

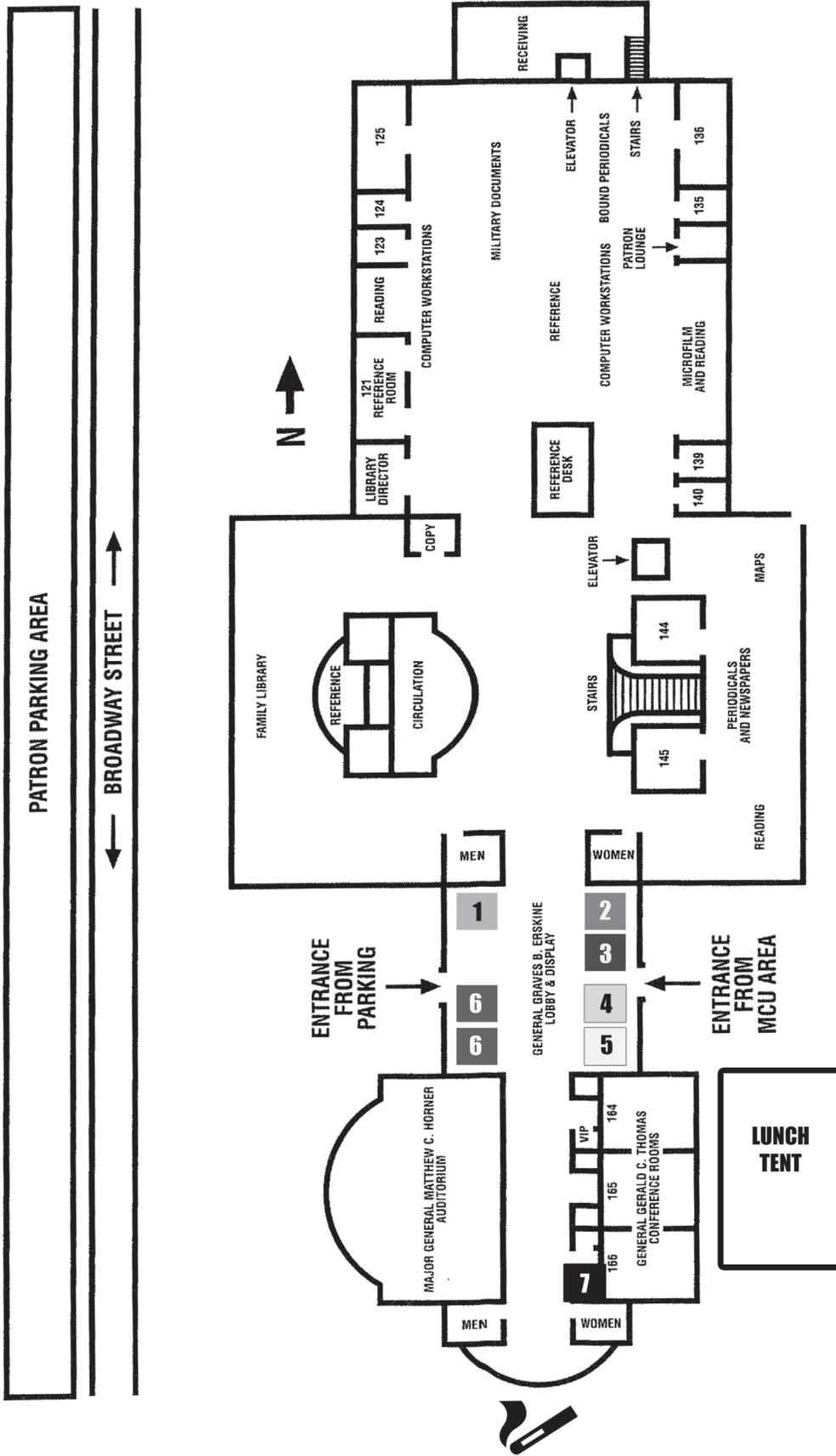


3RD ANNUAL
NAVY/MARINE CORPS

COST ANALYSIS SYMPOSIUM

17 SEPTEMBER 2009
GRAY RESEARCH CENTER
MARINE CORPS BASE QUANTICO

Gray Research Center Event Map



- 1** ON-SITE REGISTRATION
- 2** MCSC KIOSK
- 3** SCEA
- 4** A-L PRE-REGISTERED BADGE PICK UP
- 5** M-Z PRE-REGISTERED BADGE PICK UP
- 6** LUNCH ORDER TABLES
- 7** COFFEE MESS

Welcome

Welcome to the third annual Navy/Marine Corps Cost Analysis Symposium! The cost community is experiencing changing and challenging times with new laws, guidance, organizations, and responsibilities. I hope this symposium will provide useful perspectives on what lies ahead.

We are fortunate to have experienced, senior DoD leaders to address this year's theme: The Impact of Recent Acquisition Legislation on Cost Estimating and Analysis. We also will have very relevant discussions of developments in cost databases and estimating methodologies. New this year, is a training track featuring a realistic case study on how to adapt cost estimating to the uncertainties and dynamic nature of defense acquisition programs.

Many thanks to all our presenters who have taken the time to share their knowledge and insights. We all appreciate the significant effort put forth by our Marine Corps hosts for the third well-managed tour in this state-of-the-art conference center.

My request to you is that you enjoy the symposium. Ask questions, share your perspectives where appropriate, learn, take something back to your own organization, and open up communications with your colleagues within the DON cost estimating community who are in attendance today. Thanks for your participation.

Wendy P. Kunc
Deputy Assistant Secretary of the Navy (Cost & Economics)



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On-site Lunch Information

Please visit the LUNCH ORDER TABLES located in the lobby (#6 on the map) to place your box lunch order prior to the start of the event. No orders will be taken after 0900.

After placing your order and paying \$7.50 in cash (exact change preferred), you will be given a color coded ticket based on your order. At lunch break, pick up your lunch in the lobby. Boxes will be grouped according to the ticket colors.

Harry O's Bakery \$7.50 Box Lunch

The Harry O's Lunch Box includes a hearty sandwich made to your order on our fresh-baked French Bread, a bottled beverage, your choice of snack chips and a fresh baked Harry O's cookie.

Sandwich Selections:

ROAST BEEF - HAM - TURKEY - TUNA - VEGGIE

Beverages:

COKE - DIET COKE - SPRITE - DIET SPRITE - BOTTLED WATER - BOTTLED TEA

Snack Chips:

REGULAR - SOUR CREAM & ONION - BBQ

Fresh Baked Cookie:

CHOCOLATE CHIP - OATMEAL - PEANUT BUTTER - DOUBLE CHOCOLATE - WALNUT

Agenda

Navy Marine Corps Cost Analysis Symposium

17 September 2009, Gray Research Center, Marine Corps Base Quantico

Theme: The Impact of Recent Acquisition Legislation on Cost Estimating

Start	End				Mins
7:30	8:30	Check In and Coffee Social (Lobby)			60
8:30	8:40	Welcome (Auditorium) Cost Analysis and Management Science Award, and Administrative Items Ms. Wendy Kunc, ASN(FM&C) DASN Cost & Economics			10
8:40	9:35	The 2009 Acquisition Reform Act and the Certification Process Dr. Nancy Spruill OUSD(AT&L) Director, Acquisition Resources and Analysis			55
9:35	10:30	Impact of the Acquisition Reform Act on the Acquisition Workforce, Contract Types and Cost/Price Estimating Mr. Shay Assad DUSD(A&T) Director, Defense Procurement, Acquisition Policy and Strategic Sourcing			55
10:30	10:45	Break			15
		Theme Sessions	Cost Estimating Methods, Models, Issues & Trends	A Case Study & Lessons Learned	
		Auditorium	Conference Rooms 164-165	Conference Room 166	
10:45	11:30	Ship Estimates at Complete Mr. Richard Coleman Mr. Eric Druker SCEA Best Paper	JCARD Developments Ms. Saroja Raman, NAVAIR 4.2	Estimate Definition & Planning Mr. Marc Greenberg, NCCA Ms. Kathy Loudin, DAU	45
11:30	11:35	Transition			5
11:35	12:20	Considering Cost in Requirements Generation CAPT Bradley Martin, OPNAV	NAVSEA Cost Data & Tools Hershel Young, Phil McCormick NAVSEA 05C VAMOSC and METEOR Mike Carey, Tom Demas NCCA	Developing the Cost Estimate DAU & NCCA	45
12:20	13:10	Box Lunch (Tent and Conference Rooms)			50
13:10	13:55	Developing Service Cost Positions Mr. Grant McViker, Air Force Mr. Steve Loftus, Army	Recent Trends in the US Defense Industrial Base Dr. Nayantara Hensel, NCCA	Estimating and Describing Cost Risk DAU & NCCA	45
13:55	14:00	Transition			5
14:00	14:45	Business-Cost Estimating Career Path and Certification Requirements Ms. Susan Wileman, DACM	O&S Cost Estimating Dr. Jino Choi, CNA	Case Study Discussion DAU and NCCA SCEA Certification Process Mr. Peter Andrejev, SCEA	45
14:45	14:55	Break			10
14:55	16:00	Cost Chiefs Updates and Panel Questions (Auditorium) Ms. Wendy Kunc, NCCA and DON Cost Chiefs			65
16:00		Wrap-up and Closing (Auditorium)			

Abstracts

Keynote Speakers

8:40-9:35

Acquisition Reform & Weapon Systems Cost Growth

Dr. Nancy L. Spruill OUSD(AT&L)

Congress has long been concerned with the efforts to improve the Defense Acquisition process—giving us increasingly more direction over the years in the form of legislation intended to fix a system they believe to be broken. Their most recent effort to discipline the process is the Weapon Systems Acquisition Reform Act (WSARA) of 2009. This presentation will address several of the key WSARA policy changes, including additions to the mandatory Milestone A and B certification processes.

GAO continues to report annually on what they have labeled as “high risk weapon system acquisitions” and citing huge cost growth, including the most recent, \$296 M above initial estimates for the 2008 portfolio of Major Defense Acquisition Programs. This presentation also will examine the GAO’s methodology for that estimate and offer rationale for alternate estimates.

9:35-10:30

Impact of the Acquisition Reform Act on the Acquisition Workforce, Contract Types and Cost/Price Estimating

Mr. Shay Assad

Discussion of the Act’s impact on workforce, fixed price contracts, and cost/price estimation.

Track I Theme Sessions Auditorium

10:45-11:30

Ship Estimates at Complete

Mr. Richard Coleman, NG-IS and Mr. Eric Druker, BAH

Performing Statistical Analysis on Earned Value Data Traditional Earned Value Methods, such as those described in the equations on the DAU Gold Card, suffer from the shortcoming that they do not allow for inferential or descriptive statistics. The EACs they yield can therefore not be evaluated for bias or uncertainty, nor can statistical significance tests be applied to them. This leads to the propensity for these estimates to tail-chase, meaning that the EAC for an over run-

ning program will systematically lag in predicting the overrun, and the EAC for an under running program will systematically lag in predicting the under run. Lastly, without quantified uncertainty measures, there is no method by which to perform risk analysis on these estimates without relying on subjective methods.

The purpose of this paper is to present a method by which statistical analysis techniques can be applied to Earned Value data. EACs developed using statistical methods rely on historical data and are thus testable, that is to say that they can be subjected to statistical significance tests, and they are thus defensible. Estimates produced using statistical analysis techniques will be unbiased and the descriptive statistics developed as a by-product of the method will allow uncertainty to be quantified for risk analysis purposes. Lastly, because this method normalizes out shifts in the CPI that seem to be pervasive among similar programs, productivity can be monitored with a high degree of accuracy.

For demonstration, the method will be applied to a set of representative data. The paper will continue with an example of the paradigm shift this type of analysis caused when it was implemented across a production facility. The conclusion will discuss the types of data needed to implement this type of analysis/process.

11:35-12:20

Considering Cost in Requirements Generation

Captain Bradley Martin, OPNAV (N81)

Various initiatives – ranging from legislation to revision of Service policy – aim to ensure that cost receives attention earlier in the capability development process, at the point where the requirements are still being formulated. Proposed presentation will frame the problem, then discuss the kinds of cost information we should be considering.

Historically, Navy (in keeping with DOD) has divided its acquisition process into a requirements and an acquisition portion. Although cost supposedly informed requirements, detailed analysis of cost generally did not take place until after requirements were generated, key performance parameters established, and concept of operations developed. Being somewhat unconstrained, requirements generally crept towards the high end – who wouldn't want bigger, faster, better? But, the result was that programs were initiated that were already incapable of being delivered at a reasonable cost in a reasonable quantity to the warfighter. The process diminished the opportunity to make low cost trades, evaluate alternative approaches, and assess whether meeting the requirement is worth what must be given up to achieve it. In addition, high cost resulted in impact on overall Service programs, sometimes resulting in delays, which in turn resulted in additional cost. Clearly, it will be beneficial to consider cost as an integral part of the requirements generation process.

The following is not an exhaustive list of where and how cost could be considered. We look forward to additional insight from the cost analysis community. However, some obvious areas include:

- During gap analysis, a rough assessment of how much it will cost to fill the gap, allowing comparison between the severity of the gap and the potential cost.

- During KPP development, a better sense of what it will cost to reach any given threshold value, and some sense of the relationship between performance and cost – in other words, how easy is it to affect cost by trading performance?
- Throughout, a sense of how derived requirements are affecting the cost, and a continuing incentive to look for ways of affecting these.
- Consideration of personnel, maintenance, and energy costs, not just procurement.

13:10-13:55

Developing Service Cost Positions

Air Force

Mr. Grant McViker AFCAA

This presentation is an overview of the Air Force Cost Analysis Agency's (AFCAA) process to develop the Service Cost Position (SCP) for milestone decisions. This overview will cover the policy for SCP preparation, review, and approval. There is an examination of the responsibilities of the program office and the AFCAA. In addition, there is a discussion of the timeline for SCP development and the chain of command for SCP approval. Finally, there will be a review of AFCAA's efforts to improve Air Force Cost Analysis including Non Advocate Cost Assessments (NACA) and establishment of AFCAA operating locations in the field.

Army

Cost Review Board and the Army Cost Position

Steve Loftus DASA Cost & Economics

This presentation describes the Army's cost review process and the role of the Cost Review Board (CRB) in the development of the Army Service Cost Position (SCP). It discusses the CRB composition, purpose and process in support of acquisition decisions for milestones, program restructures, program baselines, and quality assurance. Finally, it addresses the role of the CRB in SCP development via the review and reconciliation of requirements, cost estimates, methodology, schedule, and risk.

1400-14:45

Business – Cost Estimating: A New DAWIA Career Path

Ms Susan Wileman DACM

On October 1, 2009, the current Business Cost Estimating Financial Management (BCEFM) career field will be renamed the "Business" (BUS) career field and divided into two distinct career paths: Business – Financial Management (BUS-FM) and Business – Cost Estimating (BUS-CE). The DAWIA certification requirements for the new BUS-CE path are significantly different than those of the current BCEFM career field, including required training that is not available until FY10. This presentation provides the details on what the DON costers need to know to transition to BUS-CE.

Track II
Methods, Models, & Issues
Conference Rooms 165-165

10:45-11:30

**Joint Cost Analysis Research and Database (JCARD)
Web Information System (WIS)
Saroja Raman and Donald Allen NAVAIR 4.2**

The JCARD WIS was established and is maintained as an official service by the JCARD Working Group (WG). Current working group membership consists of representatives from the Naval Air Systems Command (NAVAIR) 4.2.1.4, the Naval Center for Cost Analysis (NCCA), and the Air Force Cost Analysis Agency (AFCAA).

The goal of the JCARD WG is to advance the capability, productivity and credibility of the DoD Cost Analysis Community through the sharing of resources, data, knowledge and expertise.

The JCARD WIS is designed to be the single information bridge between cost analysts and the numerous Department of Defense (DoD) authoritative data sources for Unclassified/For Official Use Only (U/FOUO) cost, technical and programmatic data. The concept is to provide a tool that will allow cost analysts to efficiently search for and retrieve vital information required to conduct official business for the Department of Defense.

The initial focus of the WG is in the area of weapon systems/subsystems acquisition cost analysis, both development and production. Currently housed within the JCARD WIS are an Aircraft Systems Data Module and a Propulsion Data Module with cost, technical and programmatic data in each. Plans for the future include the development of a Missile Systems Data Module and an Electronic and Software Data Module.

The vision of the JCARD WG is to have the JCARD WIS be the one stop shop for DoD Cost Agencies to store, retrieve, and share cost, technical and programmatic information.

11:35-12:20

**NAVSEA Cost Data & Tools
Hershel Young and Phil McCormick, NAVSEA 05C**

NAVSEA SEA05C has several ongoing initiatives to support common tools and processes in the NAVSEA cost community. Two significant components of this strategy are the SEA05C Information Management System (IMS) and the NAVSEA Common Cost Model (NCCM). The SEA 05C Cost IMS provides a centralized repository for cost information to support SEA 05C and the Navy Cost Community, in development of estimates. The Ship and Combat System modules contain historical information related to ships and combat systems, including financial data (budgets, bid cost, actual cost data, GFE/Mission system cost, software cost, production and engineering hours), technical (weights, characteristics), contract information, and programmatic information (shipbuilding progress/program schedules). NCCM is a web-based application that provides a common framework for ship acquisition cost estimating. NCCM includes an integrated capability to calculate shipyard direct labor and overhead rates for use within the estimate. Additionally, NCCM includes a cost risk analysis capability and a unique feature to determine

cost model inputs based on a specified cost risk confidence level (Risk Allocation). NAVSEA has continued development of a methodology and process to create an estimate breakdown (to the lowest level) for any confidence picked on an S-curve and a joint effort with NAVAIR on Risk Allocation process development is ongoing.

VAMOSOC and METEOR

Mike Carey and Tom Demas NCCA

The Naval Visibility and Management of Operating and Support Costs (VAMOSOC) Program is the DON's repository of historic operating and support (O&S) costs. Naval VAMOSOC maintains O&S costs and attribute for Navy and Military Sealift Command ships, Navy and Marine Corps aircraft, Marine Corps ground systems, and weapons systems. Several new databases/models have recently been released which have great potential to aid cost analysis. This presentation explores the new Infrastructure database, Civilian Personnel database, Ships Depot database and the manpower model, called Manpower Cost Estimating for Enhanced Online Reporting (METEOR), for use in deriving O&S cost estimates for future weapon systems, Total Ownership Cost (TOC) reduction initiatives, and populating O&S cost models.

13:10-13:55

Recent Trends in the US Defense Industrial Base

Dr. Nayantara Hensel ASN (FM&C)/NCCA

The defense industrial base in the US has witnessed many changes over the past twenty years, following the end of the Cold War and has been reshaped by a variety of significant forces. The defense sector has faced cycles of growth and shrinkage in the budget, shifts in the competitive landscape with the globalization of the defense sector, substantive consolidation of defense contractors during the 1990's in the wake of excess capacity, and an evolution in the demand for certain types of weapons systems with the post 9 / 11 emergence of a new type of threat in the form of terrorist groups who, unlike earlier traditional threats, are the enemies of civilized societies. This presentation explores trends in these forces and discusses their potential impact.

- How has the defense budget historically evolved and will potential shrinkage in the defense budget provide additional pressure for cost growth reform?
- While the globalization of the defense sector can lead to improved cost and quality of weapons systems, have disruptions in the global supply chain led to greater delays and higher costs for certain weapons systems?
- To what degree have trans-Atlantic alliances between defense contractors been successful and served as a viable alternative to mergers? What types of patterns have we seen in alliances?
- How will the defense industrial base be impacted by shifting priorities in terms of the types of weapons systems needed as the military threats move away from more conventional threats?
- Finally, how will the recent economic crisis impact the financial viability of defense contractors?

As the defense industrial base faces a new wave of challenges, the need for the leaders in the cost community today to train tomorrow's leaders to understand the shifting landscape continues,

particularly in the wake of the sustained importance of improved quality, lower cost, and greater timeliness for weapons systems.

14:00-14:45

O&S Cost Estimating

Dr. Jino Choi CNA

This study analyzed the growth in Operating and Support (O&S) costs of the Navy's major ship and aircraft programs. We examined 15 ship and 11 aircraft programs and found that the final O&S cost estimates are on average 15 percent higher than the initial estimates. The aircraft programs experienced substantially higher cost growth (27 percent) than the ship programs (6 percent). The biggest problem area appears to be aircraft Operations and Maintenance (O&M) with an average cost growth of 42 percent. We have also conducted three case studies to better understand the major causes of cost growth and to assess what contributes to (or compounds) this problem. The case studies suggest that the major causes of cost growth include: addition of newer capabilities (or requirements creep), increases in compensation cost associated with new personnel policies, accounting changes that include more indirect costs to the platforms, and parts prices outpacing inflation. The potential problem areas include: inadequate use of cost estimating relationships (CERs) or too much reliance on analogy, inconsistent reporting and availability of data, deflators underestimating prices, and not incorporating foreseeable changes into cost estimates.

Track III Training Track Conference Room 166

10:45-14:45

A Case Study and Lessons Learned

Marc Greenberg, NCCA and Ms. Kathy Loudin, DAU

Using a fictitious case study of a notional Intra-Theater Fast Ship (IFS) concept, the Training Track addresses some common challenges cost analysts face in today's acquisition environment.

The Training Track kicks off with a scenario where the cost analyst, given no information about the IFS concept's performance requirements and characteristics, is asked by the Program Manager to provide him with the procurement budget for the first IFS.

To adequately respond to the PM's request, the notional case study is broken down into three 40-minute lessons, each building off the previous one, to guide the cost analyst from defining requirements to presenting the cost estimate:

10:45-11:30

Lesson 1, "Definition & Planning", describes how the cost analyst works with experts in order to further define the task and ship requirements.

11:35-12:20

Lesson 2, “Developing the Cost Estimate”, covers some of the common challenges associated with data collection, and then describes how to use the data to produce statistics-based and regression-based cost estimates.

13:10-13:55

Lesson 3, “Estimating & Describing Cost Risk”, addresses the uncertainty associated with the regression-based cost estimate by quantifying (1) a prediction interval about the estimate, (2) changes in cost due to requirements uncertainty (sensitivity analysis) and (3) impacts of applying Monte Carlo simulation about the sensitivity output.

14:00-14:45

Case Study Discussion and SCEA Presentation

SCEA Certification Process

Mr. Peter Andrejev SCEA/CCEA

Society of Cost Estimating and Analysis (SCEA) Certified Cost Estimator/Analyst (CCEA) Certification Program

In light of heightened visibility and interest in cost analysis, and the subsequent increased demand for cost professionals in the DoD, the Director of Certification for SCEA will discuss the recent enhancements to its Certified Cost Estimator/Analyst (CCEA) program. This presentation will address revisions to the eligibility requirements, the new Professional Cost Estimator/Analyst (PCEA) designation, modifications to the CCEA examination, and the development of the new Cost Estimating Body of Knowledge (CEBoK) training/reference handbook.



Cost Chiefs' Biographies

Ms. Wendy P. Kunc

**Deputy Assistant Secretary of the Navy for Cost and Economics
OASN (FM&C)**

Ms. Kunc is the Deputy Assistant Secretary of the Navy for Cost and Economics and serves as the Executive Director of the Naval Center for Cost Analysis (NCCA). In this capacity, she advises DON leadership on cost issues, develops defensible independent cost estimates and assessments for major acquisition programs, provides cost analysis tools, and performs special studies. Ms. Kunc chairs the DON Cost Review Board and the DON Cost Estimating Stakeholders Group.

Previously, Ms. Kunc led NCCA's Cost Analysis Tools Division, managing the Naval Visibility and Management of Operating and Support Costs (VAMOSOC) management information system and the Operating and Support Cost Analysis Model suite. Ms. Kunc also spent 15 years with the Department of the Air Force. In 2000, she led the Cost Factors Branch within the Air Force Cost Analysis Agency's Forces Analysis Division, developing the multi-billion dollar Cost Per Flying Hour program. In 1993, Ms. Kunc managed Air Force VAMOSOC and led the expansion into the more comprehensive Air Force Total Ownership Cost (AFTOC) management information system. Ms. Kunc served as an operations research analyst at what is now the Air Force ISR Agency in San Antonio. Various positions included Chief of Software Support where she developed Air Force Cryptologic Support Center software applications. Ms. Kunc began her government career as a cartographer with the Defense Mapping Agency.

Ms. Kunc holds a Bachelor's degree in Mathematics from the University of Missouri and a Master of Science degree in Computer Information Systems from St. Mary's University, San Antonio, Texas. She received a Master of Science degree in National Resource Strategy from the National Defense University and completed the Industrial College of the Armed Forces Senior Acquisition Course. She completed the National Defense University's CIO certification program in 2005. Ms. Kunc received the Department of the Navy Superior Civilian Service award in 2009 and the Air Force Headquarters civilian award for Outstanding Contribution to Financial Management and Comptroller in 1998. She received the OSD Comptroller team award for Innovative use of Technology in Financial Management in 1999 and 2002. She is a Certified Defense Financial Manager, is Level III certified in the Defense Acquisition Workforce, and is a member of the Acquisition Corps.

David E. Burgess

**Director, AIR-42 Cost Department
Naval Air Command (NAVAIR)**

Mr. Burgess was selected to the Senior Executive Service (SES) Corps in August 2001 as Director of the Cost Department and is NAVAIR's principal spokesman and technical advisor on air weapons system cost analysis and estimating.

In 1997, Mr. Burgess was appointed as Deputy Director of the Corporate Business Office for NAVAIR. As such, he served as an advisor assisting senior leadership in balancing naval aviation resources to meet customer/fleet requirements and developing command-wide strategies that ensure Naval Aviation operations are efficient. He was awarded the Department of the Navy's Superior Civilian Service Medal for his performance.

In 1995, he was appointed as the Cost Department Deputy Director, acting as the Principal Administrator and Technical Advisor to NAVAIR's 200 personnel cost estimating organization. In 1994, he served as Cost Department Site Manager for the Naval Air Warfare Center Aircraft Division. Mr. Burgess established naval aviation cost estimating capabilities within a Navy Working Capitol Fund (NWCF) environment. He was awarded the Department of the Navy's Meritorious Service Medal for this achievement.

In 1992, Mr. Burgess was appointed as Division Director, for Advanced Concepts and Enterprise Activities where he developed life-cycle cost estimates for such aircraft as the F-117N, S-3AEW, AFX (now F-35), and MLR(now CH-53K). Additionally, he coordinated a program-by-program review of all cost estimates as part of the Navy's "bottoms up" review.

In 1989, Mr. Burgess was appointed by the Assistant Secretary of Navy for Ship Building and Logistics to lead a team of senior cost analysts in conducting an independent cost assessment of the V-22 Osprey. The assessment resulted in a \$400 million reduction in the estimated cost for production tooling and test equipment.

In 1984, he directed cost analytical support for over seven major weapon systems including HARM, ASPJ, SLAT and Phoenix; while serving in this position, he gained the additional responsibility of Lead Cost Analyst for Advanced Missile Weapon Systems.

Mr. Burgess began his service for NAVAIR in 1981, where he served as a Cost Analyst, and is a graduate from George Mason University with a Bachelor of Science degree in Business Administration and is a certified member of the Navy's Acquisition Professional Community.

Donald M. Burlingham **Office of the Assistant Commander for Programs** **Marine Corps Systems Command**

Mr. Burlingham is a graduate of the United States Naval Academy, the Naval Post Graduate School, the Marine Corps Command and Staff College, and the Marine Corps School of Advanced Warfare.

Then Lieutenant Colonel Burlingham joined the Marine Corps Systems Command for his final active duty assignment in September 2001. In April 2002, LtCol Burlingham was assigned a critical role directing Command-level Operations functions, including the coordination of MARCORSYSCOM support for urgent material support of Marine forces during Operation Iraqi Freedom.

In December 2003, Mr. Burlingham transitioned to federal service to fill the newly established position of Supervisory Operations Research Analyst, where he led the Requirements Transition Team for the Assistant Commander for Programs.

Mr. Burlingham assumed his current duties as the Head of the Economic and Business Analysis Branch in August 2008.

Nidak A. Sumrean **Director, Cost Engineering & Industrial Analysis** **Naval Sea Systems Command**

Mr. Sumrean is Director of the Cost Engineering and Industrial Analysis Division at the Naval Sea System Command (NAVSEA) in Washington D.C. As Director, he is responsible for advising the Assistant Secretary of the Navy (Research, Development, and Acquisition) and the Commander of NAVSEA regarding cost and industrial base matters that pertained to the acquisition and in-service support of ships and weapon systems.

Mr. Sumrean was appointed to the Senior Executive Service in January 2009 and has 23 years of Federal Service.

Mr. Sumrean served as the Deputy Program Manager of the newly formed Strategic and Theater Sealift Program Office from September 2007 through January 2009. He served as the senior civilian responsible for program management of the Maritime Prepositioning Force (Future) MPF(F) family of programs and the Joint High Speed Vessel (JHSV) program along with associated research and technology development. Both of these programs are joint acquisition category ID and require oversight from senior Navy, Marine Corp, Army and DoD leadership.

Mr. Sumrean served as the senior civilian advisor for Deputy Assistant Secretary of the Navy for Ships on issues related to the shipbuilding industrial base and acquisition oversight of all amphibious and auxiliary ship construction and conversion programs from December 2003 through September 2007. This oversight spanned five Major Defense Acquisition Programs, and leasing initiatives with \$20B of Obligation Authority. He also prepared Congressional testimony, interfaced with Congressional staffs, shipbuilding industry leaders and constituents, and developed issue papers and background information for the Secretary of the Navy relating to Shipbuilding issues.

After the Base Realignment and Closure decisions of 1996, Mr. Sumrean relocated to the NAVSEA Cost Engineering and Industrial Analysis division where he served as the civilian cost team leader for systems and cost support to the Program Executive Office Theater Surface Combatants for the Cooperative Engagement Capability (CEC) and Theater Ballistic Missile Defense (TBMD) programs from September 1996 through August 2002. He was only one of a few cost engineers selected to work directly on-site with

CVN 21, CEC and TBMD Program Managers.

Mr. Sumrean served in the Naval Air Systems Command (NAVAIR) Cost Engineering division where he was responsible for developing cost estimates and acquisition strategies for Program Executive Office Tactical Aircraft programs in support of the planning, programming and fielding of the Cooperative Engagement Capability (CEC) and the Mission Computer Upgrade system aboard the E-2C aircraft from April 1992 through September 1996. He represented the Program Manager at various senior Navy and Office of the Secretary of Defense reviews as the cost/schedule expert for the E-2C program. This involved articulating program life cycle cost.

Brian P. Ullrich

Director Cost Analysis and Estimating

Navy Engineering Logistics Office

Mr. Ullrich is currently the Director of Cost Analysis and Estimating at the Navy Engineering Logistics Office (NELO).

Mr. Ullrich began his federal career with the Defense Logistics Agency in September 1977. He was assigned to the DCASMA Garden City New York office where he completed an intern program specializing in Quality Assurance for Electronic Systems and Subsystems. In November 1982, Mr. Ullrich moved to the Washington DC area where he became a Cost Analysis professional for the Naval Air Systems Command, Cost Analysis Division (AIR-524). While at NAVAIR, from 1982 through 1986, he worked in both the Advanced Concepts Branch as well as the Production Aircraft Branch, where he supported a variety of Naval Aviation programs including the T-45 GOSHAWK Advanced Jet Training System, V-22 OSPREY Tilt Rotor Program and the F-14 TOMCAT Fighter Program. In 1987 Mr. Ullrich was selected for promotion by the Navy Engineering Logistics Office and was assigned as the lead cost analyst on numerous classified programs. In the fall of 1988, Mr. Ullrich returned to NAVAIR, but now as a supervisor in the AIR-524 Data and Research Methods Branch.

Prior to his current position Mr. Ullrich has spent the last 18 years as a Supervisor and Associate Director of Cost Analysis in the Navy Engineering Logistics Office.

Mr. Ullrich holds a Bachelor's degree in Business from St. Johns University NY as well as an Associates Degree in Electrical Engineering Technology from the State University of New York and a Masters in Industrial Engineering Operations Research from Virginia Tech.

Mr. Mourad Yacoub

Division Director, Cost Estimating and Analysis

Space and Naval Warfare Systems Command (SPAWAR 1.6)

Mr. Yacoub is the Division Director for Cost Estimating and Analysis at the Space and Naval Warfare Systems Command (SPAWAR 1.6). He is the Team SPAWAR focal point for cost estimating policy, procedures and guidance. Mr. Yacoub is responsible for coordinating and managing all SPAWAR inputs to Navy and DoD leadership related to Life Cycle Cost and Earned Value Management. Prior to his current position in SPAWAR, Mr. Yacoub held numerous position in and outside the government working on a variety of DoD programs in the areas of cost estimating, analysis, research and project management. He interfaces regularly with Acquisition managers to assess affordability of capabilities delivered to the warfighters. Among many of his assignments he served as an acquisition coordinator for the Joint Chemical and Biological Defense program office in Program Executive Office for Communications, Command, Control, Computers and Intelligence (PEO/C4I), where he was responsible for acquisition planning and control.

Mr. Yacoub received numerous awards and recognitions for his contributions. He received the SPAWAR Exemplary Achievement Award for his leadership and management of cost estimating and analysis issues in the Command. Mr. Yacoub is a recipient of the David Packard Excellence in Acquisition Award for his work on the DoD Integrated Program Management Initiative Joint Team. His contribution on this team led to implementing the process of transitioning Earned Value Management ownership and responsibility from the government to industry and has created a recognized international best practice. Mr. Yacoub was recognized by the USD (A&T) for his contributions to the education, training and development of the acquisition workforce, and he was also awarded the Naval Sea Systems Command (NAVSEA) Quality Champion Award for his leadership in process improvements in NAVSEA.

Mr. Yacoub holds a Bachelor of Science degree from Polytechnic University of New York, a Masters of Science from George Washington University in Civil Engineering, and a Masters of Science in Strategic Studies from the U.S. Army War College. He is

a graduate of the DSMC Program Management Course, and a member of the Defense Leadership and Management Program. Mr. Yacoub chaired several program management tracks at the annual International Cost Performance Management Conference, and is a member of the Society of Cost Estimating and Analysis. Mr. Yacoub resides with his spouse in San Diego, California and has two children.

Keynote Speakers

Biographies

Shay Assad DUSD(A&T)

Director

Defense Procurement

Mr. Shay Assad assumed the role of director on April 3, 2006. As the Director of the Defense Procurement, Acquisition Policy and Strategic Sourcing (DPAP), he is responsible for all acquisition and procurement policy matters in the Department of Defense (DoD). He serves as the principal advisor to the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) and the Defense Acquisition Board on acquisition & procurement strategies for all major weapon systems programs, major automated information systems programs, and services acquisitions. He is responsible for procurement/sourcing functional business process requirements in the Department's Business Enterprise Architecture (BEA). Mr. Assad is DoD's advisor for competition, source selection, multiyear contracting, warranties, leasing and all international contracting matters. He is the functional leader for the Contracting workforce within the Department of Defense, and he is also responsible for overseeing all Strategic Sourcing activities within the Department of Defense.

Before assuming this position, Mr. Assad was the Assistant Deputy Commandant, Installations and Logistics (Contracts), Headquarters, Marine Corps, Washington, D.C. He had held the position as the Marine Corps' senior civilian contracting official since June 2004.

Upon graduating with distinction from the U.S. Naval Academy in 1972, he served two tours of duty aboard U.S. Navy destroyers and won recognition as the Outstanding Junior Officer, Fifth Naval District. He then served as a Naval Procurement Officer at the Naval Sea Systems Command.

In 1978, Mr. Assad began working for the Raytheon Company. He was promoted to Vice President – Director of Contracts for Raytheon in 1994, and was subsequently promoted to Senior Vice President, Contracts in 1997. As such, he was responsible for the contract negotiation and administration activities (\$20 Billion) in all of Raytheon's businesses – both government and commercial. In addition to his contracting duties, Mr. Assad was given numerous program and business management special assignments by Raytheon's Executive Office. These assignments spanned participation in all three of Raytheon's major operating businesses (Government, Aviation, and Engineering and Construction). In 1998, he was promoted to Executive Vice President and served as the Chief Operating Officer and subsequently, as the Chairman and Chief Executive Officer of Raytheon's Engineering and Construction (RE&C) business with eleven offices world-wide, revenue of \$2.7B and 15,000 employees. He retired from Raytheon in July 2000.

He has received numerous Federal Service awards to include: 1) the Secretary of Defense medal for exceptional civilian service; 2) the Secretary of Defense medal for meritorious service; 3) the Department of Defense Inspector General Joseph H. Sherick Award (the highest honor given to non-IG employees); 4) the 24th Annual Gilbert A. Cuneo Lecturer; 5) the inaugural recipient of the 2008 Osborne A. "Oz" Day Award as the Federal executive who has done the most to increase the awareness of Ability One employment opportunities for those who are blind or severely disabled, and 6) the E. Richard "Dick" Alley Career Achievement Award which is given to one federal employee whose long-term dedication and support of the AbilityOne Program is exemplary, and worthy of the Committee's highest recognition.

Dr. Nancy Spruill OUSD(AT&L)
Director, Acquisition Resources & Analysis

Dr. Nancy Spruill is a native of Takoma Park, MD. After receiving Bachelor of Science Degree in Mathematics from University of Maryland in 1971, she joined the Center for Naval Analyses (CNA). From 1971 to 1983, she held a variety of positions on the CNA staff, including Technical Staff Analyst, Professional Staff Analyst and Project Director. In 1975, she earned her Master of Arts in Mathematical Statistics from George Washington University followed by her Doctorate in 1980.

Dr. Spruill served on the staff of the Office of the Secretary of Defense from 1983 to 1993. Initially, she was the Senior Planning, Programming, and Budget Analyst in the Manpower, Reserve Affairs and Logistics Secretariat. Later, she served as the Director for Support and Liaison for the Assistant Secretary of Defense for Force Management and Personnel. Then she served as the Senior Operations Research Analyst in the Office of the Assistant Secretary of Defense for Program Analysis and Evaluation.

In 1993, she joined the staff of the Defense Mapping Agency (DMA), serving as the Chief of Programs and Analysis Division for the DMA Comptroller. Subsequently, she served as Acting Deputy Comptroller and was a member of the Reinvention Task Force for the Vice President's National Performance Review.

In March 1995, she was selected as the Deputy Director for Acquisition Resources for the Under Secretary of Defense for Acquisition and Technology. In February 1999, she was appointed Director, Acquisition Resources & Analysis (ARA) for Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)). In this capacity, she is responsible for all aspects of AT&L'S participation in the Planning, Programming and Budgeting System (PPBS); the Congressional process; and the Defense Acquisition System. She serves as the Executive Secretary to the Defense Acquisition Board and is responsible for the timely and accurate submission to Congress of Selected Acquisition Reports and Unit Cost Reports for Major Defense Acquisition Programs. She manages the Defense Acquisition Execution Summary monthly review of programs; monitors cost and schedule status of high interest programs; and conducts analyses of contract and program cost performance including analysis of the effective use of Integrated Program Management principles through the use of Earned Value Management. Dr. Spruill performs systemic analysis to improve acquisition policy and education, and conducts special analyses for the Under Secretary. She leads the Department in developing plans to manage Property, Plant and Equipment, Inventory, Operating Materials and Supplies/Deferred Maintenance and Environmental Liabilities. She proposes modifications to, or acquisition of, new DoD feeder systems, in support of achieving an unqualified audit opinion on DoD Financial Statements as mandated by the Chief Financial Officers (CFO) Act. She also manages the studies program for OSD, oversees USD(AT&L)'s office automation system and manages its information system network, and conducts special analyses for the Under Secretary.

Dr. Spruill has been a member of the Senior Executive Service since 1995. She is a certified Acquisition Professional and an active member of the American Statistical Association. Her many honors and awards include the Department of Defense Medal for Distinguished Civilian Service, the Secretary of Defense Medal for Exceptional Civilian Service, the Secretary of Defense Medal for Meritorious Civilian Service, the Hammer Award, the Acker Skill in Communications Award and the Presidential Rank Award. She has contributed papers in publications of the statistics and defense analyses communities and authored articles in the general press on how politicians use--and abuse--statistics.

Presenters Biographies

Mr. Donald P. Allen
Naval Air Systems Command

Mr. Allen heads the Advanced Concepts/Special Studies and Database branch within the NAVAIR cost department. He has fourteen years of experience estimating aircraft weapon systems.

Mr. Allen began his NAVAIR career in August 1990 as a Program Manager for PMA-260 (AIR-552) Support Equipment Office. In April of 1993 Mr. Allen transferred to the NAVAIR's Cost Analysis Department (AIR-4.2), where he was assigned to the Advanced Concepts Branch. He supported the development of program cost estimates for the AFX, V-22 and ASTOVL programs, as well as,

independent cost estimates for the V-22 Cost Reduction team and MLR COEA. In 1994 Mr. Allen was selected to be the Deputy Cost Team Leader (DCTL) for the JAST/JSF program, where he directed the development of the program cost model. In 1997, after successfully seeing the JSF program through MS A, Mr. Allen took the job as the F/A-18 E/F DCTL. In 1998 Mr. Allen was promoted to the MMA/MPA Cost Team Lead position, where he provided cost analysis support for and the Technical and Economic Feasibility Assessment (TEFA), for the U.S., Australia and Japan. In 2000 he was appointed as a Cost Panel Lead for the AEA AOA, where he oversaw the development of cost estimates for 49 different system of system solutions and 54 sensitivity cases. In 2002 Mr. Allen accepted the promotion to the Advanced Concepts/Special Studies and Database Branch Head position. Mr. Allen holds a bachelor's degree in Aerospace Engineering from Boston University.

Peter E. Andrejev CCEA, PMP

Mr. Andrejev is the Director of Certification of the Society of Cost Estimating and Analysis (SCEA), overseeing the refinement and administration of its Certified Cost Estimator/Analyst (CCEA) program. He was named the 2000 National Cost Estimator/ Analyst of the Year by SCEA, served on its Board of Directors, and has held a number of national SCEA posts.

With over 30 years of professional experience supporting the government in acquiring major defense, intelligence, and civilian systems, he is the Director of Booz Allen Hamilton's Systems Engineering and Integration (SE&I) service area. Most recently, Mr. Andrejev served as an advisor to the Business Executives for National Security (BENS) Task Force on Acquisition Law and Oversight in developing acquisition reform and implementation recommendations to Congress

Michael J. Carey Cost Analysis Tools Branch Head, NCCA

Mr. Carey earned his Bachelor of Science degree in Electrical Engineering from the US Naval Academy in 1977 and was commissioned an Ensign in the US Navy. He earned a Master of Science degree from Troy University in 1996.

After a career spanning four ships plus shore assignments in operational intelligence, training, tactical development, and theater logistics, he entered private industry. During this time he supported the Naval Center for Cost Analysis, the Office of Naval Research, and the DD(X) Program. Mr. Carey entered government service in 2003 as the Deputy Program Manager for the Naval VAMOSOC Program. He was selected to become the Cost Analysis Tools Branch Head and the VAMOSOC Program Manager in July 2005.

Dr. Jino Choi CNA

Jino Choi is the Director of Cost and Acquisition Team at the Center for Naval Analyses (CNA). He has more than 25 years of experience working for or in support of the Navy, including 18 years at CNA. His expertise is in analyzing cost and budget-related issues, especially the cost and budget implications of acquiring major weapon systems. He was the lead cost analyst for the F/A-18C/D and the F-14 programs at the Naval Air Systems Command before joining CNA. Prior to that, he was an engineer at the Bettis Atomic Power Laboratory where he evaluated engineering change proposals from various naval shipyards that recommended changes or improvements to the operating and maintenance manuals for naval nuclear submarine power plants. He has a bachelor's degree in chemical engineering and a doctorate in economics.

Mr. Richard Coleman Northrop Grumman Information Systems

Richard L. Coleman was commissioned upon graduation from the U. S. Naval Academy in 1968, where he received a B.S. in Naval Engineering with a minor in Operations Analysis. He received an MS in Operations Research (With Distinction) from the Naval Postgraduate School in 1974. Graduating first in his class, he was the recipient of the CNO's Award for Excellence in Operations

Research. He was a surface warfare officer in cruisers, destroyers and frigates. His career culminated in tours as Section Head in N-815, Commanding Officer of USS Dewey (DDG 45), Director of the SAM Section at COMOPTEVFOR and Director, Naval Center for Cost Analysis, where he was responsible for over 40 Independent Cost Estimates including: USCGC Healy, New Attack Submarine, AAV, MIDS, CEC, LHX, DDG 51 Flt IIA, Strategic Sealift, Tomahawk Blk IV and the F/A 18 E/F. He retired from active duty as a Captain, USN in 1993.

Since retirement, he has worked for TASC and Northrop Grumman Information Systems (NGIS). He has supported MDA, DARO, the Navy Acquisition Reform Office, DD(X), CG(X), the Future Imagery Architecture JMO, and NASA. He supports the intelligence community in cost and risk. He is currently the Director of Independent Cost Estimation for NGIS and conducts Independent Cost Evaluations of Northrop Grumman proposals. He has conducted over 100 NG ICES including LPD 21, LHD 8, LHA 6, EPCD, DDG 1000, VA Class Submarine Block II and III, CVN 77 IPR, CVN 78 Construction Preparation, CANES, CVN 78, TMOS, F-16 AESA, F-16 India EW, Warfighter Focus, Kennedy Space Center ISC, LA Leader Replacement System, MD Dept of HR IT support, and Virginia's VITA. He received the TASC Sector Rainmaker Award for Program Management; the CMS Program Analysis & Evaluation Office Exceptional Teamwork Award; the NRO Director's Team Award; the Northrop Grumman Contracts and Pricing Award; the TASC President's Award; and the NGIT President's Award for Operational Excellence.

He is a Board Member of the Society of Cost Estimation and Analysis (SCEA) and is the former National and Regional Vice President. He is co-author of over 70 papers on cost, risk and CAIV at SCEA, ADoDCAS, MORSS, and NPS ARS. He served as an editor and author of SCEA's acclaimed Cost Estimating Body of Knowledge training, and has taught courses in industry, the DoD and the UK MoD. He is the recipient of SCEA's Lifetime Achievement Award.

Thomas Demas

Deputy Program Manager, Ships and Personnel, NCCA

Mr. Demas earned his Bachelor of Science degree in Civil Engineering from Old Dominion University in 1983. He earned a Master of Business Administration from Averett University in 1992.

Mr. Demas is the Deputy Program Manager for Ships and Military Personnel on the Navy Visibility and Management of Operating and Support Costs (VAMOSOC) program. He is a graduate of the Defense Systems Management College Program Managers Course, certified in Program Management and Financial Management.

Eric R. Druker

Booz Allen Hamilton

Eric R. Druker CCE/A graduated from the College of William and Mary with a B.S. in Applied Mathematics in 2005 concentrating in both Operations Research and Probability & Statistics with a minor in Economics. He is employed by Booz Allen Hamilton as a Senior Consultant and currently serves on the St. Louis Society of Cost Estimating & Analysis (SCEA) Chapter's Board of Directors. In 2009, he was named SCEA's National Estimator/Analyst of the Year for Technical Achievement. Mr. Druker currently supports NASA, performing joint cost & schedule risk analysis across a variety of projects. In past positions he supported a variety of DoD and IC clients including the Air Force, Navy, NGA and DNI CAIG. In addition to multiple SCEA conferences, Eric has been an invited presenter at The Naval Postgraduate School's Acquisition Research Symposium, DoDCAS and NASA's PM Challenge. Prior to coming to Booz Allen, he helped to develop Northrop Grumman's Independent Cost Evaluation (ICE) risk analysis practices and served as lead author of the Regression and Cost/Schedule Risk modules for the 2008 CostPROF update.

Mr. Marc Greenberg

NCCA

Marc Greenberg was hired as an operations research analyst with the Naval Center for Cost Analysis (NCCA) in November 2008. At NCCA, he is developing ways to standardize formats for Independent Cost Estimates (ICES), quantify drivers of weapons systems cost growth and improve upon existing cost risk methods and policy. From October 2005 through October 2008, Mr. Greenberg taught for the Defense Acquisition University (DAU). At DAU, he taught acquisition professionals the principles of cost analysis and was involved in the development of various course curricula.

Prior to teaching at DAU, Mr. Greenberg worked as a cost analysis for the Naval Sea Systems Command (NAVSEA, Carderock) for fourteen years. At NAVSEA Carderock, he conducted cost studies on Navy ships, submarines and emerging technologies. His efforts concentrated in risk analysis, cost modeling, technology cost and cost-benefit analysis. Mr. Greenberg also served on co-located cost teams that supported acquisition efforts for the New Attack Submarine Program, Future Aircraft Carrier Program and the Littoral Combat Ship Program. Prior to his career with the Navy, Mr. Greenberg worked as an electronics engineer for the US Army Information Systems Engineering Command where he provided support in simulation, design and construction of high frequency and microwave communication systems.

In 1987, Mr. Greenberg received his bachelor's degree in ceramic science and engineering from Pennsylvania State University. In May 1998, he received his master's degree in engineering management from George Washington University. Mr. Greenberg is professionally certified by the Society of Cost Estimating and Analysis as a Cost Estimator/Analyst and is DAWIA Level III certified in Business Cost Estimating and Financial Management. In 2003, he joined the Omega Rho International Honor Society, an organization that recognizes academic achievements in operations research and management science.

Dr. Nayantara Hensel ASN (FM&C)/NCCA, Chief Economist

Dr. Nayantara Hensel is the Chief Economist for the Department of the Navy, and works with the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller) and in the Naval Center for Cost Analysis. She provides economic guidance on growth projections, the federal budget, interest rates, unemployment, exchange rates, inflation, the financial health of defense contractors, as well as trends in the broader economy and in the defense sector. Dr. Hensel received her BA, MA, and Ph.D. from Harvard University, where she graduated magna cum laude and Phi Beta Kappa and specialized in finance and economics. She has taught at Harvard University, the Stern School of Business at New York University (NYU), and the US Naval Postgraduate School's Graduate School of Business and Public Policy. In the private sector, Dr. Hensel previously served as Senior Manager and Chief Economist for Ernst & Young's litigation advisory group, managing economist for the New York City office of the Law and Economics Consulting Group (LECG), and an economist in the economic consulting arm of Marsh & McLennan. Dr. Hensel has written over 30 articles and research reports. Her recent research has focused on globalization and the US defense industrial base (the USAF tanker competition), the role of defense mergers in improving weapons systems cost efficiency, efficiency in IPO auctions relative to traditional processes, the factors impacting discount rates for US Marine Corps personnel, and market structure-specific and firm-specific factors impacting economies of scale and density in European and Japanese banks. She has published in the International Journal of Managerial Finance, the Review of Financial Economics, Business Economics, the European Financial Management Journal, the Journal of Financial Transformation, and Harvard Business School Working Knowledge. Dr. Hensel has presented her work at a variety of institutions, including the Federal Reserve Banks in Chicago, Dallas, Boston, and Cleveland, the Federal Reserve Board of Governors, Department of Justice, the US Treasury, and RAND, as well as universities, such as London Business School, and Harvard University. Dr. Hensel is also a frequent presenter at conferences, including the USAF Air and Space Technology Exposition, the NBER National Security Working Group, the National Association for Business Economists (NABE) annual conference, the Western Economics Association, the Midwestern Economics Association, and the European Financial Management Association.

Mr. Stephen Loftus DASA Cost & Economics

Mr. Loftus has been involved with cost analysis for the past eleven years at the Office of the Deputy Assistant Secretary of the Army for Cost and Economics and prior to that, spent ten years in the Army in the Field Artillery. His cost analysis experience includes four years on the Aviation Cost Team and seven years in the Cost Review Board Office, where he is now the Cost Review Board Office Chief. He has developed independent cost estimates for aviation systems and Service Cost Positions for aviation, missile, C4ISR, and Enterprise Resource Planning Systems.

Ms. Kathy Loudin DAU

Kathlyn Loudin joined the DAU faculty in October 2008. Previously she led an acclaimed group of cost engineers at the Naval Surface Warfare Center, supporting Navy, Marine Corps, and other Defense programs. Loudin has acquisition experience within both

DoD and industry, having held program leadership and line-management positions at Northrop Grumman. Loudin holds B.A., B.S., and M.P.A. degrees, and expects to complete her Ph.D. in 2011 at Virginia Tech. She has been published in Contract Management, Defense AT&L Magazine, and Defense Acquisition Research Journal.

Captain Bradley Martin **OPNAV Assessment Division (N81)**

Captain Martin is Branch Head for the Joint Requirements and Acquisition branch of the OPNAV Assessment Division (N81). This is his second tour in N81, where he previously served as an analyst. He is a surface warfare officer with extensive operational experience in amphibious and mine warfare, including three at sea commands. Prior to joining the Navy, he attended the University of Michigan, receiving a doctorate in political science, with special emphasis on international relations, conflict studies, and quantitative methods.

Phil McCormick **Naval Surface Warfare Center, Carderock**

Phil McCormick is an Operations Research Analyst with the Cost Effectiveness Branch at the Naval Surface Warfare Center, Carderock Division. Phil received his Bachelor's degree from Washington & Jefferson College in Mathematics and Psychology. Phil has been providing cost analysis and budget support to major Navy acquisition programs since 2007.

Mr. Grant McViker **Chief of the Aircraft and Weapons Division, Air Force Cost Analysis Agency**

Mr. McViker is the Chief of the Aircraft and Weapons Division, Air Force Cost Analysis Agency. He is accountable for the development and defense of over \$200B in cost estimates for major defense acquisition aircraft and weapon programs presented at Defense Acquisition Executive reviews. He serves as the Chair of the Cost Integrated Process Team and leads multi-functional teams in the development of the Service Cost Position. Prior to his current position, Mr McViker was the Director of Affordability for the Joint Strike Fighter (JSF) Program Office, where he was directly accountable for planning, programming, and budgeting over \$40 billion in RDT&E funds. In addition, he was the principle financial advisor for the Program on affordability and future budgetary requirements. Mr. McViker's previous assignments include: Chief of the F-22 Production Financial Management Branch; Chief of the F-117 Program Control Division; Senior Cost Analyst for the Deputy Assistant Secretary of the Air Force, Cost and Economics; Financial Manager for the Aircraft System Program Office, Aeronautical Systems Division; and Missile Combat Crew Commander, 490th Strategic Missile Squadron.

Ms. Saroja Raman **Naval Air Systems Command, 4.2 Cost Department**

Ms. Raman has a Bachelor of Science degree in Mechanical Engineering from Drexel University and a Master of Science degree in Management from the Florida Institute of Technology. She began her professional career at the Naval Air Development Center in Warminster, PA working as an engineer in the Anti-Submarine Warfare field. She received two patents during this period for new deployment devices designed to increase the performance of sonobuoy systems. In 1993, Ms. Raman was selected for a one-year assignment at the Space and Naval Systems Command to be the Co-Team Lead for a \$50M Counter Cruise Missile Program. In 1994, Ms. Raman decided to broaden her career to include business, cost estimating and financial management. She accepted a position with the Naval Air Systems Command Cost Department. Ms. Raman held several positions there including Cost Team lead for S&T projects where she led a team of analysts to develop new tools to estimate the cost impacts of new technologies on present and future DoD aircraft. She also served the Naval Aviation System Team Corporate Business Office as a Cost Team Leader, providing economic forecasts and return on investment analyses. In 2000, Ms. Raman became involved with the design and development of cost databases, and led several cost data validation efforts. In 2005, Ms. Raman was appointed the NAVAIR Cost Team lead for a Joint Project entitled Joint Cost Analysis Research and Database (JCARD) Project which includes members from the Naval Center for Cost

Analysis (NCCA), the Air Force Cost Analysis Agency (AFCAA) and the NAVAIR Cost Department. As the Project Lead she is responsible for the development of a Joint Web Information System with the objective of being the single information bridge between cost analysts and the DoD authoritative sources for Unclassified/For Official Use Only cost, technical and programmatic data.

Ms. Susan Wileman OASN (RD&A) DACM

Since July 2008, Ms. Susan Wileman has been an acquisition workforce manager in the office of the Director, Acquisition Career Management (DACM) under the Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN (RD&A)). In addition to executing the roles of ASN (RD&A) as the steward of the Department of the Navy acquisition workforce, Ms. Wileman is the DACM representative for the DAWIA Business Cost Estimating Financial Management (BCEFM) career field.

Before joining the DACM team, Ms. Wileman was a Navy cost estimator for 19 years. She graduated from the Navy Cost Analysis Intern Program in 1991. She worked seven years in the Naval Air Systems Command (NAVAIR) Cost Department on several aircraft programs. After NAVAIR, she served seven years in the Naval Sea Systems Command Cost Division as a cost analyst for carriers and submarines, Auxiliary Ship Team Leader, and Amphibious/Auxiliary Ship Branch Head. She then spent five years in the Naval Center for Cost Analysis, where in addition to performing as the AIS/C4ISR Branch Head, she chaired the BCEFM Acquisition Career Management Board.

Ms. Wileman is a member of the Acquisition Corps and is DAWIA Level III certified in BCEFM. She received her Bachelor of Science degree in Mathematics Summa Cum Laude and minor in Statistics from Virginia Tech in 1989. She received her Master of Science degree in Operations Research/Management Science from George Mason University in 1995.

Hershel Young Division Director for Earned Value Management NAVSEA (SEA 05C)

Mr. Young is currently serving as the Division Director for Earned Value Management Division within the NAVSEA Cost Engineering and Industrial Analysis Group (SEA 05C). He previously served as the Team Leader for Cost Engineering Policy and Processes and was the Technical Warrant Holder for Cost Engineering Processes. He served as the cost engineering focal point for the implementation of cost engineering technical authority and the transition to a competency aligned organization. Since his assignment to SEA 05C in 2003, Mr. Young has lead or been a contributing member on a number of efforts for cost engineering standards and processes including the NAVSEA Common Cost Model (NCCM), NAVSEA Cost Estimating Handbook, and the NAVSEA Technical Authority Database.

Mr. Young from 1989-2003 served as a Ship Transfer Project Engineer in the NAVSEA Foreign Military Sales (FMS) Program Office (PMS 380). He planned and managed the transfer of over 10 major surface combatant ships to allied navies. This included the development of FMS case cost estimates as well as required ship maintenance and modernization requirements for transfer and support of surface combatants to FMS customers. During this time he managed numerous major ship maintenance availabilities and three reactivations of previously decommissioned surface combatants. Mr. Young also served as FMS Case Manager for Hellenic Navy programs.

He previously supported NAVSEA ship acquisition programs included the DDG 51 Contract and Detail Design and FFG 7 Ship Construction program. Mr. Young served as Auxiliaries/Electrical Officer and Communications Officer on USS FIFE (DD 991) from 1980-1983.

Mr. Young earned a BS in Applied Mathematics from the Georgia Institute of Technology.

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