Understanding Military Procurement

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WARNING –DATED MATERIAL

To attempt to understand what the true interpretation of *Boyle v. United Technology* was meant to be, one must first understand military procurement procedures.

The **FAR**s (Federal Acquisition Regulations) and **DLARs** (Defense Acquisition Regulations) precisely regulate government and defense procurement. These rules state quite specifically who can approve or change contract requirements and technical specifications. Generally speaking, only the **Contracting Officer (Co)** can change specification. The Contracting Representative and specified **Contract Office Technical Representatives (COTR)** do not have the power to change contract requirements or change specifications unless approved by the Contracting Officer. It is the Contracting Officer who is empowered to grant waivers and deviations. These are the persons empowered with the Government's discretionary power, with regard to military contracting. [This is probably who Scalia meant when he said "A Federal Government Procurement Officer".]

> *"The Contracting Officer's Technical Representative or Technical Officer has been designated by the Contracting officer (CO) as having primary responsibility for overseeing the Contractor's performance. A letter of designation specifies the C.O.T.R.'s duties...The COTR also determines whether contract deliverables meet functional, technical and performance specifications...The COTR is the Technical advisor to the CO for all aspects of contract administration, but must request changes to the contract through the CO." (chapt. 2 paragraphs 1 and 2)*

III.

A Generic Examination of Military Contracting Procedures

The United States Government may acquire products from contractors in three general manners.

1. By **Full Scale Development (F.S.D.)** of a very new product.
2. by extensive development and modification of an existing product.
3. By off the shelf purchases of an existing product.
   a. Off the shelf item of a previously approved product (

re order)
B. Off the shelf item, new purchase.

Intense Government scrutiny of design proposals and designs usually occur most regularly in development phase contracts. Government design review is much less likely in the purchase of off the shelf items. By the time that the Government is in a production phase purchase contract the design phase is settled. In such a production purchase contract the government is no longer scrutinizing the design aspects for approval.

The Full Scale Development program for a new aircraft such as the S3 in a similar manner as described hereinafter.

The Government negotiates and funds a **Full Scale Development Contract (F.S.D.)** with several phases for the development and initial production of the new aircraft. In a full scale development situation a contractor initiated Development Plan is promulgated. It is usually divided into logical phases or subsections for contract control.

A Contracting Officer **(CO)** is designated in writing. The location of the Contract Office is determined. Technical Representatives of the Contracting Officer are designated (COTR). An overall Military Program Manager or Project Officer is named. (The difference between a program and project is the scope and cost). A program manager may have several project officers' working for him.

The Development Plan, created by the manufacturer and sent to the military, is usually condensed into a **Program Manager's Master Notebook.** It is within this Development Plan and the Master Notebook that evidence of the existence or non existence of the military contract defense may be found, such as:

1. Who will do the work?
2. When the work is to be completed.
3. What the cost and funding procedures are.
4. Milestones and milestone reviews.
5. Document genesis, and requirements.
6. Testing requirements.
7. Acceptance or Approval requirements.
8. Subcontract requirements and status.
9. Specification and Control Drawing Requirements.

Typical Divisions of a Full Scale Aircraft Development Program include, but are not limited to:

FAZE me.
Phase I . Development phase for engineering R. and D. studies.
PHASE II. Development phase in test and mock up.
PHASE III. Development phase demonstration and flight testing.

PHASE IV. Production phase.

It is during the Development phase [phase I.] that most design work is accomplished. Most final controlling specifications for subcomponent and component parts are decided upon and memorialized in writing.

The original R. and D. development phase contract between the Government and the contractor will include normal contractual language and requirements to be performed. To delineate what is to be done, the contract will usually include detailed and complete recitation of the work to be completed. It will include a section stating which Design Handbook criteria, military standards and military specifications are to be followed and met. It may include specialized preliminary design or equipment specifications for the system. It will include a **Contract Data and Demonstration List (C.D.R.L.)** of engineering data to be produced as well as a listing of engineering testing to be demonstrated. It will state what requirements shall be met and which items are to be reviewed and approved by the Government.

Milestones are utilized to schedule and track design events. Basically, a milestone is a logical scheduling system that assigns dates events are to be completed. Milestones are utilized in the procurement funding portion of a military contract to signify completion of an event primarily to initiate transfer of money from the Government to the contractor. Milestones are scheduling and accounting devices tied to engineering progress. **MILESTONE REVIEWS** are regularly conducted by the governmental Contracting Officer (CO) or his representative to insure that the project is on schedule and that funding transfers from the Government to the manufacturer are warranted. Generally they are not held for the purpose of technical approval.

During the development phase [PHASE I.] the **PRIME MANUFACTURER** will see the need to purchase or design items for installation and usage on the new aircraft. He may do this in several ways:

1. The Government may order the prime manufacturer to utilize certain items already in the inventory or supply system. These Items are called **G.F.E.** or **G.F.A.E.** standing for government furnished equipment or aeronautical equipment. No new specifications are written.

2. The Prime may purchase certain items as off the shelf items, if they appear as an item on a **Government Approved List**. There is no qualification or verification required.

3. The Prime may approach a **SUBCONTRACTOR** to design and supply a new subcomponent part. In some cases the Prime must obtain permission from the Government to approach a subcontractor, in other cases permission is not needed. In either case the process is called **PRIME ITEM**

DEVELOPMENT (P.I.D.). The prime contractor will issue preliminary specifications, milestones, testing and verification requirements that the subcontractor must meet. The Prime manufacturer oversees the progress of the subcontractor much as the government oversees the prime.

In the P.I.D. case the subcontractor will provide demonstration of the new widget to the prime through analysis, testing, and verification and qualification demonstrations. Further, the subcontractor will submit a **Final Specification** to the Prime manufacturer for the design of the new subcomponent. It (the Final Specification) will reference compliance with all required previous specifications or it will include waivers, deviations or exceptions thereto.

In some cases of subcomponent development the government may participate in a **First Article Testing and/or Configuration Audit** of a subcomponent designed through a P.I.D. process. [This audit determines what configuration the final item will take as it is subsequently procured]. The Prime Contractor is the usual approving authority for the Final Specification of a subcontractor's part or component.

During this time each such subcontractor and the prime are creating technical supporting and compliance and verification documents that may be required by the original Government contract or by the myriad of subcontracts. The documents that are required are listed on an attachment to the contract known as a **Contract Data Requirement Listing,(C.D.R.L.)** or in the case of a subcontract, the **Subcontractor Data Requirement List(S.D.R.L.)**

So far we have shown great latitude of design to the manufacturer and little governmental interference. The subcontractors have received their approval (of P.I.D.S.) from the prime contractor.

As the development phase moves into system and aircraft mockup [PHASE II.] the final product is beginning to emerge in hardware form. The prime contractor has to show the government that its design is jelling into a workable system. The prime contractor is in the spotlight to demonstrate that its aircraft design will meet the contract requirements.

Throughout the entire development phases of a government contract the Government may and usually does conduct **Design Reviews**, **Critical Design Reviews**, and **Safety Reviews** of the prime contractor. The Government may conduct unannounced inspections of the prime or subcontractor at any time.

During Phase II. The contractor is demonstrating system integration to the government.

In PHASE III. as the final aircraft design evolves and is settled upon during

flight testing, almost all the specification writing is complete except for the final specification for the purchase of the aircraft. During Production test (where first the company and later military test pilots fly the final product) many problems are found and corrected. The aircraft is tested to demonstrate conformance to performance requirements and specifications. In this time it is usual for a military **"Inspection Board"** (given differing names by the services) to verify performance and other specifications.

If these tests are satisfactory and the Government wants to mass produce the machine it will begin to move toward the **PRODUCTION PHASE** (PHASE IV).

At this point almost all the data has been collected sufficient to write a complete and comprehensive "reasonably precise " specification for the final configuration of the finished aircraft. One step remains in which the Government is very deeply involved, that is the creation of the **"Configuration Audit"**. The Government may have been presented several design options and a multitude of installed equipment options to be installed on the air vehicle. This is like going to the automobile dealer and special ordering your car with a number of special options. The Configuration Audit essentially **baseline** the aircraft and all aircraft produced under the production phase contract [PHASE IV] must be delivered identical to the one specified. The manufacturer can't change the design of the aircraft if such change affects **form, fit or function without** future Government approval. After such an audit is complete the Contractor writes a Final Specification for the specific aircraft and forwards it to the government in accordance with the work requirements of the contract. It references other specifications and milspec and milstd. That has been complied with. It is usually accompanied by a set of microfiche Control Drawings.

What makes up the Final Phase Four Procurement Contract of such an aircraft? Usually, it is the Contract itself, the Final Specification, the configuration audit, a set of control drawings, a contract data requirement list and included somewhere a listing of deviations, waivers and exceptions to design specifications. (Such a listing notifies the government that during the development fazes some of the original goals or specifications could not be met.)

Most defense attorneys rely heavily on the extensive military involvement and testing phase of the aircraft to bolster claims of immunity, since the military approved the final design and configuration of the aircraft. In actuality it is often true that many devices incorporated within the aircraft have not been analyzed or approved by any military Contract Officer. In fact many devices may not have been built under a government contract, nor have they been scrutinized sufficient to deserve immunity. The process of approval for the overall aircraft may be a mere "rubber stamp" with regard to the design of components installed within the aircraft.

After production has begun each aircraft is inspected and test flown as it

comes off the line. After such an Acceptance Test a form **DOD 2050** is signed by the government plant representative to take possession of the aircraft. The acceptance also triggers funding to the manufacturer for delivery of the aircraft. This document is signed by a Government underling who has the power to take possession of an aircraft that has not met the configuration audit. The military signer of the DD 2050 does not have local authority or discretionary function sufficient to waive design specifications. This is power is reserved for a Contracting Officer (CO).

Subsequent to delivery of the aircraft the only way changes can be made by the manufacturer are through **Engineering Change Proposals (Epps)** that must be approved by the Contracting Officer (CO) and funded by the government.

Or

Through **Notice of Deficiency (N.O.D.)** which means that the Government has found that the manufacturer did not meet the original design specifications and so the manufacturer must fix the design at no cost to the government.

Besides the Program Manager's Master Notebook and the Development Plan, the most important document utilized to determine whether or not there has been a true governmental review and approval process is the **Contract Data Requirements Lists (C.D.R.L.)**

This listing specifies what document submissions, reports and control drawings are to be submitted to the Government. The submission of such reports does not definitely mean that the government conducted the substantive review of those documents. It is proof, however, that certain documents were supposed to be turned over to the Government as part of the contract. These documents are certainly some evidence of governmental review.

IV.
When is a Specification a Reasonably Precise Specification?

During design and development of a new product, it is incumbent upon the designer to meet certain design specifications, requirements and criteria. When the design is done and the product is complete, a set of documents will have been created that in combination make up the final specifications for the product. The final design specifications have gradually metamorphisized from the initial contract requirements and specifications.

At the point in time of the signing of the development contract all such initial general specifications and requirements that are included by reference are mandatory and they define the contract.

As the development proceeds, the manufacturer is given design latitude as

how to accomplish these goals and requirements. If the manufacturer can not attain the requirements or specifications (those that shall be met), it is incumbent on the manufacturer to notify the Government of the impossibility in a timely fashion. When such requirements can't be met, the manufacturer applies for a deviation or a waiver (occasionally misnamed an exception). The difference between a deviation and a waiver is that a deviation represents a temporary situation whereas a waiver is a permanent release from meeting a specification or contract requirement.

As the contract progresses to hardware stage it is usual for the contractor to be required to write an extremely complete finished product specification (end product specification) for the newly developed item. It is also usual to supply the Government with complete set of microfiche control drawings (blueprints), sufficient to build the end product. Often the contract will include a licensing agreement. Further, the contract will state what engineering reports, analysis, and testing verification reports an demonstrations must be supplied the Government to fulfill the Work Requirements and Contract Data Requirements portions of the contract. This procedure may or not require actual governmental approval of any of these items.

Such a developmental protocol will almost undeniably result in the Government's receipt of many reasonably precise engineering documents. Such a protocol will result in transmittal of documents from the manufacturer to the Government. From the aspect of Military Contract Legal Defense, such a protocol may or may not constitute approval by the government of reasonably precise design specifications. This aspect can only be determined by the amount of governmental review conducted for the purpose of design approval by the Government.

In many instances the design is left to the manufacturer and actual approval of the system is also left to the manufacturer. This is especially true for subcomponent parts of a system that were obtained through prime item specification controlled by the manufacturer and not the Government.

From a legal aspect, the question of whether or not a manufacturer deserves immunity for a new design is determined by how much interface there was between the manufacturer and the Government Contracting Officer concerning the issue of actual governmental approval of the manufacturer’s product.

We were armed with this limited understanding of military contract procedures since I had lived them at The NADC during the late 1060's. Further Howard and I had done the F-16 case, The B-1 bomber case and the B-52 case. In short prior to the Secretary of Defense who brought you the Edsel and helped bring the Viet Nam war contracting procedures were different. Now they are more standardized across the services.

It was plaintiff's job to make the manufacturer produce the documents that would show whether or not the government had received reasonably precise specifications, whether the government had approved any such specifications, and whether the machine complied with them if indeed they did exist. I imagined that we would find a great many specifications and a great deal of government scrutiny.

It was known that Prime manufacturer did not actually manufacture the hydraulic flight control servos and actuators. This was done by a subcontractor. The strange part was yet to be discovered.

During the competition for design rights the Company's "paper airplane proposal" had included a set of schematics for the flight control actuators. These drawings were different from the final product. The preliminary proposal could not be considered precise or what was eventually delivered as installed. It was entitled "Equipment Specification- Power Servos" It was dated 1968.

Next we were delivered a three inch blue covered book that they said was the specifications for the flight controls on the S3 aircraft. They were very general in nature and they were a Lockheed product. The only approval shown stamped on the cover of this document was an approval of a Lockheed engineer. The document that they turned over to us had no Government stamp of approval and no printed routing slip with a place for government approval. The document contained no blue prints or specific details for the final construction of the systems.

It was during the first deposition of a Company engineer who had been employed at the time of the aileron servo design that the full truth began to emerge.

He told us that the specification for the design of the aileron servo was actually a Company specification. Further he told us that the contract for the servo was between Defendant Company and a subcontractor not the Navy. He said that defendant company as Prime had approval authority over the subcontractor. He said that if the subcontractor wanted to initiate an engineering change to the servo that the subcontractor had to come to Lockheed for approval not the Navy. He said that engineering documents were submitted to Lockheed and not the Navy and he said that testing demonstrations were overseen and watched by Defendant Company and not the Navy. Approval was by Defendant Company.

When we asked if there was Navy participation in the design process the answer was that that was not the way we did it back then.

We were overjoyed at these revelations. We had not expected that it would be so

clean in that:

a. There was no navy contract for the design and development of the aileron servo.

b. There did not seem to exist any reasonably precise specifications for the aileron servo except the Lockheed general specifications.

c. There was no Navy participation or review of design and development engineering done by the subcontractor.

d. There was no indication that the subcontractors work had been transmitted to the Navy.

And

e. There was no indication that the Navy ever approved any reasonably precise design or development specifications for the system.

Once a system has been approved the first article will undergo a configuration audit before mass production is begun. The Navy had not been involved in this process only Lockheed and the subcontractor.

This chain of unexpected events was Manna from heaven. If the engineer's memory was correct we had won the contract defense issue. If his memory was incorrect Lockheed would have to produce either documents or witnesses to impeach their own witness.

Since the design and development of the system happened 25 years ago, it was possible that documents had not been kept. Our motion for discovery and production of documents and things was enormous. We simply asked them to produce every document in their possession that they would rely upon to prove up the government contractor defense. They produced little or nothing of concern to us. They produced a production contract for the batch of airplanes that include our own. This contract had nothing to do with design and development of the servo which had been completed years before. They brought in years of flight test material for the completed prototype airplane which again had nothing to do with the design, development or selection of the aileron servo that had been completed years before.

While my partner was ecstatic at these developments I was terrified and very pessimistic. A wise old Turk taught me that the difference between an optimist and a pessimist is that the pessimist is better informed.

What we were seeing was that defendant company was not producing documents that would prove the contractor defense. What I was seeing was that the myriad of documentation lead me to believe that defendant company did in fact have documents that might prove up the defense. I believed that the defense was intentionally withholding them so as to allow their defense lawyers to run up the bill before springing a trap on us.

Instead of springing such a surprise they brought out their Top Gun. They

got the retired Navy Admiral to sign an affidavit unsupported by enclosed documents that basically said that He had been the S3 Program Manager all the way from design and development through production. The affidavit suggested that the Navy was involved in every step pf the contracting procedure, saw everything, signed everything and approved everything about the S3 aircraft.

Now if you are familiar with Admirals the one mistake they readily make is that they think they know what is going on in their command. The Admiral is usually the last to know. More importantly is the fact that to prove up the Government (Military) Contractor Defense the key man (from a legal standpoint) is never the Program Manager. Admittedly a PM usually retains title throughout the program. He is usually a military man with limited engineering background (Relative to the CONTRACTING OFFICER (CO) and his people).

On the other had you have the most important single person in a military contract is the designated Contracting Officer **(THE CO)** He alone has the power Justice Scalia opined about. He is the designated person with power to bind the government concerning design development production and purchase of widgets by the government.

The Government Contracting Officer's Authority

The Contracting Officer (CO) has enormous Power. He probably is what Justice Scalia was describing when he said a Government Procurement Officer with power to use government discretion in the design and procurement process of the United States Government.

By government Law The Federal Acquisition Regulations and a variant used by DOD.

THE CO

The Contracting Officer (CO) is designated in writing for each contract.

The Contracting Officer(CO) is the only person per contract empowered issue or approve final specifications.

The Contracting Officer(CO) is the only person per contract empowered to change Specifications

The Contracting Officer(CO) is the only person per contract empowered to change contract provisions

The Contracting Officer(CO) is the only person per contract empowered to issue waivers or deviations.

The Contracting Officer(CO) is the only person per contract empowered react to any DOD issued by the manufacturer per contract proviso.

The Contracting Officer (CO) has a cadre of The Contracting Officer Technical representatives (COTR) that may view verification and other tests.

THE COTR

The Contracting Officer(CO) team of COTRs can disapprove test results or verification

The Contracting Officer(CO) team of COTRs may recommend acceptance of specifications

The Contracting Officer(CO) team of COTRs may recommend the issuance of waivers or deviations.

The fact that the affidavit was devoid of supporting documents that had been cited by the Admiral caused me to become more optimistic. A sophomore in law school knows that you should submit documents cited in an affidavit as an enclosure to the document. The fact that Lockheed did not made me think that the documents did not in fact exist. Maybe the CO never signed anything or his work had been lost.

Moreover, the kind of Approval that Scalia wants to see is CO approval. I knew this because in the years 1967 through 1969 I was Project Officer for NAVY SAR research. For a period of time NADC became Lead Laboratory and I became a Program Manager (awaiting a more senior replacement). It is true on every contract's signature page I signed with the person with he real Power …The **Contracting Officer**. The program manager is more a figurehead for the military while others with real power conduct and approve the Governments business.