensive to design, take longer to produce, are more difficult to test, are larger / heavier, and consume far more O&S resources to sustain. The result is to institutionalize obsolete processes, practices and components for the life of the program and the assets it produces --- **missing strategic opportunity to lower acquisition and life cycle costs.**

Concise Root Cause Analysis

- DoD rarely / deliberately revisits its specification requirements for accessible innovation.
- DoD workforce expertise to update old practices, specifications and technologies is limited.
- DoD MDAP PMOs have no direct incentive to assume appropriate risk to apply innovative technologies that reduce costs, improve efficiency, or improve readiness and reliability.
- Congressional & PPBS/President's budget process is too long & inflexible to capture innovation opportunities or avoid emergent problems. The established appropriation "color of money" system creates artificial barriers between PMOs and Troops who use/maintain systems.
- It is impossible to revisit a given year budget once subject to a "budget lock." "State of the Practice" innovations can't be applied.
- DOD acquisition workforce has no incentive to make a better product or develop the expertise necessary to drive commonly accepted innovations into system design.

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Innovation to Affordability

Adverse Consequences

- Obsolete systems are larger, heavier and consume far more fuel; have lower availability (Ao) and are less reliable than modern commercial equivalents. Obsolete systems often require the startup of added Diminishing manufacturing sources and material shortages (DMSMS) efforts to sustain or extend service life - lifetime spares add to inventory costs, require their own sustainment; often needing custom solutions / repair, incurring further cost liabilities.
- There is no incentive to “open the can.” e.g., system built in 1980’s contains 1970’s technology and, without incentives or actionable means, 70’s technology is perpetuated / institutionalized; in turn warfighters are delivered “new” underperforming obsolete systems.

Concise Solution Proposal

(Note: “Major Capital Asset” defined as MDAP products and large MILCON projects).

- All new designs should require a **process of peer review , open (higher level) designs and design architectures for systems that are common to commercial and military assets**. Commercial industry should peer review designs at all steps in the development process to ensure that “state of the practice” / best commercial practices / commonly accepted innovations are implemented by DoD.
- Congress require DoD to conduct an **independent** obsolescence study of all major capital assets to identify systems that can be replaced **with modern / “State of the Practice”**, efficient, reliable technologies, widespread & accepted in similar commercial applications. The study should recommend changes that can be made based upon availability of an asset as well as major changes necessary to incorporate “Sate of the Practice” innovation into a major overhaul or mid-life upgrades. The study should **require a process of peer review, open (higher level) design and design architectures for systems that are common to commercial and military assets**.
- Based upon the obsolescence study, a list of critical assets that cannot be practically replaced should be made and a regime of training and maintenance developed by each service to ensure that these obsolete systems are operable throughout full service life.

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Innovation to Affordability

DOD should evaluate (and report on) all production lines that are 20+ yrs old – to determine if updates to original design architectures and technologies are needed. This study should **require a process of Govt / Commercial Industry peer review of open (higher level) designs and design architectures for systems that are common to commercial and military assets.**

- Congress should mandate MDAP product performance efficiencies, such as reducing fuel consumption, both for PMOs and Service entities that maintain them. The current arrangement has the practical effect of organizing the warfighter for failure as they attempt to maintain obsolete systems. These best practices should **require a process of peer review, open (higher level) designs and design architectures for systems that are common to commercial and military assets.**
- Peer review each step of each process. Even after a system is developed, it must be peer reviewed to refine it. Systems such as F-15, F-16 and DDG-51 have been in production for decades, with little incentive to revisit architectures / practices.
- The purpose of these peer reviews, consultation with commercial users of similar systems is to incentivize the acquisition workforce to question why systems / technologies are still used in ships, rather than the typical focus of adding new capabilities.
- **Congress should require DoD to Develop “innovation” in cost avoidance / savings incentives for the DoD MDAP PM / PMO workforce and Industry system providers - wherein the PMO, Agency Sponsor and Industry are permitted to keep a portion of (nominated / evidence substantiated / and approved) “innovation” savings; thus encouraging the PM & Contractor to “open up the can” to capture innovation opportunities, even after the system is in production.**
- FAR Part 15 contract negotiation is a significant barrier to entry by contractors as it does not accommodate commercial operating or investment models, but is the preferred method of DoD Acquisition

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