BATTLE FORCE ACTION OFFICER (BFAO) HANDBOOK

VOLUME I

PREPARED BY: Naval Sea Systems Command
Port Hueneme Division (CODE 4L00)
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TABLE OF CONTENTS

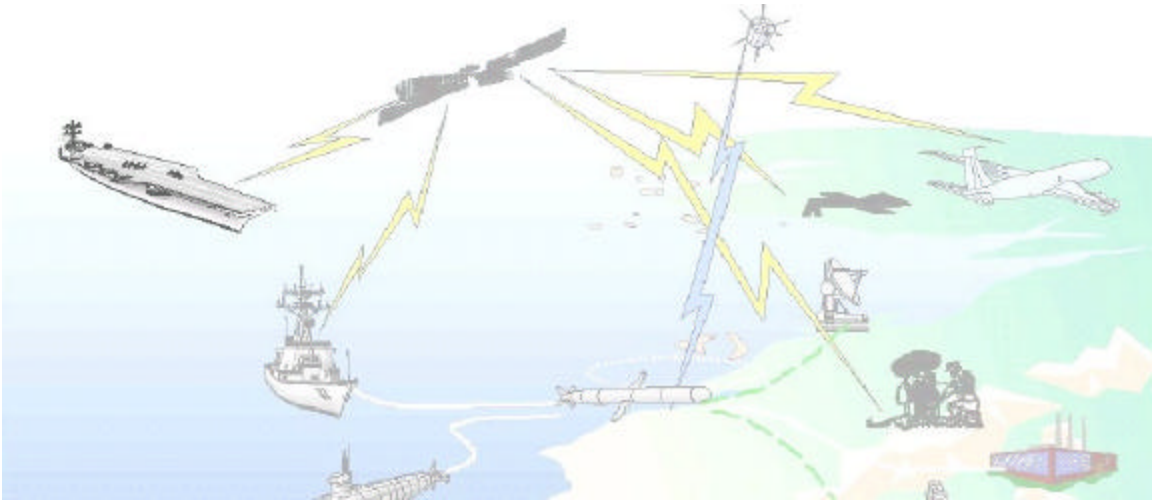
PURPOSE STATEMENT

This handbook is a guide for Battle Force Action Officers (BFAOs) and a reference to information most frequently needed by BFAOs. The handbook is to be used by BFAOs, On Site Representatives (OSRs) and Systems Engineers (SEs)/Project Engineers (PEs) in meeting their responsibilities for their assigned battle forces. It has been prepared as part of the Battle Force Interoperability Program originally of COMNAVSEASYSCOM (NAVSEA) 05 and subsequently NAVSEA 53.

NAVSEA 05 KEY OBJECTIVES

No system or program (interoperable type, as applicable) will be employed on a ship without having been tested in the Distributed Engineering Plant (DEP). No delivery or developmental testing of a program will be allowed during Composite Training Unit Exercise/Joint Task Force Exercise (COMPTUEX/JTFEX) without permission of the Chief of Naval Operations (CNO). No program will be deployed with a Battle Group (BG) that is not in the BG Capabilities and Limitations (C&L) (if applicable to C&L).

Theater Data Link Operations and C&L



"Ability of systems, units or forces to provide services to and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together and achieve the assigned missions" (JCS Pub 1)

Comments regarding this BFAO Handbook and requests for additional copies may be made to the Commander, Port Hueneme Division, Naval Surface Warfare Center, 4363 Missile Way, Port Hueneme, California 93043-4307, Attention Code 4L00.

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RECORD OF CHANGES

CHANGE NO.	DATE	TITLE/DESCRIPTION OF CHANGE

FEEDBACK PAGE

We need your comments. It is extremely important for this document to be the best possible reference for the BFAO.

E Mail your comments to:

bfic@phdnswc.navy.mil

SECTION
1

1. INTRODUCTION

1.1 Battle Force Interoperability (BFI) Program Origins

In the late 1990s, technical and interoperability deficiencies started to show up at the BG and fighting unit level. In 1997, the Advanced Combat Direction System (ACDS) Block 1 in USS EISENHOWER and Advanced Tomahawk Weapons Control System (ATWCS) failed OPEVAL. CINCLANTFLT declared the BG not ready for deployment. In the USS JOHN F KENNEDY BG, the Fleet, viewed with concern that "operational interoperability issues seen preclude operating in a deployed BG environment". In several ships (USS MONTEREY, USS MILIUS, USS HUE CITY, and USS VICKSBURG), combat systems, and Command, Control, Communications, Computers and Intelligence (C4I) systems were reported as operationally effective and not operationally suitable. Some of these common interoperability problems and the related technical contributors are tabulated below.

	Warfighting Impacts	***TECHNICAL CONTRIBUTORS***			
		CONNECTIVITY	**GRIDLOCK**	**CORRELATION**	**IFF ASSOCIATION**
PROBLEMS	**DATA LOSS**	✓			
	DUAL TRACKS	✓	✓	✓	
	SAME TRACK NUMBER ON TWO OR MORE VEHICLES	✓	✓	✓	
	IFF CONFLICTS	✓			✓
	OPERATOR OVERLOAD	✓	✓	✓	✓
	TRACK NUMBER CHANGES AND SWAPS	✓	✓	✓	

While fielding the complex and increasingly interdependent systems, the Navy focused primarily on getting capability fielded quickly therefore ignoring engineering "red flags" and the impact of budget reductions on training and documentation. Disciplined processes were not being followed and the systems that were delivered were not ready for the stresses of the underway environment.

An immediate process was started to fix the 1997 BGs and fighting units and to assess the overall situation. Tiger teams of engineers and available shore facilities were put to use to start solving the fleet interoperability problems. Two ships were held back from deployment, but their BGs deployed. The Program Management Advisory Group headed by VADM Nanos noted the problems above and concluded that systems had not been designed with interoperability in mind, had not been allowed enough time for maturation, and had suffered from inadequate shore-based testing.

A CNO message assigned responsibility to NAVSEA 53 to address interoperability. In May 1998, in order to fix the short and long term situation, the CNO assigned central responsibility to then NAVSEA 05 to address battle management/C4I/combat systems interoperability problems within the System Commands (SYSCOMs) / Program Executive Offices (PEOs) and to coordinate resolution with the Fleet (CNO 021648Z MAY 98). The full text of the message is in Volume II, Appendix A. (Note: Unless otherwise noted, NAVSEA 05 and NAVSEA 53 are synonymous for the purpose of this book).

Specific tasks assigned to NAVSEA 05 were to:

- Develop policy and architecture for Battle Force (BF) warfare systems engineering, implement a common warfare systems engineering process, and provide top level direction for fielding and supporting balanced combat systems for ships and submarines.

- Be the focal point for coordination and resolution of BFI issues, and for establishment of processes for defining, controlling and certifying each BG configuration prior to deployment. (This focal point responsibility was to be met by baselining capabilities, maintaining configuration control, verifying interoperability and performing final certification.)

- Implement a process with the Fleet Commanders-In-Chief (FLTCINC)s that will coordinate installations and test interoperability earlier in the interdeployment training cycle.

- Leverage existing infrastructure to address deploying BG requirements. Assign project officers to each BG Commander to:

    - Coordinate installations
    - Control configuration
    - Provide a single point of contact for identification and tracking of BG interoperability issues.

- For the long term, develop initiatives to expand the capabilities of the existing shore based testing network to support interoperability testing.

- Together with OPNAV, work with the FLTCINCs on an improved BG interoperability management process. The goal for each BG is to conduct predeployment fleet exercises with full attention to BG warfighting readiness, absent distractions resulting from interoperability failures.

NAVSEA 05 Guidance and Policy Paper (G&PP) (Warfare Systems G&PP No. 98-03, of 8/4/98)

In response to CNO direction, NAVSEA 05 distributed a policy paper entitled the Battle Force Interoperability Certification Process. The paper provides an interim methodology for BFI that results in Certified Battle Force configurations. The objectives of the certification process in the paper are to ensure:

- Hardware, computer program, firmware, tactical database and navigational database configuration management

- Baseline configurations of BF fighting units are hardware and computer program compatible

- Disciplined change control and configuration management

- Computer program compatibility, functionality, and reliability is verified by rigorous shore-based and fighting unit testing

- Integration and interoperability deficiencies are recorded, prioritized and corrected prior to deployment.

The G&PP also defines interoperability, the systems scope to which certification applies, the overall D-30 process, and how the certification process builds upon the existing Fleet and NAVSEA processes. The required milestones, associated test and training events, and responsible organizations are identified. The paper also describes how configurations to BFI Certification after completion of shore-based Battle Force Interoperability Testing (BFIT) and at-sea Battle Group System Integration Testing (BGSIT). The paper also describes how configurations will be controlled and the use of C&L documents to describe the best use of a BF configuration. This G&PP is located in Volume II Appendix B.

1.2 Current Phased Approach

The current phased approach is an interim process leading up to the D-30 process. It began in November 1998 and will be superceded in FY2001. The BFAO needs to be aware of the difference in approaches for a BG under the “current phased approach” vice the D-30 approach.

NAVSEA 05 Plans - Early/Long Term BGs (NAVSEA 030515Z NOV 98)

This message outlines the phased start-up of NAVSEA 53 BFI efforts. For the BFs that were within D-20 as of November 1998, the planned support included:

- PHD NSWC to assign a BFAO to each BG
- Publish interim C&L documents tailored to each BF and limited in scope to Anti-Air Warfare (AAW)
- Involvement by NAVSEA 05 to coordinate NAVSEA claimancy installations that affect interoperability
- Y2K tracking/testing/mitigation where applicable
- Initiate Naval Ship Master Plan (NSMP) configuration database verification
- Investigation/correction of known Electro-Magnetic Interference (EMI) issues as funding allows
- Tracking and work around or fix for high priority BGSIT issues
- Use of BF Configuration Control Boards (CCBs) to address FLTCINC identified issues such as Target Configuration Date (TCD) waiver requests.

The BFs that received or are receiving the planned support above are:

- ENTERPRISE/NASSAU 98
- CARL VINSON/BOXER 98
- THEODORE ROOSEVELT/KEARSARGE 99
- CONSTELLATION/PELELIU 99
- JOHN F KENNEDY/BATAAN 99
- JOHN C STENNIS/BONHOMME RICHARD 00
- EISENHOWER/WASP 00.

For the BFs between D-20 and D-30 as of November 98, additional support included:

- Proactive involvement by NAVSEA 05 to integrate cross-system installations into a "D-30-like" process
- Establishment of a BF configuration baseline
- Closer coordination among SYSCOMSs to manage configuration installations of hardware and software. Inclusion of NAVAIR and USMC systems into the NSMP database
- Evolution of the BF C&Ls document to include unique in-theater requirements, and all warfare areas
- Conduct of limited land based testing of BF-configured systems, using the DEP
- Use of BF CCBs to address emergent FLTCINC installation requests.

The Battle Forces that received or are receiving the planned and additional support above are:

- ABRAHAM LINCOLN/TARAWA 00
- TRUMAN/NASSAU 00
- GEORGE WASHINGTON/SAIPAN 00.

For BFs near or beyond D-30 as of November 1998, the full NAVSEA 05 G&PP processes were to be invoked and the following additional actions included:

- Proactive efforts to influence the Fleet Modernization Program (FMP) system
- Comprehensive shore-based testing leading to pre-TCD BF certification
- Formal NAVSEA 05 BF certification prior to deployment.

This full support applies to CONSTELLATION/BOXER 01, ENTERPRISE/KEARSARGE 01 and subsequent BFs.

Fleet Process Instruction (CINCLANTFLT/CINCPACFLT INSTRUCTION 4720.3A)

This instruction is the management of afloat combat systems and C4I installations and improvements. The purpose of the instruction is to provide an orderly process and procedures for the efficient implementation of combat systems and C4I systems across the BF. The intent of this process is to ensure the combat deployers, (i.e., the Carrier Battle Group (CVBG) or BG, the Amphibious Ready Group (ARG) with the embarked Marine Expeditionary Unit (MEU), Pacific Middle East Force (PACMEF), and the Mine Warfare Readiness Group (MIWRG), receive improved, and certified warfighting technologies, in order to achieve the highest possible degree of warfighting capability and interoperability; and to ensure that these capabilities are provided with the proper training, logistics, and technical documentation.

The instruction addresses the implementation planning process for initiating, approving and scheduling combat systems and C4I system installations and upgrades, including software deliveries, with an emphasis on BG/ARG deployments. Milestones, events and organization responsibilities are included. The process described in the instruction is applicable to all shipboard combat systems, C4I system installations, Programs of Record (POR), and upgrades including Ship Alterations (SHIPALTs), engineering and field changes programmed under the Fleet Modernization Program (FMP), Ordnance Alterations (ORDALT), emergent C4I upgrades, Advanced Concept Technology Demonstrations (ACTD), and Operational Proof of Concepts.

The instruction incorporates the tenets of the D-30 process from NAVSEA's G&PP 98-03, revises and expands CINCPACFLT/CINLANTFLT 4720.3 to include combat systems, and also adds a detailed section on waiver requirements for non-standard alterations or prototype installations, emergent changes to the final baseline configuration and post-TCD installations. The instruction is located in Volume II Appendix C.

NAVSEA Software Quality Improvement (SQI)

G&PP No. 99-05, SQI Program of 21 May 1999, provides the SQI processes necessary for certifying the safety, effectiveness and operational use of computer programs developed or upgraded for installation in surface combatants, submarines, aircraft carriers, amphibious ships and mine warfare vessels. The procedures contained in the enclosed SQI G&PP are used for CV/CVN, LHD, LHA, LSD, FFG and DD ship classes and have been expanded to include AEGIS CG/DDG, SSN/SSBN, MCM and MHC Classes. All combat system computer programs will now be subjected to flag level scrutiny at a Fleet Delivery Readiness

Review (FDRR) prior to installation. The Software Certification Program (SCP) will replace the SQI. The G&PP is located in Volume II Appendix D.

NAVSEA Configuration Management

G&PP No. 99-06, Combat System Software Change Control Board (CSSCCB) of 26 May 1999 provides procedures for maintaining platform configuration control in surface combatants, aircraft carriers and amphibious ships. The CSSCCB, chaired by NAVSEA 53, will ensure that all Engineering Change Proposals (ECPs) impacting interfaced combat system elements are reviewed for technical accuracy and programmatic issues by all affected system managers prior to implementing changes in their computer programs. The G&PP is located in Volume II Appendix E

Fleet Battle Group Systems Integration Testing (CINCPACFLT/CINCLANTFLT Instruction 4720.4)

This instruction promulgates guidance and direction for the conduct of the CINCPACFLT/CINCLANTFLT-sponsored Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and Combat Systems integration testing and validation process within deploying carrier BGs, ARGs, and Middle East Forces (MEF), to include embarked Naval Air Wings (CVW and Air Combat Element (ACE) and MEUs.

The process defined by the instruction complements the configuration control process formalized in CINCPACFLT/CINCLANTFLTINST 4720.3 series. The intent of the BGSIT process is to provide an evaluation of C4ISR/combat systems interoperability and integration within the deploying BG/ARG/MEF/CVW/MEU/ACE to the FLTCINC, Numbered Fleet Commander (NFC), Fleet Marine Force (FMF) Commander, and the BG/ARG/MEF Commanders.

CINCPACFLT/CINCLANTFLT BGSIT is a CINCPACFLT/CINCLANTFLT-directed program designed to provide a comprehensive validation of “total force system” performance prior to overseas deployment. BGSIT is chartered by CINCPACFLT/CINCLANTFLT to liaison with the Type Commanders (TYCOMs), SYSCOMs, and PEOs in reporting and tracking resolution of BG/ARG/MEF/CVW/MEU/ACE C4ISR/combat system interoperability and integration issues. The instruction is located in Volume II Appendix F

1.3 Key Organizational Players, Responsibilities, and Tasks

NAVSEA 53 is working with SPAWAR 05 and NAVAIR 05 to execute the responsibilities assigned by CNO in MAY 98 with NAVSEA 53 as the focal point for coordination and resolution of BFI issues.

Fleet activities involved in the BFI Program are:

- CINCLANTFLT and CINCPACFLT staffs (Fleet Maintenance N4 and combat systems/C4I N6 or N6/N8) are the keepers of the process for approving and installing combat system and C4I installations in fleet units

- The TYCOMs deliver fighting units as ready for fleet operations

- The BF Commanders (COMCRUDESGRU or COMCARGRU) accept fighting units and prepare for deployment

- Navy Program Managers (PMs) and PEOs are responsible to deliver stable combat and C4I systems ready to perform across interfaces by the TCD, six months before a deployment.

- SPAWAR 04 provides the overall unifying direction and coordination of SPAWAR installation and logistics efforts. SPAWAR 04F provides the Joint Task Group (JTG) Manager as the SPAWAR principal point of contact to the fleet and principal action officer for D-30 process. The SPAWAR System Centers provide the C4I Superintendent that works the deck plate level

- NAVSEA 53 has assigned PHD NSWC to assist in coordination and resolution of BF interoperability issues by assisting in establishing processes, baselining capabilities, maintaining configuration control, verifying interoperability, and certifying baseline configurations. PHD NSWC provides BFAOs as liaison between the fleet and technical communities and to facilitate resolution of interoperability issues.

1.4 BFAO Top Level Objectives

From NAVSEA 53's perspective, the BFAO's objectives are to:

- Represent NAVSEA 00 and report through NAVSEA 53 when interfacing with the Fleet and participating in meetings with fleet and technical activities
- Assist the NAVSEA 53 Baseline Manager in maintaining configuration discipline
- Communicate and maintain liaison between the Fleet and technical activities for interoperability matters
- Brief the BF Commander on the status of BFI
- Present products that support D-30 events and meetings such as assessments, and C&L documents.

1.5 BFAO Roles and Responsibilities

The May 1998 CNO message requires NAVSEA 05 to "leverage existing infrastructure to address deploying BG requirements", and, in particular, to "assign Project Officers to each BG Commander, to coordinate installations, control configuration, and provide a single point of contact for identification and tracking of BG interoperability issues".

Since 1998, experience has shown that the BFAO cannot be a "single" point of contact. BFAOs are "primary" points of contact who maintain and manage the big interoperability

picture. This means the BFAO has to be the primary point of contact as a member of a larger team.

As outlined in PHD NSWC 240502Z AUG 98, the BFAOs were initially assigned from PHD NSWC's Port Hueneme and Dam Neck locations to:

- Serve as a liaison between the Fleet and technical community,
- Highlight and coordinate the resolution of interoperability problems and issues,
- Maintain close contact with the BF Commanders and staff and associated ARGs and MEFs to allow early identification of interoperability issues and to facilitate prompt resolution.

PHD NSWC describes the duties of a BFAO:

- Facilitator of the D-30 process at the deck plate level

- One of the primary points-of-contact to BF Commander for interoperability issues representing NAVSEA, SPAWAR, NAVAIR and MARCOR systems commands

- A liaison between the fleet and technical community, who facilitates resolution of interoperability issues.

- One who maintains awareness with the CINCs, TYCOMs AND SYSCOMs regarding battle force interoperability, including EMI, and monitors BF baseline installations. (The intent of this BFAO role is to provide coordination/status between activities, not to assume any responsibility from existing CINC, TYCOM or SYSCOM participants.)

- Forecasts interoperability performance through land-based engineering and testing activities

- Advises BG Commander and staff on resolution of BF interoperability issues within the D-30 process

- Generates weekly status report to NAVSEA 53.

1.6 Summary

The BFAO is a project officer with responsibilities for interoperability among systems that have their own system problems. These systems may not necessarily work together and may not be on the schedule that will properly benefit the BFAO's deploying BF. The BFAOs' *technical* job involves tracking systems problems that extend across interfaces and working with PHD NSWC departments, the SPAWAR JTG Manager, other SPAWAR elements, and other organizations to find the best path to timely solutions for the deploying BF. The BFAO's *management* job is to report and solve problems among acquisition program offices, installation and test agents, and fleet users.

Section 2 of this handbook provides definitions of commonly used terms in BFI. Section 3 provides a description of the D-30 process, information on what the BFAO does in key meetings, how to monitor the baseline execution leading to certification and how to communicate within the technical and fleet communities.

Appendices and tabs are in Volume II and include the full text of governing references, various lists (acronyms, website addresses, points of contact), and also templates for meetings, conferences, and the weekly sitrep.

SECTION
2

2. DEFINITIONS

This section provides some of the basic definitions a BFAO needs to understand.

2.1 Afloat Master Plan (AMP)

The AMP provides the configuration and planned installation dates for systems in BFs. This information is maintained as a complete baseline configuration for all BFs. The listing includes combat systems, C4ISR systems, and air wing composition (see Afloat Master Planning System (AMPS) web site http://amps.navsea.navy.mil/)). Apply for access via the web site log-on screen.

2.2 Alteration Installation Team (AIT) Management Process (AMP)

An AIT is comprised of contractors and government employees that install an ECP ORDALT or SHIPALT aboard a ship.. The AIT is directed by the program office or assigned technical agent that funds it. The AMP provides the management process for the AIT installations and defines the testing and logistic requirements that have to be satisfied for a successful install.

2.3 Assessments

An assessment is an independent appraisal of the condition of a system or equipment against a set of criteria. For example, capabilities measured against a set of functional requirements can be the focus of an assessment.

BFI assessments by PHD NSWC are made in support of the NAVSEA 53 certification requirements and by their nature, involve systems, equipment and computer programs that transfer information among the BF.

The approach to a BF assessment is to assess the BF as a “system” with associated systems as “sub-systems”. The assessment is done by appraising the technical readiness or capabilities of proposed/actual configurations for overall interoperability and for warfare areas. The series of assessments conducted on a BF during the D-30 process serve to track progress towards achieving the targeted baseline configuration and provide the basis for NAVSEA 53 to make technical certifications of the BF at D-7 and D-2 as deployment approaches. Sample assessments are in Volume II at Tab C.

Early in the D-30 process, assessments are based on expected performance of proposed configurations and on the adequacy of plans for deficiency correction, installation and test. For example, once the proposed deployment baseline composition and fighting units target configurations are established at D-27, an assessment is made of the configuration's potential to solve known interoperability deficiencies and also of the adequacy of plans for installation and test. Later in the D-30 process, assessments are more definitive, based on success in installation and on actual results from the land-based and at-sea test events.

2.4 Baselines

- **Proposed Baseline Configuration (D-29)**
  SYSCOMs and PEOs identify the proposed baseline configuration. Hardware/firmware and computer programs/data bases installed or planned for installation are identified for all ships, aircraft and submarines. Based on inputs from SYSCOMs and PEOs, NAVSEA 53 consolidates and distributes this proposed baseline configuration.

- **Initial Baseline Configuration (D-28)**
  The configuration established by review of the proposed baseline configuration at the Initial Baseline Review (IBR) conducted by NAVSEA 53.

- **Deployment Baseline Configuration (D-25)**
  The configuration that is the outcome of the Pre-Deployment Planning Conference. This configuration is forwarded by the CINC as the fleet supported deployment baseline configuration to SYSCOMs and PEOs.

- **Final Baseline Configuration (D-24)**
  The final baseline configuration is approved by the FLTCINCs in the D-24 meeting. The baseline is placed under a BF CCB configuration management. The BF CCB controls the combat systems and C4I configuration for the battle force through an "exception process" for emergent requirements or deletion of existing items listed in the current baseline. A sample CINC approved baseline message is in Volume II, Tab F.

2.5 Battle Force Composition Message

This message to other FLTCINCs, Theater CINCs, Numbered Fleet Commanders (NFC), SYSCOMs, PEOs, TYCOMs, and MARFORLANT or PAC includes all deployers, including United States-Latin American Naval Exercise (UNITAS) and MIWRG. The unclassified composition message identifies the:

- Commanders: BG, Destroyer Squadron Commander (DESRON), Amphibious Squadron (PHIBRON), and PACMEF Commander,
- Carrier Air Wing,
- MEU,
- Ships and submarines by hull number,
- Deployment dates and TCDs,

- Ships within five years of decommissioning (based on input from OPNAV) Inter-Deployment Training Cycle (IDTC).

2.6 Battle Group Systems Integration Test (BGSIT) Process

CINCPACFLT 120551Z DEC 98 defines the BGSIT as a process that is Pacific Fleet's "honest broker" in identification of C4ISR and combat systems technical interoperability and integration issues in an operational environment. The testing serves as a process between the technical community and the deploying commanders in the tracking and resolution of identified interoperability and integration issues.

The phases of a BGSIT are:

- Preliminary Assessment (PA) - coordinated by the BG and ARG Commander to baseline individual platform systems prior to task force operations, and to define required coordination areas. This PA assists in the planning for formal testing to evaluate BG and ARG unit interoperability in an operational environment.
- Problem Definition (PD) survey - conducted on all ships to assist in identification of shortfalls in individual systems operations and intra-ship connectivity.
- Final Integration Testing (FIT) - this at-sea-event phase of the BGSIT process identifies C4ISR/combat systems interoperability and integration issues at a CVBG/ARG/MEF level. It is conducted post-TCD, typically during COMPTUEX.

CINCPACFLT 280027Z AUG 97 established the BGSIT program by appointing a CINCPACFLT staff BGSIT program authority. The message appoints the CINCPACFLT Staff Program Manager/Deputy Program Manager, BGSIT Coordinator for ARGs and surface combatants, confirms message routing procedures, and defines responsibilities. These responsibilities include efforts for East/West Coast BGs, coordination with CINCLANTFLT BGSIT staff, and maintenance of a comprehensive data base for BGSIT results and status from both the Atlantic and Pacific Fleets.

2.7 Battle Force Integration Testing (BFIT)

The BFIT is a shore based testing effort to test all BF integrated computer programs to verify interoperability, compatibility, maturity and reliability under stress in a controlled environment. The BFIT is conducted by NAVSEA 53, at about D-12, using the DEP, and provides the basis for preliminary BFI certification. In addition, the BFIT provides initial validation of the BG OPTASK LINK, the BF C&L documentation, and other procedures designed to mitigate known interoperability problems (CINCPACFLT/CINCLANTFLT Instruction 4720.3A).

2.8 Baseline Review Board (BRB)

The BRB, chaired by the FLTCINC, establishes the final baseline configuration for a given BF at D-24. In response to the baseline presentation by NAVSEA 53 and SPAWAR 05 representatives, flag officers decide the final baseline configuration. Once the configuration is decided, the emphasis is on execution of the plan under the management of the BF CCB

described below. The chairman of the BRB is a flag officer from the FLTCINC, the deputy chair is NAVSEA 53. The membership also includes voting and non-voting members from OPNAV, Fleet commands, TYCOMs, SYSCOMs, PEOs and PMs. Any changes to the baseline for combat systems and C4I are done through an "Exception Process" for emergent requirements and monitored through the electronic CCB (eCCB).

2.9 Battle Force Change Control Board (BF CCB)

The BF CCB evaluates proposed changes to the final baseline configuration. Once the final baseline configuration is established, a disciplined process is invoked to evaluate proposed warfighting benefit versus technical, schedule, and programmatic risks. The chairman of the BF CCB is NAVSEA 53 and the deputy chair is SPAWAR 05. Voting and non-voting members are from Fleet Commands, OPNAV, SYSCOMs, TYCOMs, PEOs and PMs. The chairman of the BF CCB forwards the board's recommendation to the respective FLTCINC, who as the ultimate authority, can accept or reject the board's recommendation.

2.10 Battle Force Configuration Planning Group (BF CPG)

NAVSEA 53 chairs the Battle Force Configuration Planning Group (BF CPG) which meets quarterly (D-21 – D-12).

The purpose of the BF CPG is to identify, track and resolve issues involving the following items that could effect BFIT testing, the capabilities and limitations document, and /or the FLTCINC baseline:

- Proposed hardware and software installations
- Fighting unit schedules
- Planned baseline configurations
- Computer program development status
- Proposed deliveries
- Integration test plans and test bed development
- Simulation/simulation development
- Issue/risk assessments
- EMI.

2.11 Capabilities and Limitations (C&L)

The C&L document is a product of PHD NSWC 4L00 maintained for each BF throughout the D-30 cycle. NAVSEA 53 is required by CINCPACFLT/CINCLANTFLT Instruction 4720.3A to provide the preliminary C&L document at D-7 and final C&L document at D-2. The purpose of C&L is to explain employment and interoperability issues related to Tactical Digital Information Links (TADILS). In addition, organic sensors are covered.

The objectives of a C&L document are to:

- Show how data links and combat systems acquire data.
- Show how data is processed by systems, inside the lifelines.

- Show how data is fused into a coherent battle space picture.
- Show how data is shared and interpreted by BG/joint forces.
- Define BG C&L based on force composition and system configurations, provide hyperlinks to individual ship C&L/OP 3594 and joint references.
- Identify where gaps in knowledge exist, discuss lessons learned and approved work-arounds.
- Provide trainers, tacticians and operators a comprehensive reference and training tool.

2.12 Certification

NAVSEA 53 certifies that the BF is ready for deployment (preliminary at D-7 and final at D-2). The criteria for achieving BFI certification were originally specified in NAVSEA letter 9400 Ser 05/051 of 7 August 1998. In addition, CINCPACFLT/CINCLANTFLT Instruction 4720.3A states that NAVSEA 53 technically certifies the BF ready for deployment, focusing on the safety and interoperability of the equipment in a BF setting. This certification differs significantly from the numbered fleet commander operational certification of BF and is evolving into a testing characterization snap shot rather than a certification.

2.13 Combat Systems Integration Testing (CSIT)

The CSIT is a test facility for non-AEGIS combat systems software testing, such as ACDS. This is a test of all on board combat systems programs using wrap around simulation devices in the place of radio frequency emissions normally found on ships. NAVSEA 53 conducts CSITs at D-18.

2.14 Distributed Engineering Plant (DEP)

The DEP is used to conduct the BFIT at about D-12. The DEP replicates, simulates and stimulates the BG/BF ashore through a nationwide Asynchronous Transfer Mode (ATM) network linking generic BG/BF shore based combat systems hardware. The DEP provides a distributed shore-based BG/BF containing the attributes of an at-sea BG/BF, and allows for input of simulation/stimulation data (ground truth), exchange of live link 11 and link 16 tactical data, tactical and administrative voice data, File Transfer Protocol (FTP) data, data extraction and video teleconferencing.

2.15 Fleet Delivery Readiness Review (FDRR)

Within the BFI certification process, completion of platform-level certification testing and a FDRR provides the mechanism for ensuring combat systems, C4I elements and data links are ready for introduction into individual ships, submarines and aircraft (CINCPACFLT/CINCLANTFLT 4720.3A). This review is conducted by NAVSEA 53 at D-13.

2.16 Initial Baseline Review (IBR) D-28

NAVSEA 53 holds the IBR, attended by SYSCOMs and PEOs, to review the proposed baseline configuration (FLTCINC and TYCOMs attend as they desire). As a result of the

review, NAVSEA 53 establishes the initial baseline configuration. NAVSEA 53 also transmits a message to the FLTCINC, information to CNO, theater commanders, TYCOMs, and NFCs listing all installations that will be accomplished prior to the deployment. This message announces the posting of the initial baseline configuration on a NAVSEA website. This message includes:

- Program of Record (POR) installs
- Installations for Advanced Concept Technical Demonstration (ACTD) or operational proof of concept must include deinstallation and system/ ship restoration funding in the request message .

2.17 Inter-Deployment Training Cycle (IDTC)

The IDTC is a mandatory reportable evolution for all ships, the product of which is a training plan for the inter-deployment period. The IDTC begins after the maintenance period with an individual ship assessment, and builds into the BG training plan prior to deployment.

2.18 Interoperability

Ability of systems, units or forces to provide services to and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together and achieve the assigned missions (JCS Pub 1).

2.19 Pre-Deployment Planning Conference (D-25)

This conference is chaired by the Fleet Commander and forwards the draft deployment baseline configuration to SYSCOMs and PEOs. SYSCOMs and PEOs present a draft deployment baseline configuration to FLTCINC, TYCOMs/COMMARFOR, respective NFC, and respective COMPHIBRU and BG Commander.

2.20 Pre-TCD Conference (D–10)

The FLTCINC holds this conference in which the BF staff briefs its final combat systems and C4I configuration to the NFC, TYCOMs and SYSCOMs. The BF staff briefs its install/training status, concerns and any additional install/ training requests to fix noted shortfalls. TYCOM promulgates updated combat systems and C4I upgrade/training status resulting from the conference. SYSCOMs provide feedback to issues. Briefs on security and BGSIT/Amphibious Ready Group System Integrated Testing (ARGSIT) are provided to the BF.

2.21 Program of Record (POR)

A system acquisition program under the formal DOD acquisition process and being developed by a systems command.

2.22 Timeline Summary (TLS)

A configuration change summary is maintained on the NAVSEA AMP and SPAWAR 04 virtual product office web sites for a BF starting at about D-24. Systems that are changing are shown for each ship along with the planned installation schedule. A sample NAVSEA TLS is in Volume II, Tab G.

2.23 Software Certification Program (SCP)

A NAVSEA SCP is the final phase in a systematic computer program development process that begins with code development and system-level integration and testing. As a minimum, the computer programs of individual Combat System (CS)/ Non-Propulsion Electric (NPE)/C4I elements are determined by the developing agency to be safe and effective prior to commencing platform level testing. All integrated CS/NPE/C4I computer programs must successfully complete platform level integration test and BFIT prior to approval for delivery for Fleet operational use and deployment. Computer program certification results from formal evaluation of platform level tests by a Platform Certification Panel (PCP) and BFIT by a Battle Group Certification Board (BGCB).

2.24 Target Configuration Date (TCD)

The TCD, set by the Fleet Commander in the BF composition message, is six months before the scheduled deployment date. By TCD, all planned installations in a BF are required to be completed and system operation stable – or waivers requested.

2.25 Unique Deployers

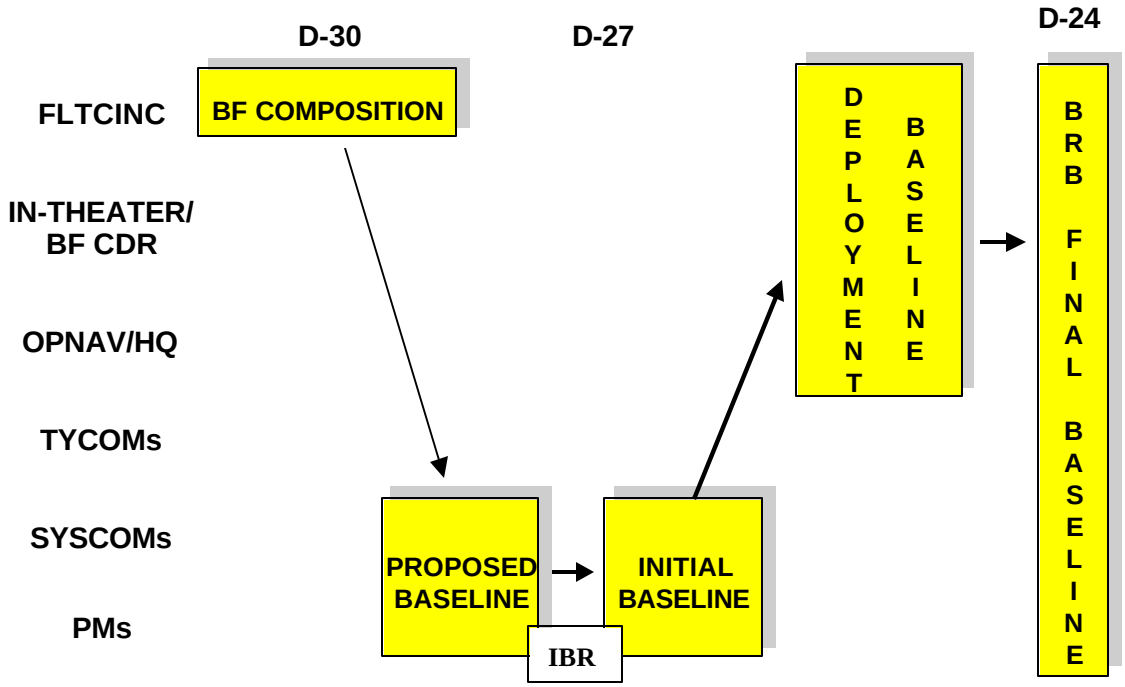
Unique deployers are ships, such as those forward deployed, or those making different deployments that are not part of a BF, such as UNITAS, MIWRG, or counter-drug operations. Some of the tenets of the D-30 process are applied to these ships. For example, it may not be possible to do a full land-based testing, nor to execute a full D-30 process for those ships that are forward deployed overseas. In these cases, the FLTCINC in coordination with the TYCOMs and NAVSEA 53 mutually agree on how much of the process will be incorporated.

SECTION
3

3. PROCESSES AND PRODUCTS

3.1 D-30 Process and Related Products

The early months of the D-30 process are shown below. The process for a particular BF is initiated by the FLTCINC BF composition message that lists ships, air wing and USMC composition along with any associated forces such as Joint Inter-Agency Task Forces (JIATFs) and Middle East Forces (MEFs).



NAVSEA 53 schedules an IBR Meeting and requests data from PEOs and PMs on planned installations and upgrades. The response to the data call is the proposed baseline and the extent of the response is reviewed by NAVSEA 53 at a pre-IBR about two weeks before the IBR. At the pre-IBR, the product that PHD NSWC provides is a preliminary assessment of the interoperability issues that the composition and configuration presents.

The purpose of the IBR is to formally review the proposed baseline configuration and establish the Initial Baseline Configuration for a given BF. PHD NSWC provides a formal assessment and presentation at the IBR.

This initial baseline configuration is transmitted by message to the FLTCINC, information to CNO, theater commanders, TYCOMS, and NFCs. This configuration lists all installations that will be accomplished prior to deployment.

At the D-25 Pre-Deployment Planning Conference, NAVSEA 53 with SPAWAR representatives, present the draft deployment baseline configuration for a given BF. This presentation is to the FLTCINC, TYCOMs/COMMARFOR, respective NFC, and respective COMPHIBGRU, and BG Commander. In support of this conference, the BFAO provides a PHD NSWC assessment that updates issues identified earlier in the IBR assessment. As a result, of the review, the CINC forwards the fleet supported deployment baseline configuration to the SYSCOMs and PEOs.

The BRB establishes the final baseline at D-24. This completes the evolutions of the baseline from Preliminary to Initial to Deployment to Final. Subsequent changes are controlled by the BF CCB**.**

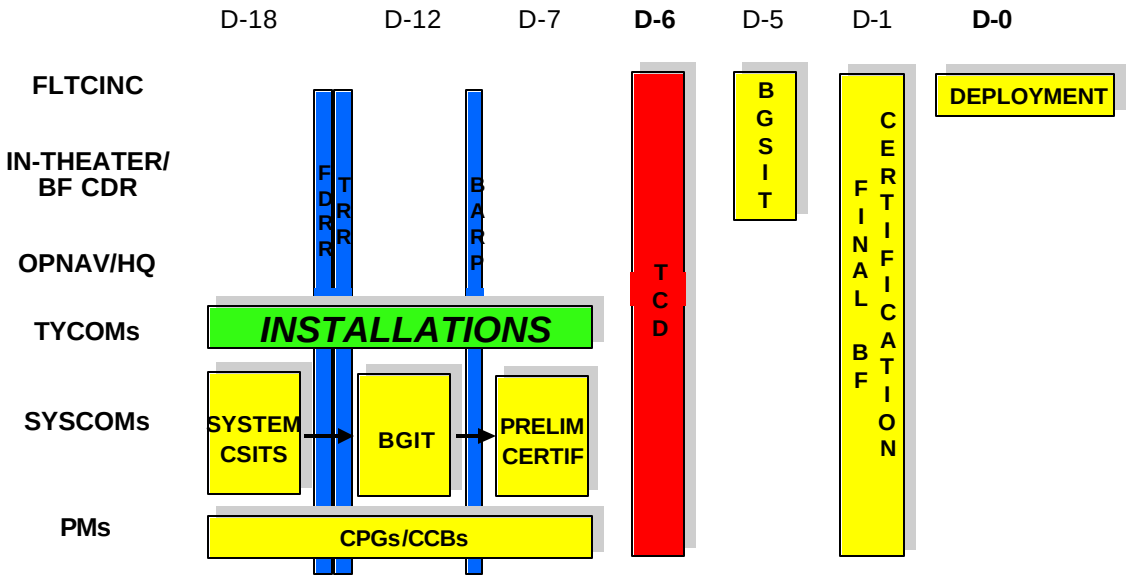
After the BRB at D-24, changes to the baseline must be formally recommended to the final baseline for a given BF. The **FLTCINC is the final decision authority!**

From the D-24 to D-18, plans are being refined to achieve the approved final baseline. In addition, systems are prepared for tests that take place starting in D-18.

D-18 to D-0 Process

At D-18, FLTCINC promulgates BF ashore training plan. BFs begin IDTC with Basic Ashore Phase and individual proficiency training. SYSCOMs and PEOs begin systems integration testing (Fleet involvement invited, but is not required).

Also at D-18, the BFAO provides an early version of the PHD NSWC C&L document to the BF. This is the version used to plan BFI training.



Installations in fleet units take place during the D-18 to D-7 time frame in CNO availabilities and in other maintenance periods. The BFAO, assisted by the assigned PE, monitors the status of installation planning and execution.

At about D-13, the SYSCOMs and PEOs complete CSIT. NAVSEA 53 conducts ship FDRR and the final BFIT Readiness Review. The final BFIT Readiness Review is the preparation for shore site testing using the DEP. Software delivery is made after the FDRR to the DEP. The PEO coordinates the software deliveries with all appropriate organizations and provides delivery details by message.

A system must meet specific criteria in order to be ready to enter BFIT testing. Platform certification testing must be completed and a successful 25-hour endurance run must be completed with zero high software trouble reports. If any high trouble reports exist, the risks and limitations must be identified with no safety related issues. Also, there must be a demonstrated increase in maturity over the preceding baseline with flag officer approval of any outstanding criteria breaches.

At about D-12, the SYSCOMs and PEOs begin BFIT, SYSCOMs promulgate update messages with the final status of installations, and the BFs begin training on training team proficiencies.

At D-10, the FLTCINC holds the Pre-TCD conference. BF Commanders brief final combat systems and C4I configuration to NFC, TYCOMs, with SYSCOMs. SYSCOMs provide feedback on issues.

At D-8, PHD NSWC provides an assessment to NAVSEA 53 that includes a recommendation for the preliminary BFI certification.

At D-7, NAVSEA 53 produces the preliminary C&L document based on successful testing, and provides the preliminary BFI certification.

By the D-6 TCD, the SYSCOMs and PEOs should have completed all scheduled combat systems and C4I upgrades. All subsystems including Systems Operation Verification Testing (SOVT)/Combat System Readiness Review (CSRR) testing, training and logistics provisions should be complete at TCD. Also at TCD, IDTC unit level training under the TYCOMs ends, group level training begins, and readiness for BGSIT is assessed.

At D-5, the BF conducts the COMPTUEX and the FIT of the BGSIT process.

At D-3, PHD NSWC provides an assessment to NAVSEA 53 that includes a recommendation for the final BFI certification.

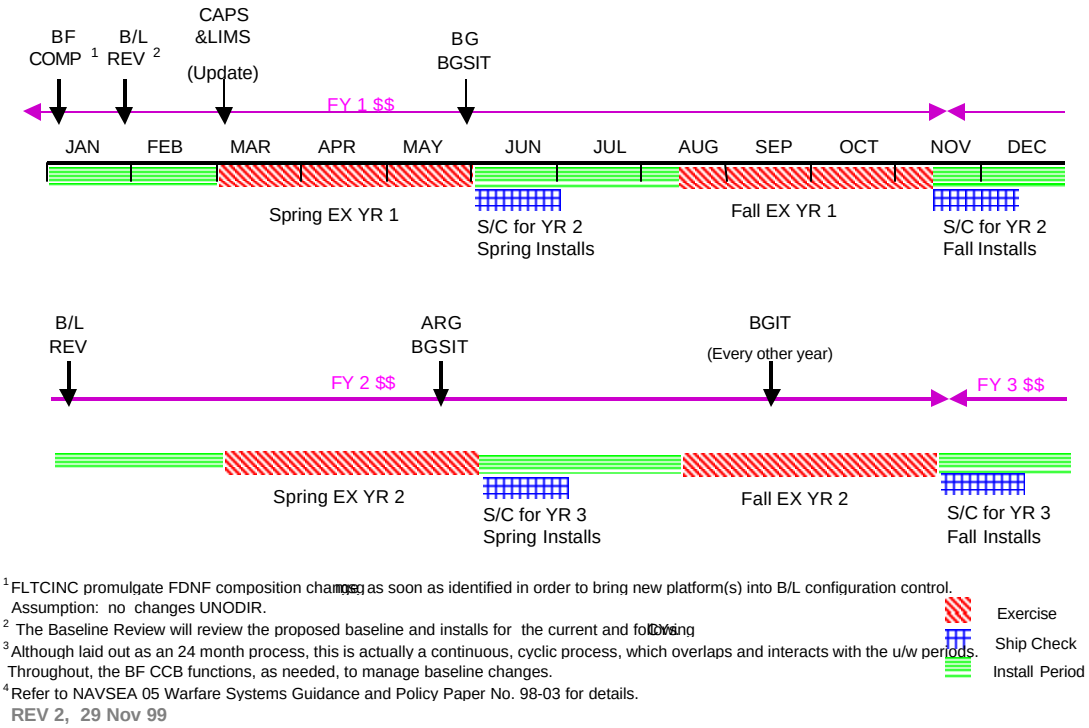
At D-2, NAVSEA 53 promulgates final C&L document and technically certifies the battle force ready for deployment, focusing on the safety and interoperability of the equipment in a battle force setting. This certification differs significantly from the NFC's operational certification of the BF. Also at D-2, the NFC conducts advanced training during Fleet Exercise (FLEETEX) or JTFEX events.

At D-1, IDTC group level training ends and Pre-Overseas Movement (POM) standdown commences.

At D-0, the FLTCINC deploys the BF.

Forward Deployed Naval Forces (FDNF)

For the KITTY HAWK BG and the ARG, homeported in Japan, a modified process is followed to accommodate the higher readiness requirements and different operating cycle.



[1] FLTCINC promulgate FDNF composition changes as soon as identified in order to bring new platform(s) into B/L configuration control. Assumption: no changes UNODIR.
[2] The Baseline Review will review the proposed baseline and installs for the current and following CY.
[3] Although laid out as an 24 month process, this is actually a continuous, cyclic process, which overlaps and interacts with the u/w periods. Throughout, the BF CCB functions, as needed, to manage baseline changes.
[4] Refer to NAVSEA 05 Warfare Systems Guidance and Policy Paper No. 98-03 for details.
REV 2, 29 Nov 99

In this modified process, there is an annual review of changes planned for the FDNF BF. This annual review considers installation plans for the Spring and Fall install periods for the current year and for the following year. Similar to the regular D-30 process, CINCPACFLT announces the composition, NAVSEA 53 proposes the baselines, and CINCPACFLT approves baselines or changes to baselines.

NAVSEA AIT Management

NAVSEA has overall responsibility to ensure all maintenance, including modernization, repair and preventative maintenance, is executed in accordance with applicable technical requirements. The delegation of technical authority to Naval Shipyards and Supervisors of Shipbuilding is addressed in several references.

Fleet feedback continues to underscore the requirement for improved modernization processes, management and execution. NAVSEA is assigned to develop solutions with SYSCOMs/PEOs, coordinate resolutions with the fleet, and to manage interoperability issues under NAVSEA 53 cognizance.

NAVSEA Ship Platform Managers (SMPs) are responsible for the development of ship class specific alterations and documentation. The PARMs/SYSCOMs are responsible for

development of equipment alterations and documentation. NAVSEA 53 is responsible for BG interoperability, engineering testing and documentation. The water front "Gate Keeper" function is performed by the Regional Maintenance and Modernization Coordination Office (RMMCO) "Fleet Water Front Assets". The alteration data is entered into the database. SPMs, Participating Managers (PARMs), and SYSCOMs are the data owners. Lastly, the replacement for the SPMs are the PARMs.

The following diagram illustrates the AIT management process:

AMP HQ / FCO Responsibilities

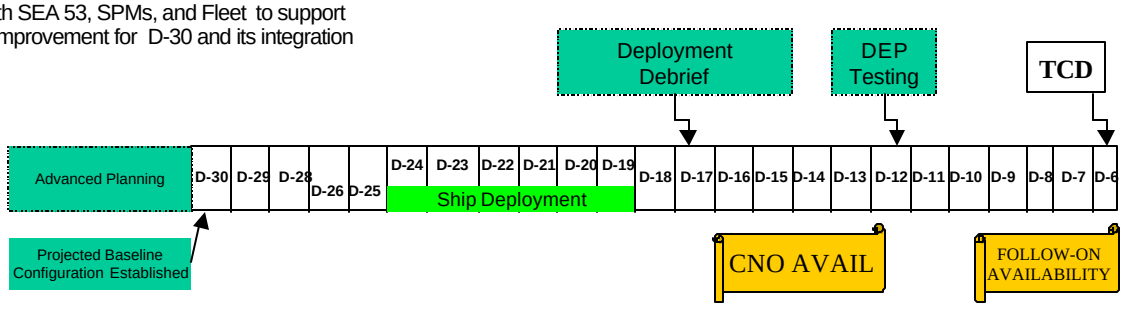
•Team with alteration providers, installers, and customers (Fleet) to maximize the end-to-end process (<D-30 through Deployment)
•Define and implement IT requirements required for integration of FMP/CM/ILS and TYCOM data into a shared environment providing real time alteration status. Generate the BF listing of ALTs indicating those that are "mature" and ready for installation to foster a synergistic stakeholder decision making process
•Validate approved alteration packages and provide assessment of integrated ship impact of ALTs
•Partner with and assist NSA's & RMMCO in the coordination of modernization through a single gatekeeping process
•Manage resolution of port loading of private sector industrial workload problems through partnership with SEA 04X
•Team with SEA 53, SPMs, and Fleet to support process improvement for D-30 and its integration with FMP

NSA Responsibilities During CNO Availability

• Perform gatekeeping process for availabilities conducted in Naval Shipyards and for work contracted / managed through SUPSHIP
• Coordinate scheduling of install teams
• Integrate install teams with maintenance schedule
• Verify, check-in and check-out all install teams
• Validate approval of AIT quality plan IAW NAVSEA Tech Spec 9090.310
• Verify approval and certification of alteration installation with Fleet CINC, SPM, SEA 53, SEA 04
• Participate in BF installation strategy development

RMMCO Responsibilities During Non-CNO Availability

• Perform gatekeeping process
• Coordinate scheduling of install teams
• Integrate install teams with maintenance schedule
• Verify check- in and check-out all install teams
•Validate approval of AIT quality plan IAW NAVSEA Tech Spec 9090.310
• Verify approval and certification of alteration installation with Fleet CINC, SPM, SEA 53, SEA 04
• Participate in BF installation strategy development



3.2 Participation in Key Meetings

BFAO's are responsible for attending various meetings throughout the D-30 process. The following is a chronological summary of the BFAO's responsibilities for some of the more important meetings:

Initial Baseline Review (IBR)

Formally review the proposed baseline configuration and establish the combat system and C4I initial baseline configuration for a given BF at or around D-28.

Attendance by either the BFAO or the SE/PE is required. This meeting is chaired by NAVSEA 53H at NAVSEA Headquarters. Each new system or program destined for this BG will be presented on standard forms provided by NAVSEA. Contractors will distribute proposed baseline documents to all program manager representatives. Note that the forms may indicate deficiencies that must be answered/corrected prior to the BRB meeting at D-24. PMs are responsible to resolve issues and scheduling conflicts to achieve installation or upgrade prior to TCD. BFAOs will brief all BF assessment issues provided by PHD NSWC employees. NAVSEA has the responsibility to ensure time is allotted in the schedule for this briefing that is usually coordinated by a NAVSEA contractor. The more active a part that the BFAO plays in the development of the IBR pitch role the easier it will be to present. Either way, it is imperative that, before the briefing, the BFAO receives face-to-face orientation from C&L personnel and the cognizant SE charged with reporting issues.

Once completed and consolidated, NAVSEA 53 drafts the initial baseline configuration message, for release by the FLTCINCs that lists all installations to be accomplished prior to deployment.

D-25 Pre-Deployment Planning Conference

Present the draft combat system and C4I deployment baseline configuration for a given BF.

BFAO attendance is required. Depending on the coast, this Fleet conducted meeting occurs at a location agreed to by the major participants and may be conducted differently. BFAO should interface with the SPAWAR and NAVAIR representatives prior to the meeting and, if possible, preview changes from the IBR to each other's baseline information.

BFAO presents PHD NSWC assessment. NAVSEA reps may or may not attend. If NAVSEA does not attend, the BFAO may be asked to represent NAVSEA 53. BFAO may present the draft NAVSEA deployment baseline configuration to representatives from the FLTCINC, TYCOMs/Marine Force Commanders, NFCs, COMPHIBGRU and BG Commander. NAVSEA 53 provides briefing material derived from NAVSEA time line summaries and baseline configuration as recommended by the IBR. BFAO must be familiar with the proposed baseline (a list of all projected installations and alterations destined for that BF during this availability cycle) for all ships in the BF. Questions from all planning conference participants are highly encouraged to facilitate a smooth and unencumbered briefing to the flag officers.

Baseline Review Board (BRB)

A FLTCINC chaired board that formally decides the combat system and C4I final baseline and places the baseline under strict configuration management for a given BF.

BFAO and SE/PE attendance is recommended on-site or Video Tele-Conference (VTC). BRBs are normally conducted on or near the applicable CINC's premises. BG Commander representation may attend via VTC while on deployment.

BFAO's are required to help field questions asked by the board members. BFAO's on the whole may or may not have to present during the meeting and will usually know well in advance if they are needed to present. However, it is incumbent on the BFAO to ensure familiarity with the issues well enough to discuss at a flag officer level. BFAOs will take notes on the CINC's or any major issue that surfaces which requires resolution.

It is the responsibility of the BFAO to represent the BG Commander during this meeting. BFAOs should by this time have already established a great working relationship with the BG staffs and should know the BG Commander's issues related to the baseline and discussed during the D-25 Planning Conference. Make sure that during the course of the meeting the BG Commander's issues are brought up for discussion or decision. It will prove useful to know and understand current issues not yet experienced by the BG because of the recent experience gained with other systems that will eventually pertain to the BG. These issues can be C4I, combat system or NAVAIR related. The main goal is to provide the BF a complete interoperable capability with present systems, inside and outside the lifelines of any ship, being discussed. Details will not usually be worked out during this meeting.

Other than issues already mentioned, the BFAO is somewhat passive during this meeting but must remain on guard to surface issues important to the BG Commander and promote the success of the D-30 process.

Battle Force Integration Test (BFIT)

This test is a technically-controlled, air warfare centered test of any given BF that encompasses several important meetings, which a BFAO is recommended to attend. These meetings can bring to light technical issues with significant impact. The BFAO may require a lot of preparation for this event. The BFAO provides a seasoned tactical military insight that is used to hone testing scenarios. Computer program loads that will be tested in the DEP must have completed platform-level CSIT or other SYSCOM-approved platform integration tests prior to commencement of BFIT. In general, the acceptance of systems into a BFIT will be based upon the results of those platform-level tests and satisfaction of the following entrance criteria:

A. Platform certification testing completed;
B. Successful completion of 25-hour endurance run;
C. Zero high priority software trouble reports.

Acceptance of systems that do not meet entrance criteria will be considered for those systems with demonstrated increase in maturity over preceding baseline and flag officer level approval of any outstanding criteria breaches. The BFIT Test Readiness Review (TRR) panel must grant this approval. In absence of flag officer level approval, systems that fail to meet BFIT entrance criteria with proposed versions would revert to the previously certified version. Informally, BFIT is also sometimes referred to as Battle Group Integration or Interoperability Test (BGIT).

BFIT Test Plan Working Group (TPWG) Meeting

For the BFIT Test Plan Working Group (TPWG) Meeting, BFAO attendance is encouraged. SE/PEs should attend all TPWG meetings. Planning starts at the D-18 to D-12 time frame by the NAVSEA 53D, NSWC associates, and DEP coalition partners. NAVSEA 53 will release message identifying test configuration baselines, planning and conduct of the test. Ideally, anomalies will be documented and wrapped into the Battle Force TADIL C&Ls constructed in consonance with PHD NSWC and NAVSEA 53.

There are normally three working group meetings held on shared coasts. The basis of the meetings are scenario construction, mapping test objectives, identifying test execution responsibilities, establishing the BGs correct configuration, establishing test control, operations and procedures, and finally deriving the test events. After the final test plan working group meeting and before the TRR, there will be an In Process Review (IPR) with NAVSEA 53 representation. The IPR is a recommended meeting for the BFAO. The majority of testing related issues are ironed out before the IPR by the TPWG.

The IPR is an extended version of the TRR. The benefit to the BFAO is exposure to the DEP players, simulation and stimulation, the scheduling that occurs in natural use of the labs, the DEP Operating Center (“white cell”, call sign Galaxy), testing directives, and the final cut from the working groups to NAVSEA 53.

The Pre-TRR is where presentation details and BG Commander’s concerns, as relayed by the BFAO are discussed and resolved. It normally happens one to two weeks before the TRR. NAVSEA will decide on the proper course of action as determined by the standard of delivery/promises on both coasts and all issues identified by the technical community during the IPR.

TEST READINESS REVIEW (TRR)

This is a required meeting for the BFAO. The TRR is the last chance for all involved to decide on proceeding or delaying the BFIT. Risk is mitigated for all laboratories. Staff's concerns are obtained and acted upon. This is a flag officer level review that must include the BG staff, N6, and CINC participation. BFAOs are responsible to communicate the importance of N6's participation and attendance. BFAOs should inform the N6 of what to expect and give them questions to ask relevant to their position on any issue. BFAOs are, at this time, in the minds of N6, the technical expert and consultant of any issues known by them that will be discussed during the TRR. Staffs normally do not budget for this event because it is relatively new and unknown. The sooner you communicate the requirement, the sooner the staff will become part of the process.

Once actions are resolved from the TRR anomalies, the BFIT will begin according to a pre-defined schedule. While it has not been mandatory for the BFAO to attend the actual testing, it is strongly encouraged. The BFAO who does attend will receive first hand knowledge on issues related to their BG and gain better insight into DEP configuration. Additionally, if they are willing to travel, they gain expertise on platforms not normally associated with their career pattern. Ultimately the BFAO and others from this forum will brief the community and the staff on issues found during testing events at the BFIT Assessment Review Panel (BARP). The BFAO needs to ensure that BF staff and ship personnel participate in this process. (This can be done by getting the staffs to task ships to attend by re-addressing NAVSEA 53's announcement message as an action message.) One way to make sure all are in step prior to the BARP is to e-mail copies of the BFIT sitreps to the respective staffs as they become available. It strengthens the process and makes all feel more involved as they see the progress of the testing.

Pre-Target Configuration Date (TCD) Conference

This is another required meeting for the BFAO. FLTCINC holds Pre-TCD Conference. BF and PHIBGRU staffs brief final combat systems and C4I configuration to NFC, TYCOMs and SYSCOMs. SYSCOMs provide feedback to issues. Depending on the coast, flag officers may or may not be present. This conference is for each BF to brief combat systems install and training status, concerns and any additional install/training requests to fix noted shortfalls. On the East Coast, the BFAO briefs combat systems issues. TYCOM will promulgate updated combat systems and C4I upgrade/training status resulting from this conference. The BF shall brief the latest on installations, training, Local Area Network (LAN) security, BG and ARGSIT. Briefs on security and BGSIT/ARGSIT are provided to BFs.

Until recently, except on the East Coast, the meetings were normally passive for the BFAO. Now, the BFAO has the perfect opportunity to brief the combat system and the eCCB status to date. The baseline changes and suspected TCD busts of greater the interest during this meeting. This includes all combat system related computer programs, patches, firmware and hardware. The BFAO works with the staff N6, N3, N341 N2 and the C4I to help construct a flag officer level brief normally presented by the N6. It may be necessary for the project engineer to help research issues but they are usually confined to the combat systems or NAVSEA related equipment. BFAO's should coordinate with the SPAWAR JTG

manager or superintendent and the Fleet Support Engineering Team (FSET) member to handle C4I issues. The tactical data links status plays a big role in this meeting and it is necessary to know your staff's projected architecture. This includes Satellite TADIL J, Satellite TADIL A, link 16, link 11 and link 4A. BFIT will aid in this endeavor.

The BFAO's representation at this meeting cannot be over stressed. It is common for the BFAO to represent NAVSEA 53 at these meetings and field any NAVSEA related issues. It is also important that the individuals make themselves known. On the other hand, the BFAO can be put in a precarious position representing the interest of both NAVSEA and the staff. It is incumbent on the BFAO to be prepared and avoid embarrassing either the staff or NAVSEA.

BFIT Assessment Review Panel (BARP)

This is a required meeting for BFAOs as well as the SE/PEs. BFAOs will attend all three days, technical and operational, of the BARP. The BARP is the culmination of the testing done during the BFIT.

NAVSEA 53 will attempt to convene a BARP by D-9 to validate and prioritize Test Observation Reports (TORs). The BFAO is the linchpin in helping to coordinate the staff's and participating ships' schedules. The BARP authenticates the early analysis efforts and finalizes TORs so that they become official, valid BFI Trouble Reports (TRs). In addition, the BARP, in connection with ship participation, offer direction regarding the preliminary techniques and procedures during BFIT.

The BARP will consist of members of the BFIT team, representatives from applicable program management offices and their software support activities, and members (usually ships/staff experts) of the BG Tactics, Techniques & Procedures (TTP) team. The BARP is chaired by SEA 53 and BG commands. Constructing the panel in this way allows the BG staff and operators to impact the prioritization of fixes to newly discovered problems associated to their BG. The BFAO's experience and expertise will be called on during the planning process and during the meetings to help prioritize technical issues.

TORs derived from BFIT will incorporate all BFIT data and be available (to the extent securely possible) via a publicly accessible computer system (preferably the World Wide Web). In this way, NAVSEA 53 will ensure that BARP products are available to PMs as a repository of BFIT knowledge. BFAOs can help this process by coordinating with PHD NSWC Code 4L03.

Based on results of the BARP, NAVSEA 53 will determine whether preliminary BFI certification can be issued. Since BARP is a relatively new effort, program execution is still being worked. As it stands, the program should follow the format described below. In situations where preliminary certification cannot be granted, NAVSEA 53 shall formally notify the responsible PMs of new TRs resulting from the BFIT. This notification will identify the due date for proposed resolution of each TR and the location of all associated data analysis products.

Responsible PMs submit proposed TR resolutions to NAVSEA 53 via the same publicly accessible computer system in the form of updates prior to the due date. Proposed TR resolutions shall include:

Detailed description of proposed fix or fixes; Plan of Action and Milestones (POA&Ms) complete with dates and applicable cost for resolving the TR in a functional baseline assigned to a specific BG; detailed description of possible work-around(s) that could be used in lieu of a fix until the fix becomes available; risk assessment that addresses the risk of implementing each fix; or not implementing a fix. The risk assessment should provide technical risk (on all affected systems [may require teaming]), and operational risk (warfighter impact). BFAOs must understand the scope of any work-arounds and their applicability in an actual watch station environment. They will be the spokesperson and consultant for the staff. They may also be required to explain, in layman's terms, the impact of any issue brought before the BARP.

Battle Group Systems Integration Test (BGSIT)

BGSIT is the beginning of the underway period. Stateroom availability is uncommon during these underway times so BFAOs should expedite berthing requirements, and coordination for clearance information early. Send clearance request message from your respective commands to chosen points of contact on the ship you intend to ride. On the East Coast, this must be approved by the BGSIT PM. E-mail does not carry as much weight as a message. Specify gender, and also know that as a matter of record, BFAOs are not part of the BGSIT team and will not be included on the BGSIT consolidated visit clearance request message. Experience shows, the more BFAOs are involved with monitoring the progress of their stay, the better their accommodations during their stay.

The elements to this program are: Problem Definition Survey (PDS) and FIT. PDS is conducted on all ships to assist in identification of C4ISR and combat system shortfalls in individual system operations and intra-ship connectivity, to provide a program overview to ships force, and, to validate system configuration. Support for upgrade of systems is not within the BGSIT charter. PDS results in proper focus on potential system issues and assists in customizing FIT baseline procedures.

During PDS:

(1) BFAOs provide briefing on BFIT/DEP issues identified to date, existing workarounds, and capabilities and limitations considerations. Briefings will be provided to familiarize ships force with program objectives, procedures and requirements. This is normally accomplished during the pre-test readiness meeting.

(2) BFAO provides a matrix of installed and/or planned systems software/hardware versions as outlined in the TLS and the baseline message prior to the readiness meeting. The SPAWAR JTG manager and BFAO brief the TLS.

(3) Ship's representatives must be prepared to advise of any existing systems issues that are currently documented or known. BFAOs can provide continuity between BGs based on lessons learned during the BF engineering working group and SPAWAR VTCs.

Schedule Of Events (SOEs) input will be coordinated directly with the appropriate training Carrier Group commander or NFC and BGSIT PM to ensure minimal impact on training and exercise objectives.

FIT is the at-sea phase of the BGSIT process. FIT identifies C4ISR/combat systems interoperability and integration issues at the group level usually underway during COMPTUEX. During FIT, the CINCPACFLT BGSIT team augments ships force in the conduct of coordinated test events and individual system evaluations during underway operations. BFAOs have performed the duties of team leaders on specific platforms but it is recommended that the BFAO embark aboard the carrier and maintain a position that provides a continuous view of the big picture. BFAO attends daily meetings chaired by the BGSIT PM and deputy, and consults the staff on issues related to interoperability (BFAOs should attend the BGSIT out brief and provide constructive input as it relates to comparisons seen during BFIT).

FIT executes a series of scheduled at-sea tests, which the BFAO should monitor, particularly those related to LINK and BG interoperability. These test and evaluations are designed to assist BF operators and BGSIT technicians in identifying C4ISR/combat system interoperability issues. These events require operational support including air services, ship positioning, cycling of emitters/sensors, and manipulation of ship-air-shore data link parameters as coordinated via the SOE. The FIT team will embark all units and will be tailored to comprehensively profile current system baseline status. A BGSIT message details the entire plan of action. BFAOs maintain communication with other team leaders via BGSIT embarked PM.

Lastly, there is sensitivity toward "bad gouge" being distributed prior to release of the BGSIT hot wash message. Until the BGSIT message hits the street, the issues are not "real". Everyone wants to get a leg up on information and potential resolutions, but getting too far forward in the trenches has caused bitter feelings and a chain of emails to clear up non/incorrectly advertised problems.

3.3 Monitoring Baseline Certification Process

Most of the information, databases, websites and institutions that currently exist for monitoring the baseline certification process will be discussed. BFAOs must realize from the start that many aspects must be monitored to maintain the full picture on the status of the baseline and its projected success. This requires dedicated effort on the part of all concerned and it cannot, nor should it be, a "one person" show. This section is intended to describe the factors relating to baseline monitoring and the tools available to track their amendments. Techniques explained here are those used to access information and provide feedback to the interested users and ultimately help NAVSEA 53 accomplish its mission. As

such, there may be individual adjustments needed to satisfy particular geographic or installation specific requirements. The BFAO should read AIT Quality Plan from NAVSEA Technical Specification 9090.310 some time during the relieving process.

As applicable the NAVSEA 53 OSR will aid BFAOs in the review and compilation of installation information for the ships and staffs. Where applicable, the OSR is required to maintain and share a fleet perspective with NAVSEA 53H Division Office and work according to direction or contract as described by NAVSEA or the appropriate agency. The OSR's job is to act as liaison between fleet participants in a regionally defined territory and help enforce the D-30 process. The BFAO's job is to act as liaison between the fleet and the technical community for testing and system interoperability certification.

The CINC Approved Baseline

It is the document that summarizes months of planning for the BG configuration and imparts CINC approval for each new system or software upgrade related to combat systems and interoperability. Once released, changes can only be accomplished via the CCB chaired by NAVSEA 53. The responsible CINC N6, in coordination with NAVSEA 53 and other agencies, release the baseline in message format to a standard distribution. It is regularly obtained from the NAVSEA Livelink, SPAWAR's 04F Virtual Program Office (VPO) site, and the BFE web site. They are centrally located under the appropriate BG link. Any conflicts or changes with respect to this baseline must be identified early and addressed by the E-CCB, thus substantiating the need for monitoring (an example is included in Volume II Appendix F).

Installs Plans and Status

Once the baseline is established, the BG is subjected to a barrage of listed systems and improvements that should be tracked through installation. The current fleet goal/plan/drives is to accomplish large installations during the ship's scheduled CNO availability. The reasons vary from logic, to avoiding any major impact on their operational schedule, but one thing that is sure, and usually over looked, is the impact to quality of life. Suffice it to say, the more installations that are in the availability, the better it is for all concerned. Additionally, installs done in CNO Availabilities or through AIT teams are to complement the IDTC, allowing for new systems to be included in the training curriculum.

Timeline Summaries (TLS)

Both NAVSEA and SPAWAR post installation TLSs. TLSs list all the installs authorized in the baseline and the expected installation dates. The NAVSEA database also includes installs from NAVAIR and MARCORPSYSCOM. These databases are periodically updated to reflect changes and installation completion. The update schedule is not known beforehand so frequent visits to these sites keep users current and out of trouble. Unfortunately, this information has an inherent time delay that is a function of the ship's submission of the SOVT/Installation and Check Out (INCO) completion report. The web addresses that contain this configuration information are listed below. Both SYSCOMs require approved access that can be granted from a request to the webmasters.

NAVSEA installs: http//csmis.rgesvc.com nickname: “RGE” site
SPAWAR installs: htpp://vpo.spawar.navy.mil/04 nickname: “VPO” or “SPAWAR 04” site.

The AMP provides a database foundation for producing the TLS. The AMP supports the BFAO and SE/PE and is formatted to help NAVSEA 53H with baseline management. The following provides samples of what to expect:

What does NAVSEA 53H Track? (Individual ships and systems are the same as data items.) As a BFAO, you must ask the following questions: Does an item apply to this ship? Is it currently installed? When will it be installed? When will it be superceded?

> Where does NAVSEA 53H get their information? The following are the sources of information: Fleet CINC battle force composition messages, data call responses from PMs, Navy messages from ships and TYCOMs, Fleet Modernization Program Management Information System (FMPMIS) Alteration Installation Planning System (AIPS), BF CCB decisions, e-mail, web sites, and phone calls from authorized sources.

Why does NAVSEA 53H prepare a TLS? The TLS provides a historical picture of the BG progression through its technical refreshment. The TLS retrieves information from a database. A BFAO can use database filters in order to acquire a unique view of a ship’s installation plan for a given time frame.

What type of reports are available? There are three main reports available, via the web site view option. The information associated with report options are listed:

- Baseline Cross Tab Matrix – System centric, provides current installs and planned upgrades prior to deploying.
- Baseline TLS – Ship centric, provides installs and planned upgrades at deployment.
- Installation TLS – Ship centric, provides only new installations or upgrades.

Verification/Status of Integrated Logistics Support (ILS), Ship's Installation Drawings (SIDS), Funding

The fundamental planning and support products for installs represent the bulk of issues that may affect the timeline and determine the success of an install. For this reason, they also must be monitored to ensure the ships have the systems they need by TCD. Though some of this information related to SPAWAR systems is listed on their TLS, the data is usually not complete for all ships and estimated dates are subject to change since they are driven by funding shortages and impromptu transfers of accounting lines. Interaction with the JTG C4I superintendent helps bridge this gap for current data.

The AIT Management Process, governed by NAVSEA 04, has been initiated to track installation related information for BGs. AMP certifies alterations as mature or assigns a risk factor based on missing or delayed support elements. As it stands, AMP is not yet available for all BGs and requires regular interaction with the TYCOM, ship, and SYSCOM to

determine the status for installations destined for any BG ship. BFAOs predominantly accomplish this by contacting the appropriate TYCOM N43 shop and responsible SYSCOM/NAVSEA/NAVAIR PMs. Check the website for POCs. With respect to SPAWAR, the JTG superintendent and ship superintendent's listed in Volume II Tab A (Points of Contact) should be contacted before calling the specific SPAWAR system PM. (These points of contact and phone numbers are incorporated into the SPAWAR TLS.)

Electronic Change Control Board (eCCB)

The eCCB is the only approved method for making changes to the final baseline configuration. These changes include adding a system as well as deleting a listed system. Its purpose, membership and process are described in enclosure (4) of CINCLANTFLT/CINPACFLTINST 4720.3A (see Volume II Appendix C). Proposed changes or unnoticed problems in the final baseline for a given BF should be brought to the attention of NAVSEA 53 BFI secretariat for CCB consideration. BFAOs can do this by submitting the change via e-mail, listing it in the weekly SITREP, or discussing it during the Battle Force Engineering Working Group (BFEWG) meetings. Monitoring of eCCB status for ships can be reviewed via the risk forms on the BFI CCB portion of the NAVSEA AMPS site, but requires specific eCCB viewing access approval. eCCB internet browsing permission is granted via email by East or West Coast NAVSEA 53H program officers. Access is available for, but not limited to BFAOs, PE/SEs, and NAVSEA OSRs. Once access is granted, e-mail notification of changes is automatically forwarded by the eCCB.

A-0 Message

An A-0 message is a preformatted message designed to identify risks with installations. It is required for all non-standard and emergent post-TCD program and non-program of record installations in accordance with CINCLANTFLT/CINCPACFLTINST 4720.3A as described in Volume II Appendix C. BFAOs do not have a vote in the approval process and possess no leverage other than through influence of their own particular staff or executive membership representatives. Even more importantly, BFAOs cannot respond if they are not addressed, but cannot be current and relevant if they do not visit the RGE site regularly. It is imperative that the BFAO's command be listed as an action/info addee in this message and that you take the time to visit the NAVSEA AMP site. For monitoring the baseline, these messages help highlight and identify proposed changes to a baseline and emphasize delays in installs which may affect the success of the baseline through impacting interoperability land-based testing, underway sea-trials, and crew training. These requests require TYCOM/CINC approval prior to the actual installation. However, depending on the criticality of the requirement, arrangements can and are made that allow installation before the message or CINC approval is formally distributed. BFAOs must be in the communication chain so as not to be embarrassed. Normally, the A-0 message is sent by the TYCOM or SYSCOM and is available through message traffic or as a work sheet on the eCCB.

Battle Force Integration Testing (BFIT)

BFIT is land-based testing performed in the DEP. During BFIT, interoperability testing is performed prior to fleet introduction of baseline systems or computer programs. The test

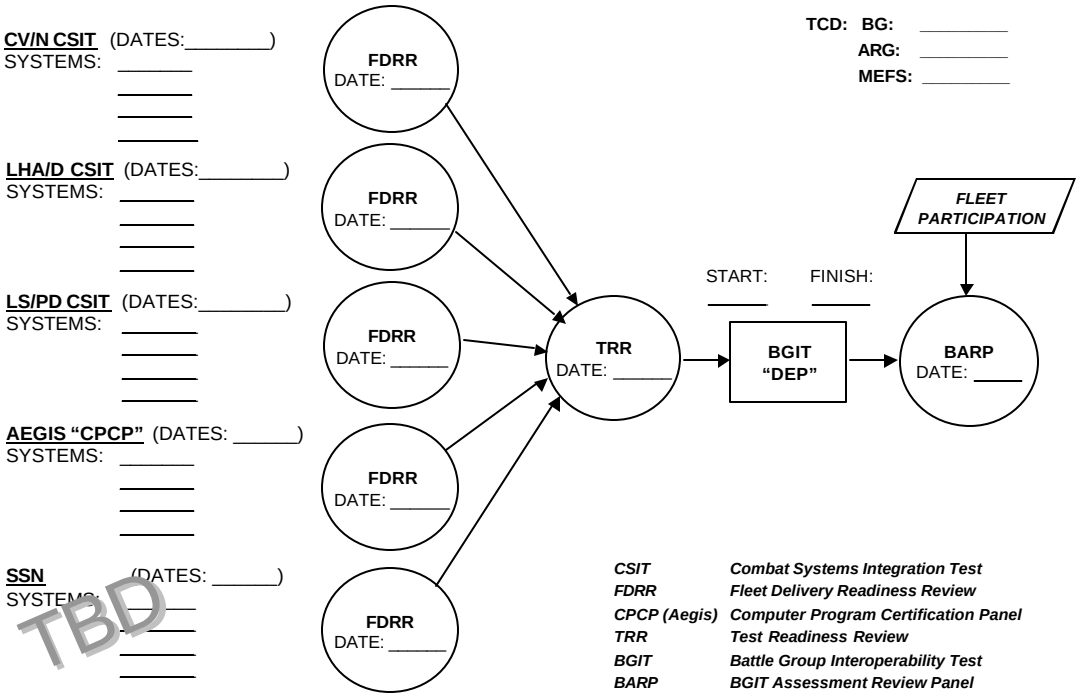
plan is designed around the CINC approved baseline for the future deployment for any given BF scheduled for testing. Results of this testing are used to help forecast the success of the software baseline and determine inherent software design interoperability anomalies associated with the baseline integration. BFAOs monitor changes in software configuration and feed that back to the BFIT test director. BFIT publishes a weekly SITREP during the weeks of testing. This is a controlled distribution and may have to be obtained by or through the PEs. This information is invaluable and will be used as a basis to support the money being spent for testing. Note that none of the results are final or releasable until reviewed and reported by the BARP.

BFIT Assessment Review Panel (BARP)

The BARP is a BG staff review of the BFIT process and its results. These panels, BFAO included, review the BFIT results and take fleet input for prioritizing the TRs found during the BFIT process. Once fixes are found or workarounds are defined for issues not fixed, the results are incorporated in the final draft of the BF C&L document delivered at D-2. Drafts and the final C&L are classified at least confidential and available via SIPRNET at http://www.phdnswc.navy.smil.mil. BFAOs and SEs/PEs are to ensure that the tested baseline is installed in the ships prior to deployment.

Bubble Chart for Certification

This is a summary of the computer programs and associated testing dates for CSIT/AEGIS Computer Program Certification Panel (CPCP), FDRR, TRR, BFIT and BARP. In addition to the scheduled dates, the bubble chart also specifies what software versions were tested and if the test was successful. NAVSEA 53 maintains this information. It is a tool that can help track and compare tested programs with those being used during work-ups and deployment. The certification of these programs focuses on ensuring that the BF understands and is comfortable with what will be used to fight the war should it happen.



Baseline Certification

The baseline certification is NAVSEA 53's determination that all interoperability issues associated with the BF baseline C&L have been appropriately addressed. The status of this certification reveals a measure of BF deployment success and could determine the outcome during any conflicts thrown at the BF. PHD NSWC maintains and advises certification status. Ways to review certification progress include comparing the IBR assessments with the D-7 and D-2 assessments for improvements, and reviewing the C&L document for improvements to a common integrated operational environment and the Single Integrated Air Picture (SIAP) fidelity. Additionally, the resolution of BGSIT issues must be included to present an overall wellness aspect of the BF.

BGSIT Data

The BGSIT database maintained by PHD NSWC is updated by two methods.

- The first method uses the raw database maintained by the CINC BGSIT codes to update the PHD NSWC database (a Microsoft Access database function), during this update all fields in the PHD NSWC database owned by the CINCs are updated with CINC information and any new issues based on hotwash message traffic are added. This update generally occurs after a BGSIT has been conducted and the hotwash message has been distributed.
- The second method is to extract status information from the BGSIT response messages sent by the SYSCOMs and the closure messages sent by the CINC BGSIT codes. This information will be included in the database, thereby keeping the database timely and responsive. A quality control check is performed on the PHD NSWC database prior to the update in accordance with method one. Spot checks

are performed by comparing records on the individual issues on the two BGSIT websites. The CINC websites are:

BGSIT LANT
HTTP://WWW02.CLF.NAVY.MIL/CLFN66
LOGIN CLFN66 READER
PASSWORD apply for password

BGSIT PAC
HTTP://199.211.108.137/N63B/N63.HTM
LOGIN bgsit
PASSWORD apply for password

System Descriptions

To properly monitor the approved baseline, a basic level of knowledge of combat systems and C4ISR is required. System descriptions are available from numerous sources. Some primary resources include:

- **PROPOSED** Baseline Systems – The purpose of all items proposed for the baseline are described with a few sentences in the IBR PowerPoint presentation, available for download at the NAVSEA AMP site.

- **SPAWAR C4I Systems –** SPAWAR N6 seminar. All PowerPoint presentations are available on the VPO site under the "N6 C4I Seminar" link. This presentation also includes a helpful list of acronyms.

- **INSTALL In-Briefs** – These meetings usually provide a good overview of the system and a chance to get questions answered about the install. Often a PowerPoint presentation is distributed and available from the briefer upon request.

There are additional websites for various systems that can be found by calling the PMs and particular owners of systems.

Though all this exists, compiling the data into a useful presentation and maintaining the desired feedback is not easy. To improve the process of monitoring the baseline and ensuring access to the most accurate data, the following changes are required:

- All owners must be disciplined in keeping the published databases/information up-to-date. This is managed by the SYSCOMs.

- Must establish/determine lines of communication and use of available resources. Improvement is needed on the waterfront between SYSCOMs, TYCOMs, squadrons and ships. This is managed by BFAOs.

- Must email POC on websites for published feedback.

Until the baseline is published, the fleet plays a minimal role in the D-30 process. Once the baseline is published, everyone becomes involved. The following are observations and/or ideas on how some think the process is working.

SHIP's Perspective of D-30
[now] CINC baseline →Install→Train→Deploy
[future] CINC baseline →Ship checks→Deploy→Avail/Installs→Training→Deploy

Changes to the Baseline
CINC baseline →ECCB→A-O→TCD waivers→Deploy

Certification of the Baseline
CINC baseline →(CSIT/CPCP)→FDRR→TRR→ BFIT
→BARP→C&L→BGSIT→CERT→Deploy

C&L Rough Timeline and Use
Draft 1, D-15 (trainers)→ Draft 2, D-9 (Ship training)
→ Final C&L (Operator reference)

In summary, the BFAO/OSR/SE/PE needs to be the expert on the baseline for the ships and Staffs they represent. The BFAO must be the expert on the issues and the status of the related resolutions but both must work to clear issues. The following are examples of the questions routinely asked by ships and Fleet staffs:

1. What is our baseline?
2. Will the baseline be certified?
3. Will the baseline change?
4. When will the baseline be installed?
5. When will we train on these systems?

Information at regional level is, for the most part, available and provided freely by all involved commands. However, it is gathered mostly by using an active role. If commands are not visited, requested or reminded, most tend to neglect answering questions. As BFI becomes more of an integrated team operation, these commands will become more proactive.

3.4 Communication

In order to be successful, BFAOs must establish and maintain a close liaison with a people network throughout the chain of command. This section will attempt to explain the relationships for the more important players and more specifically identify the BFAO's interface requirements pertaining to those individuals. BFAOs have the responsibility to ensure this network is interwoven into the normal business cycle and that communications between these entities are constant and accurate.

CINCS: Normally, as in other areas, the chosen target for our service is the N6. The N6 shop is normally organized with a senior captain or government service employee acting as the lead. This lead person is responsible to the CINC or the interoperability of all C4I and

combat systems. The N6 staff ranges from military commanders and below to government service ratings. These individuals routinely report to the CINC via the N6 and therefore must have the most current information to support interoperability interests.

Participation in the BRB should not be the BFAO's first face-to-face meeting with the CINC participants. The BFAOs must get on the N6's calendar early in the cycle and meet and greet the N6 and the staff. Ask for an organization chart and a list of phone numbers while there. Recommend during a relieving process that this be a face to face with the prospective BFAO and the relieving BFAO (as well as with the BF Commander). Do not show up thinking that your visit will be a just a courtesy call. As BFAOs represent NAVSEA so does your future contact represent a CINC. That in mind, the N6's goals is to get as much information as they can. The meeting is usually focused on their agenda. Remember just by the mere nature of a BFAO presence, own command affiliation and newly assigned interests, can expect to discuss problems ranging from within and without the lifelines for your particular BF. At the very least be prepared to discuss interoperability, acquisition related scheduling conflicts and recent casualty reports. Do not show up unprepared.

Within the CINC's N6 Organization: NAVSEA has positioned a contractor that acts as a liaison between the CINC, the technical community, and NAVSEA. History has proven this the perfect contact for conveying issues up the chain or alternatively sending CINC issues down the chain. The importance of this process cannot be overstressed. AMSEC/SAIC Mr. Glenn Palmer presently mans the East Coast at CINCLANTFLT and DRS. Mr. Tom Mills, mans the West Coast at CINCPACFLT (phone numbers and addresses can be found in the POC section).

Additionally, a requirement exists for PHD NSWC to fill two other maintenance positions one per each coast. Normally these two individuals work the maintenance side in the N43 organization but they are also linked with N6 interests. These positions are beneficial to the BFAO especially dealing with installation related issues and complications arising from ill planned CNO availabilities. These are rotational yearlong assignments.

BFAOs should not concentrate on only one organizational side and should not assume that each side will talk to the other. BFAOs act as the conduit between each (N43, N6 directorate) by ensuring e-mail is addressed to both sides. A group distribution list in Outlook with only CINC participants as members makes it easy to mail important information to them and ensures both sides get the word. As a matter of practice, send a courtesy copy to applicable NAVSEA 53 representatives. Also, during your visit ask the same questions of both N43 and N6 members to help gauge their connectivity status. The CINC's role to BFAO success is crucial. BFAOs should be contacting the CINC regularly via phone, e-mail, personal visits, and VTCs. Some of these meetings will happen as a normal course of business relations.

The CINC has the final say on any eCCB issue, TCD request, BGSIT issues, and installation requirements issues. The majority of conferences will target this community. BFAOs must know their BF's C4I issues and be sensitive to the IT-21 matrix requirements for their BF. These are always discussed during any visit. A BFAO's name and face must be immediately recognizable to the N6 and N43 staff.

N2 makes up the intelligence side of the fleet staff. No cohesive plan exists that covers the intelligence equipment requirements, interoperability issues related to that equipment, nor are agreements in place to ensure use of the D-30 process. However, this does not relieve NAVSEA nor does it relieve the BFAO from monitoring the progress of intelligence related installations. Only recently, has there been a more active interest by this community to follow the process. Removing this responsible billet from the TYCOM and placing it with the CINC piqued this interest. They should also expect to see growth in this area. They should also identify the POC for this section and conduct a “meet and greet”.

CINCs are explicit in what they expect from the BFAO. It is the BFAO's job to follow through and keep the chain of command informed on applicable issues.

TYCOM: TYCOM is the administrative supervisor of the BG Commanders and is responsible to turn over the BF to the NFC completely ready to train and fight near TCD. COMCRUDESGRUs (CCDGs) belong to the surface TYCOM and COMCARGRUs (CCGs) belong to the air TYCOM. As with the CINCs, the BFAOs work closely with the N6, N43 and the N8 staffs.

BFAOs must understand the surface combat system directorate because it is much more than installations. TYCOMs have a direct link and control of several tenant organizations that are sometimes taken for granted but remain a constant and necessary part of the process. These same organizations range in scope from Afloat Training Groups (ATGs), to Regional Maintenance Centers (RMCs) material management, to logistics support and more. The majority of the Command, Control and Communications (C3) business is conducted out of the N6 staff. The N6 is normally a captain with a staff that not only watches over the ships but also the shore establishments that support them. N6 is preoccupied with C4I and deals with combat systems but only from an operational perspective. This is inherent in the manning because the surface force C3 officer is usually an Operations Limited Duty Officer (LDO). TYCOM is the main POC for pre-TCD conferences and it normally revolves around the N6. The N6 air TYCOM is usually manned with several combat systems smart aviators. These aviators may or may not be knowledgeable in link architecture and link operational use as it relates to ships but are usually familiar with the aircraft capabilities. As with the surface TYCOM, there is a captain in charge with a staff of commander level and below support.

All N43 air and N64 surface TYCOM combat systems codes monitor and direct C4I and combat systems installations for all carrier, combatant, amphibious and auxiliary ships. The N43/N64 Combat Systems Department is designed to manage force installations and maintenance issues usually fielded by the Fleet Technical Support Centers (FTSCs). The department also chairs fleet quarterly scheduling conferences for ORDALTs, Field Changes, and ECPs.

Cryptologic and intelligence may also be assigned to this department. At first opportunity, ask for an organization chart and phone number listing. The Combat Systems Department is made up of a Lieutenant Commander EDO as the Combat Systems Officer, an electronics technician Limited Duty Officer (LDO) as the Combat Systems Maintenance Officer

(CMS)/Force EOM, a Lieutenant Cryptology officer from intelligence, a Chief Petty Officer for EW and contractor support for monitoring and managing SPAWAR issues.

The Air N43 is a little different in that you can increase the rank of the CSMO, subtract the Intelligence officer and add one contractor OSR to oversee each carrier.

The BFAOs may find that their level of issues are more closely connected with the TYCOM than with the CINC. TYCOMs monitor and provide the ships with a greater fidelity of service during the D-18 to D-6 period than does the CINC. The TYCOM and all of its departments are dedicated to the success of the IDTC. The basic training phase of the IDTC is scheduled for not more than 16 weeks and usually happens between D-12 and D-6.

For the most part, any N code directorate can help the BFAO find the information needed or will help make the necessary contacts. Use the TYCOM web site or review the newest staff organization and e-mail list distributed via message. It is important that BFAOs stay in touch with TYCOM representatives and appreciate the balance between the CINC, TYCOM, PHIBGRU, and BG Commander.

SPAWAR 05/04

SPAWAR 05 controls the initial planning phase of the D-30. In the D-30 timeline, SPAWAR 05 is responsible for constructing the initial baseline and scheduling installations of equipment that match the projected baseline prior to TCD. As it stands now, the POC for this is a contractor, Ray Thompson. Mr. Thompson also presents this information during the IBR and BRB. Notionally, at D-24 or the BRB, the responsibility to activate the plan is shifted to SPAWAR 04. NAVSEA 53H may wind up dealing more with the 05 side caused more by the need to ensure a consolidated showing during the BRB. BFAO's initiative should be focused to get a preliminary copy of the 05 presentations and review it concentrating on known issues that will impact the proposed baseline.

Management of this initial planning team will be under SPAWAR 05. These teams will be introduced in a phased approach increasing the composition of the team to a normal level of three for the BG, and Field Service Engineers (FSEs) to the ARG by start of underway operations (e.g., COMPTUEX). Upon deployment, the FSEs will embark the ships and ride to the first port of call where they will turn over to the in-theater FSEs who reside with the NFCs in Bahrain, Yokosuka and Naples. SPAWAR POCs are Mr. Larry Carr, SPAWAR 053, 858-537-0425 and Bob Stephenson SSC SD code 424, 808-471-0859. FSEs will support the following functions:

a. Be the senior technical advisor to the BG staff for C4ISR issues.

b. Support the BG/ARG C4I superintendent/BFAO and RMMCO during the installation and testing of C4ISR systems.

c. Provide end to end technical support for shipboard Information Technology (IT) systems.

d. Resolve integration issues among C4ISR systems and coordinate with staff and ship's company as a solution provider to improve work processes.

e. Support at-sea workups.

f. Advise the staff and ships on training required for new C4ISR installations.

g. With the regional Network Operations Center (NOC), prevent/resolve network services issues.

h. Advise the staff and ships on effective employment of new C4ISR systems.

i. With FTSCs, support on scene resolution of technical issues between ships' systems and shore support systems.

j. With ships' force and staffs, develop Standard Operating Procedures (SOPs) for operation of IT systems.

FSETs were formed from existing system advisor type systems engineers. Assignments and future changes and additions will be maintained on their website WWW.FSET.NAVY.MIL. BFAOs will coordinate with the FSEs when the staff or ships identify training deficiencies through the BFAOs and send the appropriate FSEs to fix the deficiency. The following are FSET members:

Billy Bunn	850-470-0083	Bunnb@spawar.navy.mil
Peter Kover	619-221-4714	Koverp@spawar.navy.mil
Eric Westcott	619-516-5959	Ewescott@spawar.navy.mil
Casey Gardner	619-296-6900	ardnerc@spawar.navy.mil
Tony King	619-596-5959	Kingt@spawar.navy.mil
Dennis Noble	619-296-6900	Nobled@spawar.navy.mil
Barry Parker	619-296-6900	Parkerb@spawar.navy.mil

SPAWAR 04 manages and executes the installations required by the baseline information received from the CINC. BFAOs deal more with 04 than 05. SPAWAR 04 provides the overall unifying direction and coordination of SPAWAR installation and logistics efforts.

Major functions include:

- Scheduling and managing afloat and ashore installations and providing a SPAWAR single point of contact known as the JTG Manager.
- Provide overarching coordination for all command installation efforts, from planning to execution.
- Provide leading edge logistics and training to the warfighter.

SPAWAR 04 manages and sponsors a C4ISR Systems Seminar held at SPAWAR Headquarters in San Diego, California. A message is sent out as a formal invitation for

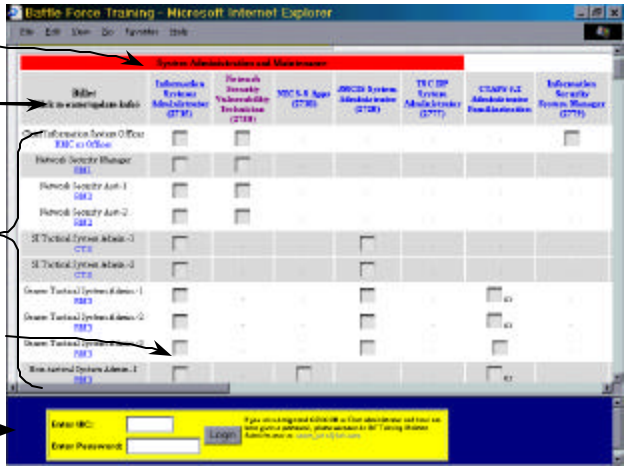
deploying BG/ARG N6 officers and prospective N6 officers to attend. Associated C4ISR staff/shipboard personnel are also invited pending quota availability.

This fleet oriented C4ISR seminar emphasizes SPAWAR C4ISR programs and initiatives currently being used by the fleet. Upon completion of the seminar, prospective/current N6 officers and attendees will have developed an understanding of current and newly introduced fleet C4ISR systems and the associated processes critical for successful fleet application. Approximately 30 C4ISR systems briefs are presented to develop a baseline understanding of C4ISR. All BFAOs should have access to the SPAWAR VPO site and can obtain the most current presentations from that site, http://vpo.spawar.navy.mil. It is preferred training for BFAOs, SE/PEs, and OSRs to attend this seminar. Quotas are controlled by SPAWAR 04F.

Integrated Battle Force Training (IBFT) provides real time training management via the Web, distributed access and real-time reporting on C4I systems. The figure below gives an idea of what you can expect to see once you enter the site. PHD NSWC employee Dale Lotspeich is the BFAOs POC for finding information on this site. It is a SPAWAR product that is controlled by the CINCs so user IDs and passwords may or may not be granted. There is no incident where access was denied. There is a link on the VPO site.

Integrated Battle Force Training (IBFT) Tool

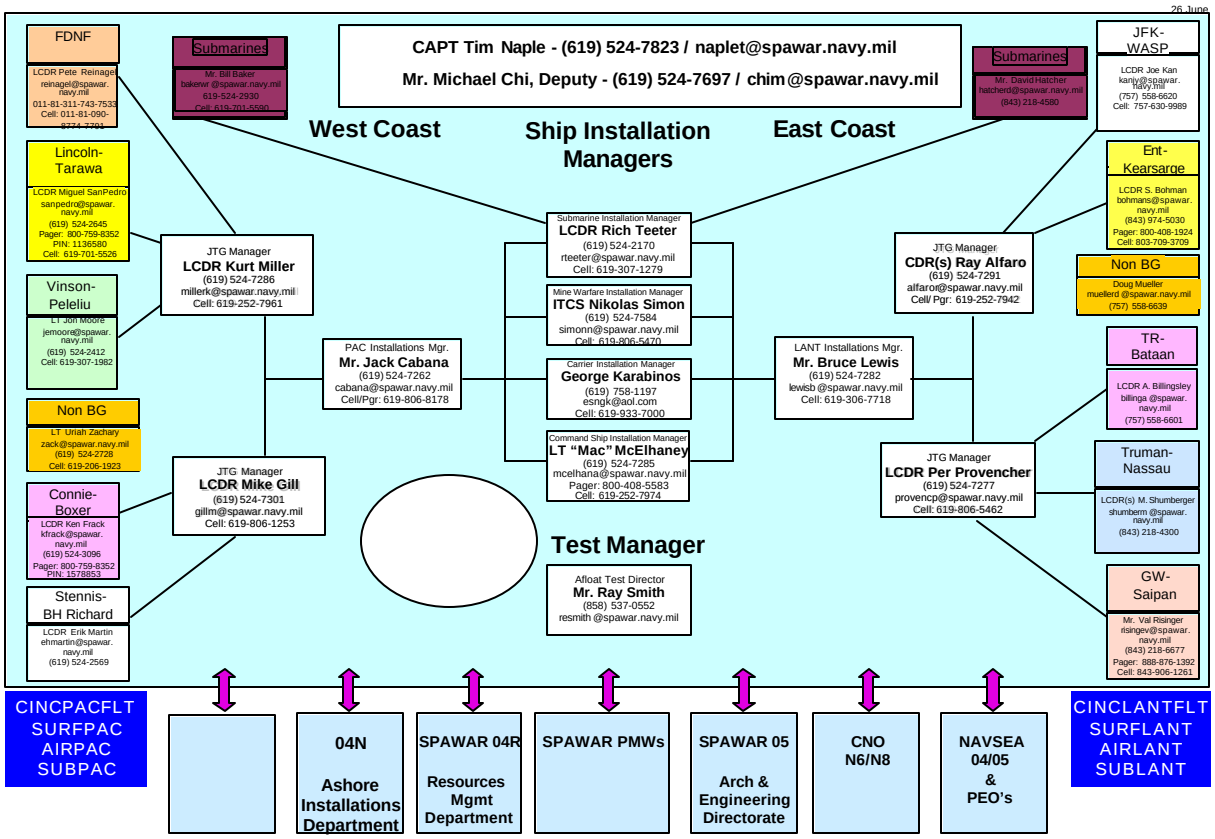
- **Web-based management tool**
- **Watchstander Jobs shown by functional area**
- **Trng Rqmts with links to descriptive data**
- **Track CNET and SYSCOM training**
- **Password protected**



http://c4iweb.spawar.navy.mil/04/ibft

*** Individual User IDs & passwords available through this address**

The SPAWAR person to inform regarding C4I training issues, specifically IBFT, is Bob Stanzione (04L), phone 858-537-0166, stanzirj@spawar.navy.mil. BFAOs need to be aware that this site exists and should make the staffs aware of this also. Requirements listed in the IBFT do not match the Surface Force Training Manual and do not attract as much attention as the Surface Force Training Manual.



PHD NSWC (Issues, C&L)

The C&L document provides an in depth review of the technical capabilities of a particular BF, in order to utilize the tactical data links to draw a coherent, consistent, shared air picture from the data gathered by individual units. It does not address the capabilities of the individual units except as they directly affect this data sharing and the synthesis of the picture. Sensor capabilities are not addressed; nor are data links other than TADIL A, C and J (Link 11, 4A and 16).

BFAOs must spend time becoming familiar with and eventually learning the concepts in this document. Your goal should be to become familiar enough to teach the executive summary and comfortably show individuals throughout the Chain of Command how to use the sections in the C&L document. For assistance, you can call Code 4L33, Dr. Gordon Whitnall's group for help and instruction.

The C&L has evolved into the cornerstone of the BFAO's efforts. It is a document that only up until a couple years ago did not exist. There are classified and unclassified versions and BFAOs should have each as a part of a toolbox from which to obtain knowledge, and use as a resource during the normal course of business. BFAOs are not a passive player in this venture. BFAOs, more than anyone, will interact with the ships crew to discuss or receive feedback on most any issue listed and unlisted. Your communication with the Code 4L33

personnel will in part hone the document real time. No issue brought up by those we work with is too insignificant for comment.

Code 4L33 uses the BFAO as a distributor of the document as well. Each BFAO and SE/PE will receive an e-mail indicating new sections of the document have been updated. These new portions are found almost immediately on the Secret Internet Protocol Router Network (SIPRNET) web site. For those who do not have SIPRNET capability, CD Roms can be made. However, they only offer a snapshot in time of the information available on SIPRNET. BFAOs simply send an e-mail to Code 4L33 indicating the amount of CDs they require and where they want them sent. Or, if they prefer and possess the proper security credentials, they can hand carry and deliver them. Code 4L33 is prompt and accommodating what ever needs to be done to get the word out. BFAOs should strive to ensure this information gets to the crew members that sit on the consoles specifically the Track Information Coordinators (TICs) or Track Supervisors (TRACK SUPS) as well as ship and BG staffs. More information can be found by contacting one of the points of contact listed at either the unclassified or classified PHD NSWC web sites.

Program Executive Officer (PEOs)

The PEOs work in conjunction with the SYSCOMs. The FLTCINCs will forward the deployment baseline configuration to the PEOs and SYSCOMs. A BFAO needs to understand that these different organizations acquire equipment and possess different projects and points of view. The BFAO will need to communicate with the PEOs and SYSCOMs regularly. Normally the PEO will be a senior government service member or a flag officer.

The task is to understand that acquisition is a stove-piped mentality and acquisition programs default to that same mentality. PEO phone numbers can be found in the appendix, however, future NAVSEA move to the Navy yard has the potential to change all numbers. It is best that the BFAOs and SEs/PEs stay in touch with the PEOs as a means to track changes to the baseline after D-24.

The dichotomy of the job comes into view when dealing with the PEOs. All BFAOs are assigned to echelon 4 commands and the PEOs are in an echelon 2 command. BFAOs are consistently bombarded with, “why should the PEO tell BFAOs what they are doing to fix interoperability problems especially since they are higher on the totem pole than us”. The best BFAOs can do is to use their influence with people already known inside and outside the confines of the PEO to get the answers. Any roadblocks should be immediately brought to the attention of the reporting chain NAVSEA 53. BFAOs are physically assigned to echelon 4 commands, but work directly for the same flag officer that they work for.

Phone lists are found on the NAVSEA intranet and can be downloaded from that site. NAVSEA 53 representative may download it or download it during a visit to Washington. On the whole, use NAVSEA 53 to help you open doors.

Take advantage of current NSWC project officers and support staff, including the Software Support Agency (SSA) and In-Service Engineering Activity (ISEA) assigned by the PEO to a particular program. Finally, work on a military level at any opportunity.

Program Managers (PMs)

Dealing with PMs can be contentious and rewarding. PMs are the leaders responsible for any given program. NAVSEA PMs work out of Washington DC, SPAWAR PMs work out of San Diego, California, NAVAIR out of Patuxent River, Maryland and MARCORPSYSCOM out of Quantico, Virginia. Each PM is dedicated to maintaining a positive presence for their current programs especially any NATO coalition, or congressionally monitored program. BFAOs must be sensitive to the PMs goals especially those that coincide with the BF's schedule designed to meet acquisition milestones. BFAOs must be cautious on delivering news, especially that which conflicts with the PMs goals. SEs/PEs have more opportunity to cross paths with the PMs but BFAOs should remain in the loop. They may relay program sensitivities with other BFAOs and relay sensitivities of the BG Commander back to the PM. The process requires BFAOs/PEs/SEs on the deck plates before project officers (PM representatives). BFAOs offer introductory assistance to both.

NAVSEA 53 conducts a frequent Interoperability Working Group (IWG) with PM representatives who are present to discuss particulars on any given planned installation. This is the perfect forum for the BFAO and does not require their presence to use. Issues should be voiced to NAVSEA 53 during the Port Hueneme/Dam Neck weekly BFEWG teleconference. NAVSEA 53 communicates with the PMs, as a group, so BFAO questions may become a lesson learned for future installs by different PMs.

The PMs are concerned with the BFI CCB process. They will complete or direct an assistant to complete the risk form. Once completed, the PM will sign and send out via e-mail. The BFAO will work with the PMs to help coordinate this process.

Units

A BFAO should take every opportunity to visit the ships in their BF. If possible, spend time with the ships daily. Know the ship’s routine and their issues. Stay in contact with the ship’s Commanding Officer, Combat Systems Officer (CSO), CSMO, operations officer, air operations officer, strike/anti-air warfare officer. E-mail is a must. Get copies of the e-mail addresses for each of these people. By default, BFAOs should spend time in Detection and Tracking (D&T) with the track coordinators/track supervisors in Combat Information Center (CIC), and observe the Tactical Action Officers (TAOs) doing their job. The ships' problems automatically become the BFAO's problems and it may not be interoperability related. Ships are looking for a belly-button that produces results. BFAOs have been that belly-button in the past and should strive to maintain that advantage for the future. BFAOs must offer fresh insight and provide as much information as reasonably possible.

Experienced BFAOs have learned that in order to maintain a good relationship with the ships, they must offer a product during each visit such as a D-30 notebook consisting of:

- Copy of the C4I N6 seminar briefs,
- Copies of the C&Ls,
- Copies of the active e-CCB items for your BF with hand scribbled notes of status,
- Names and numbers for NAVSEA points of contact,
- Briefs you prepare as a way to identify issues not realized by the staffs,
- Link 11, 16 notebooks,
- TADIL Training Study,
- Timeline of D-30 events for your BF.

While onboard the ships, a BFAO should help to ghost write messages, help with briefs and answer questions pertaining to the ships' baselines. The list is varied and open to conjecture. In order to succeed, the BFAO must maintain a presence that is not seen as only another friendly observer, but as one that is continually offering services not otherwise obtainable through any other program.

The BFAO will board the ship to gain a closer understanding of the ship's current configuration. The BFAO will in turn coordinate with PHD NSWC subject matter experts and ship class engineers to expedite the services needed to get the ship ready for deployment.

In Process Reviews (IPRs)

The IPRs, which occur quarterly, are concerned with any problems that may arise with regard to connectivity, integration, and program management. They also review "white papers" for proposed fixes for the fleet. The PHD NSWC Code 4L30 division manager distributes the agenda. BFAOs present review briefings on all accomplishments during that quarter. This brief is normally contractor prepared with BFAO input. A future expansion of this area may include an overview of all the successes from the BFAO/SE/PE team. Both coasts have ample opportunity to hone their particular sections. The majority of the information is taken from the weekly SITREPs. BFAOs provide the details that may not have been captured in the SITREP and should be able to speak for all coastal related accomplishments.

Video Tele-Conferences (VTCs)

VTCs should be used whenever feasible. The VTCs allow remote access and cost effective communications. These conferences provide an interactive collaborative environment, which enhances local support of the fleet. The BFAO attends many of these VTCs and uses this tool as a primary means of communication. SPAWAR conducts a bi-monthly C4I VTC on the first and third Tuesday of each month. BFAOs by virtue of dealing with the N6 are brought into this endeavor. The FDNF BFAO conducts a monthly VTC with CPF, C7F, CCGs, SPAWAR, NAVSEA 53, NAVSEA field activities, and others. The time is controlled by the FDNF BFAO but coordinated with all the players to ensure participation and attendance. Battle Force Information Center (BFIC) is the ideal venue for point to point VTCs, and NetMeeting. Dam Neck is poised to conduct classified and unclassified VTCs in the conference room adjacent to their secured office. Classified VTCs at Port Hueneme must be conducted in the building 445 VTC room. Building 445 VTCs must be planned and

scheduled in advance. BFAOs are strongly encouraged to continue communication via VTC while the BF is deployed. BFAOs should make this a priority to discuss with the staffs they service. Telecons are sometimes used as the substitute for VTC attendance. If this happens, make sure you have a copy of the script. Leading edge technology should be used to help solidify the BFAO relationship with the BG staff.

Battle Force Engineering Working Group (BFEWG) (Monday Phone Conferences)

The BFEWG is a weekly telephone conference that includes NSWC Port Hueneme, Dam Neck and San Diego, BFAOs, SEs, PEs, OSRs and NAVSEA 53.
It is an opportunity for the BFAO to communicate with NAVSEA 53 on the status of the BGs. The BFAO will discuss issues that NAVSEA may be having with the weekly SITREP, receive further NAVSEA direction, and benefit from information or events from other BGs. This conference is also used to relay issues that NAVSEA 53H may take to their workng groups. Interchange of ideas between NAVSEA, and East and West Coast players and a standardized knowledge base are the most notable products derived from this venue.