DEPARTMENT OF THE NAVY
SPACE AND NAVAL WARFARE SYSTEMS COMMAND
4301 PACIFIC HIGHWAY
SAN DIEGO, CA 92110-3127

16 October 2000

SPAWAR INSTRUCTION 4130.2

From: Commander, Space and Naval Warfare Systems Command

Subject: SPAWAR CONFIGURATION MANAGEMENT FOR C4ISR SYSTEMS

Encl: (1) SPAWAR Configuration Control Board Handbook

1. Purpose. To officially establish the overarching Space and Naval Warfare Systems Command Configuration Control Board (SPAWAR CCB) as a means of integrating and controlling SPAWAR-supported C4ISR system configurations.

2. Background. SPAWAR is responsible for the design, procurement, and delivery of fully integrated C4ISR systems for Battle Groups, new construction platforms, and shore sites. The SPAWAR Configuration Control Board (SPAWAR CCB) was started in June 1999 as one of the key responsibilities of SPAWAR 05 (Office of the Chief Engineer). The purpose of the SPAWAR CCB is to provide an overarching configuration management function and oversee the change management process for SPAWAR-delivered C4ISR systems. Guidance regarding PD/PMW configuration control is contained in SPAWARINST 4130.1A.

3. Action. SPAWAR Headquarters and its activities shall use the guidance provided in enclosure (1) for change management for SPAWAR C4ISR systems. A hard copy can be obtained from SPAWAR 051 or in software from http://spawarsupport.org/config.

4 Responsibilities. SPAWAR 05 shall maintain enclosure 1).

K. D. SLAGHT
By direction

SPAWAR List 4

SNDL PART II:
FKQ10 (SPAWAR Activities)

SPAWAR

Configuration Control Board Handbook

Version 1.3b
21 August 2000

DEPARTMENT OF THE NAVY
SPACE AND NAVAL WARFARE SYSTEMS COMMAND
4301 PACIFIC HIGHWAY
SAN DIEGO, CA 92110–3127

28 February 2000

From: SPAWAR Chief Engineer (05)
To: Distribution

Subject: PROMULGATION OF SPAWAR CCB HANDBOOK

The SPAWAR Configuration Control Board (CCB) Handbook is hereby promulgated. This is a dynamic document and shall be modified as necessary to improve the effectiveness of the process or as the implementing directives change.

2. SPAWAR 051 is responsible for updating this document. Soft copy versions are available at the CCB Website at http://spawarsupport.org/config.

3. The SPAWAR CCB Handbook shall be the definitive guide for configuration management policies and procedures for the SPAWAR claimancy.

K. D. SLAGHT
Rear Admiral, U.S. Navy

Distribution: List 3

28 July 2000

From: SPAWAR Systems Engineer *(051)*
To: Distribution

Ref: (a) RADM Slaght Memorandum, 28 Feb 2000, Promulgation of SPAWAR CCB Handbook

Subject VERSION 1.3 UPDATE OF SPAWAR CCB HANDBOOK

1 As per direction contained in reference (a), this Version 1.3 update to the SPAWAR Configuration Control Board (CCB) Handbook is hereby promulgated. The SPAWAR CCB Handbook is a dynamic document and shall be modified as necessary to improve the effectiveness of the process or as implementing directives change.

2. As the SPAWAR Systems Engineer, SPAWAR 051 is responsible for updating this document. Soft copy versions are available at the SPAWAR CCB Website at http://spawarsupport.org/config.

3 Document Release History: Five previous versions of the SPAWAR CCB Handbook have been released since the inception of the SPAWAR CCB in June 1999. The release history of this document is as follows (contact your SPAWAR CCB change manager for archive copies if desired):

a. Version 1.0 – released 4 October 1999 (draft working copy)
b. Version 1.1 – released 7 January 2000 (draft working copy)
c. Version 1.2 – released 1 February 2000
d Version 1.2a – released 20 March 2000
e. Version 1.2b – released 9 May 2000
f. Version 1.3 (current) – released 28 July 2000

4. The SPAWAR CCB Handbook is the definitive guide for configuration management policies and procedures for SPAWAR at the enterprise level. Additional guidance regarding PD/PMW CM responsibilities is contained in SPAWAR Instruction 4130.1A which can be found on the SPAWAR Knowledge Center website page.

R. R. Senter, Jr.
Captain, U.S. Navy

Distribution List 3

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APPENDICES

1 INTRODUCTION

1.1 Purpose

The purpose of this SPAWAR Configuration Control Board (SPAWAR CCB) Handbook is to establish a standardized set of procedures for all SPAWAR activities to use in the management, reporting, and documentation of changes to Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems.

Top-level Navy and joint vision documents, policies, and doctrine have established the goal for a single C4ISR architecture. To meet this goal, SPAWAR has aggressively insured the integration of its system into the overall C4ISR architecture. The integration of SPAWAR's systems into this single C4ISR architecture is being accomplished at 2 levels. First, SPAWAR has transferred installation responsibility to a central organizational component, SPAWAR 04, to provide a single, coordinated installation effort. Second, the integration of these various program components and/or functions is being accomplished on Defense Information Infrastructure Common Operating Environment (DII COE) via the command's Horizontal Integration development initiative.

In order to maintain control over the configuration of the SPAWAR elements of this single C4ISR architecture, SPAWAR has established a Configuration Control Board (CCB). SPAWAR instruction 4730.1A provides the authority for the formation and operation of this board.

1.2 Objective

The objective of the SPAWAR CCB Handbook is to provide guidance in the working processes involving C4ISR system change management within the SPAWAR claimancy. This handbook provides information on the basic SPAWAR CCB process, the organizational elements involved in SPAWAR change management, and the specific procedures for submitting change information to the SPAWAR CCB.

1.3 Background

SPAWAR is responsible for designing, procuring, integrating, delivering, installing, testing, and supporting C4ISR systems for Battle Groups (BGs), shore sites, new construction (SCN) platforms, and other operational commands. SPAWAR's scope of responsibilities involve:

(a) Establish and manage each C4ISR system configuration baseline for BGs, shore sites, SCN platforms, and other operational commands.

(b) Establish and manage the design and installation of upgrades or new systems in each BG, shore site, SCN platform, or other operational command.

(c) Coordinate procurement and technology developments of C4ISR system product lines within SPAWAR.

(d) Provide BGs, shore sites, and SCN platforms with an effective C4ISR product package through delivery and sustainment.

1.4 Process Overview

This section provides a quick overview of the SPAWAR CCB process. To fully understand this process it is important for the reader to carefully review Section 2. The Change Request (CR) process consists of the following major steps.

1. Determine if the change requirement is a result of a casualty or operational failure in which case the program office is obligated to restore the system to operation as expeditiously as possible (see paragraph 1.5).
2. For upgrades or enhancements, a change requirement must be reviewed by the SPAWAR CCB to determine its impact on SCN platforms, BGs, shore sites, or other operational commands.
3. CR is drafted on the SPAWAR web site (http://spawarsupport.org/config) and submitted for routing to signatories.

The CR is routed to the signatories for "Approve" or "Disapprove" recommendations prior to review by the SPAWAR CCB. (Reference the Signature Form - Figure 2-7).

4. Signatories who recommend disapproval of the CR must describe the issue(s), which led to a dissenting opinion. An explanation must be appended explaining the rationale for disapproval and providing recommendations for corrective action. (Reference the Exception Page (EP) form - Figure 2-8).
5. A standardized CR briefing package will be developed for presentation to the SPAWAR CCB.
6. Approved CRs or CRs with dissenting opinions (accompanied by optional technical approaches) are scheduled on the SPAWAR CCB agenda for briefing. If an alternative or optional approach is selected by the SPAWAR CCB as the recommended approach, additional review will be required.
7. CRs, which have been approved by the SPAWAR CCB, are then reviewed for submission to the Battle Force Integrated Configuration Control Board (BFI CCB). In cases where a submission is required, then a BFI CCB risk assessment form must be filled out on the NAVSEA Configuration Management (CM) website.

   (URL: https://csmis.rgesvc.com/login/login.html)
8. Once the BFI CCB approves the change (or in cases where the BFI CCB does not have to be notified) the change may be implemented.

1.5 Response to Operational Failure

It is important to emphasize that the SPAWAR CCB is not intended to impede any requirement to respond to a system casualty or an operational failure. As described more completely in Section 2, when a CASREP or a significant trouble report is received, it is the responsibility of the program office to take whatever steps are necessary to restore a system to a safe, reliable operating configuration.

This may involve making a configuration change of some kind such as a software patch, a hardware swap, or an operating system upgrade. If it is the judgment of the program office that the configuration must be changed in order to restore the operation of a system or to prevent an operational failure, then the effort to correct the problem should be initiated as soon as possible. The

SPAWAR CCB should be informed regarding the change at the same time the response effort is underway or immediately upon completion of the change.

1.6 Document Overview

The SPAWAR Configuration Control Handbook consists of seven (7) major sections and three (3) appendices. The document is organized as follows:

Section 1 – Introduction

Section 2 – SPAWAR CCB Concepts

Section 3 – SPAWAR CCB Responsibilities

Section 4 – The D-30 Process and Ring Chart Management

Section 5 – Submission of CRs

Section 6 – SPAWAR Software Version Release Policy

Section 7 – Signature Page Guidance

2 SPAWAR CCB CONCEPTS

The fundamental responsibility of the SPAWAR CCB is to control the configuration of SPAWAR's baseline C4ISR system designs. This control is accomplished through the use of key design data recorded as "Ring Charts" (also known as Functional Interface Diagrams). Section 4 describes Ring Charts in more detail, however, the content of a Ring Chart specifies:

- System Identification Nomenclature
- Software Version Number
- Connectivity
- Interface Design Document number and revision and/or Interface Control Document number and revision

Figure 2-1 depicts a segment from a Ring Chart, which provides system nomenclature, and information about software versions, connectivity, and interface documentation.

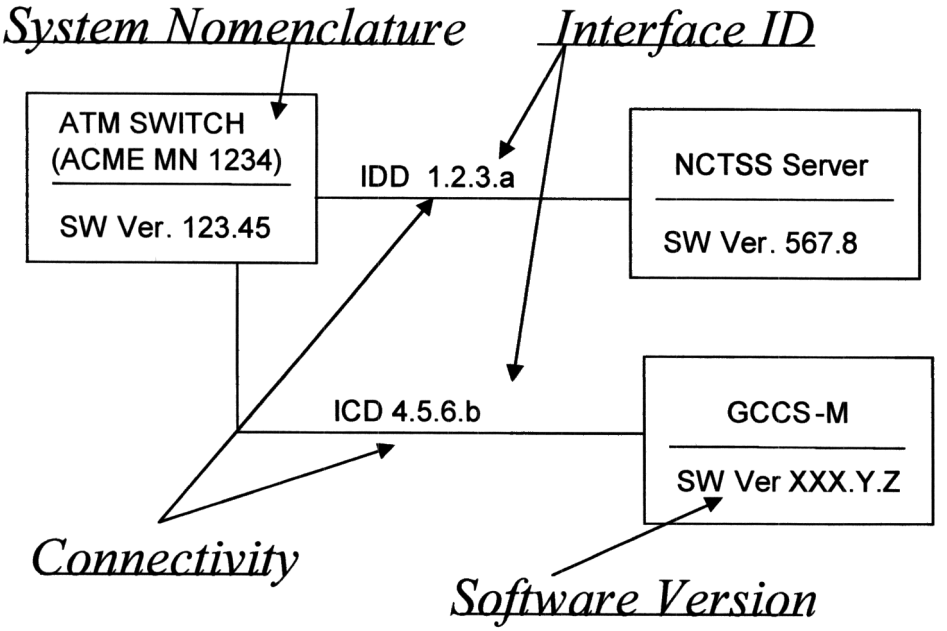


FIGURE 2-1 STANDARD RING CHART INFORMATION ELEMENTS

Once the Ring Chart information is "baselined" through the SPAWAR design review process, the Ring Chart becomes the Configuration Item (CI), which is managed via the processing of CRs. Even though a complete set of Ring Charts is not currently available, a review process for changes to all SPAWAR systems is required to ensure the overall integrity of the SPAWAR C4ISR product.

2.1 The SPAWAR CCB Process

The SPAWAR CCB process consists of a flow of information designed to process CRs, which are intended to enhance or improve SPAWAR-delivered C4ISR systems. The changes that the SPAWAR CCB will review vary in scope from those which are considered somewhat routine from an engineering perspective (i.e., software version changes, upgrades to hardware, minor interface

changes), to changes, which have a larger impact from a system configuration, capability logistics support, or training perspective.

Change proposals or requests are submitted using a CR form which is available on the SPAWAR CCB website at http://spawarsupport.org/config. Section 5 of this document describes the use of the CR form in more detail. The remainder of this section will describe the flow of change information throughout the SPAWAR CCB organization.

As illustrated in Figure 2-2, all changes originate within the Program Management offices (PMWs) in response to trouble reports or CASREPS, or as a result of Fleet requests, design changes, budget changes, technology improvements, or end-of-life cycle component replacements. This overview depicts six basic phases to the SPAWAR CCB process, which are:

1. Change Analysis
2. System Restoration
3. CR Pre-Processing
4. CR Review
5. SPAWAR CCB Processing
6. Reclama Processing
7. BFI CCB Processing & Change Implementation

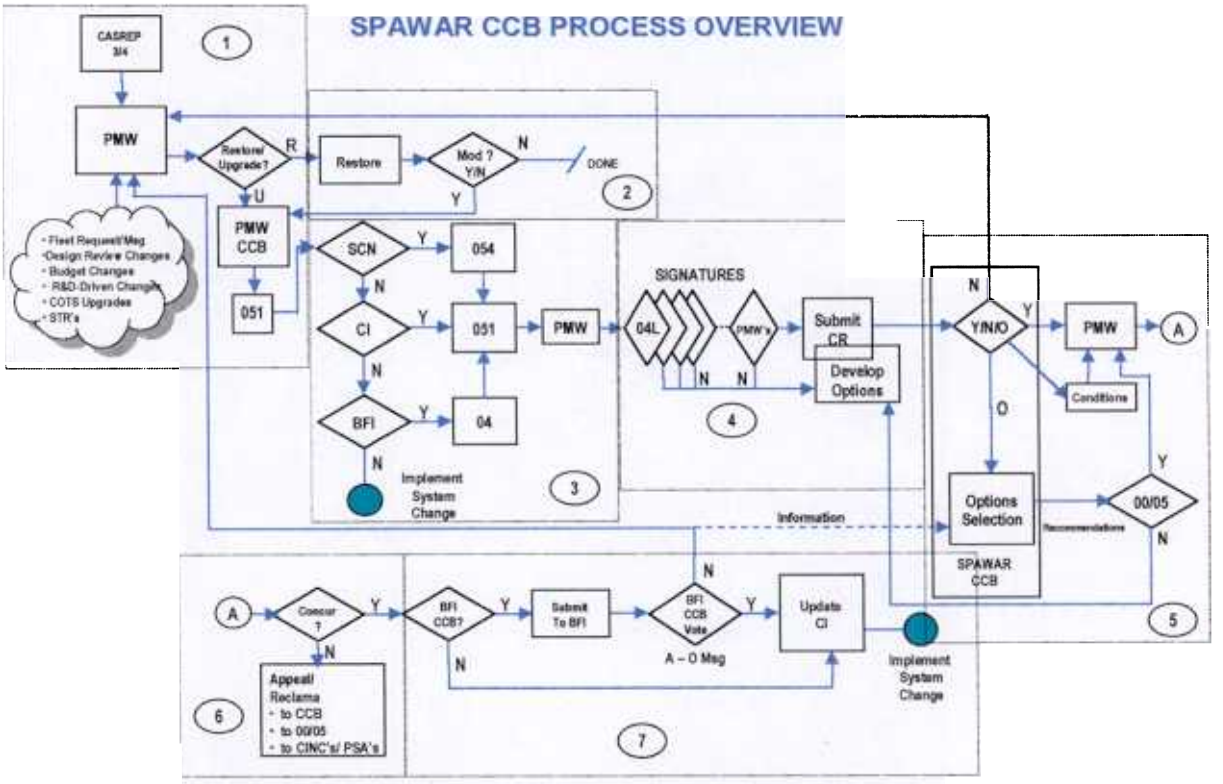


FIGURE 2-2 OVERVIEW OF THE SPAWAR CCB PROCESS

2.1.1 Change Analysis (Phase 1)

The first phase of SPAWAR's CCB process is the change analysis phase. This phase starts at the PMW, which has received information indicating a requirement to change a baselined system.

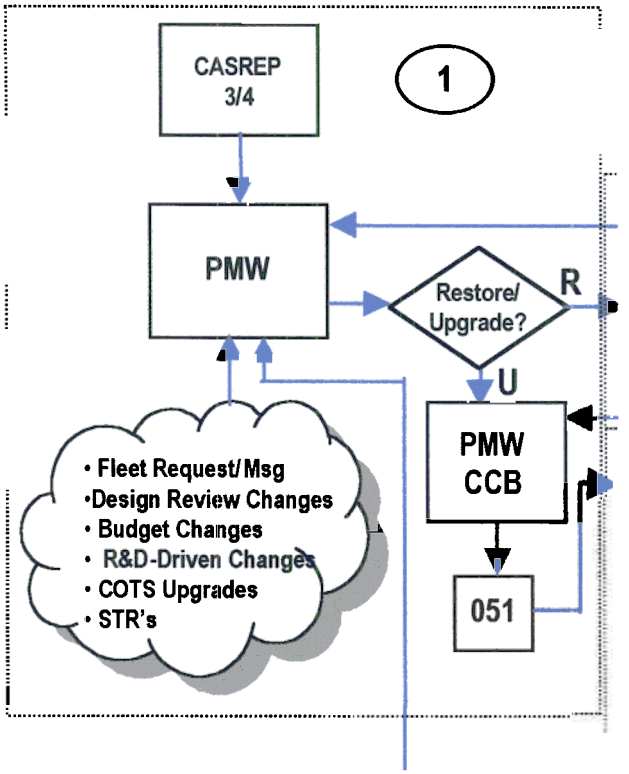


FIGURE 2-3 SPAWAR CCB CHANGE ANALYSIS

The change requirement may be the result of inputs from a variety of sources as illustrated in Figure 2-3. The change analysis phase consists of four (4) basic steps:

1. The PMW reviews information (CASREPs, fleet requests, etc.) to determine if a change is required.
2. In the event of a CASREP the program office is required to restore the system to an operational state. In some cases this may lead to a configuration change (i.e. software patch or upgrade). In the case of a CASREP-driven system restoration proceed to Section 2.1.2.
3. If the change requirement is determined to be an upgrade or functional enhancement to the existing system configuration, then the change is reviewed by the PMW's own CM.
4. Proceed to process Phase 3.

2.1.2 Post-Operational Failure and System Restoration (Phase 2)

The second phase of the SPAWAR CCB process is the system restoration phase. In cases where a system requires restoration to its original operating configuration, the primary obligation of the program management office is to accomplish the "fix" or restoration of the system to operating condition. In certain instances, however (particularly in the case of a software "patch" or software "repair") it may be necessary to actually change the software configuration of the system by changing components of the computer programs or applications in the system. The program

management office is still obligated to restore the system to operating status, however, if software configuration changes have been installed to accomplish the restoration, the SPAWAR CCB must be informed.

Figure 2-4 illustrates the primary steps in system restoration.

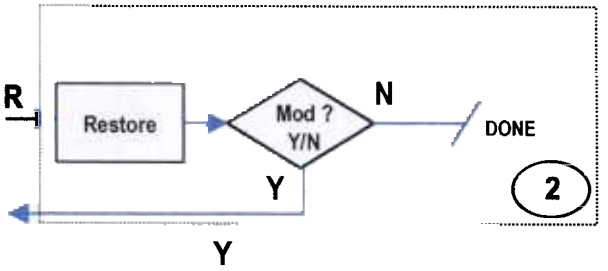


FIGURE 2-4 SYSTEM RESTORATION

The system restoration phase consists of:

1. Restoring the system to operating status.
2. Determining if a modification to the system was required (particularly to software programs) in order to restore the system to operation.
3. In cases where the configuration has been modified, reporting the system configuration changes to the cognizant program management office. Note that a CR must be submitted IAW the CCB process prior to the next CCB meeting.
4. Proceed to Phase 3.

2.1.3 CR Pre-Processing (Phase 3)

In order to process a CR properly, it is important to determine the impact of the change on baselined system designs. This third phase of the CCB process involves determining if the change applies to SCN platforms (such as LPD-17 or CVN-76), BGs, other Navy platforms (patrol craft, strategic submarines, etc.), or shore sites. It is also important to determine if the change will require the concurrence of the BFI CCB.

Figure 2-5 illustrates the CR "Pre-Processing" phase of the SPAWAR CCB process.

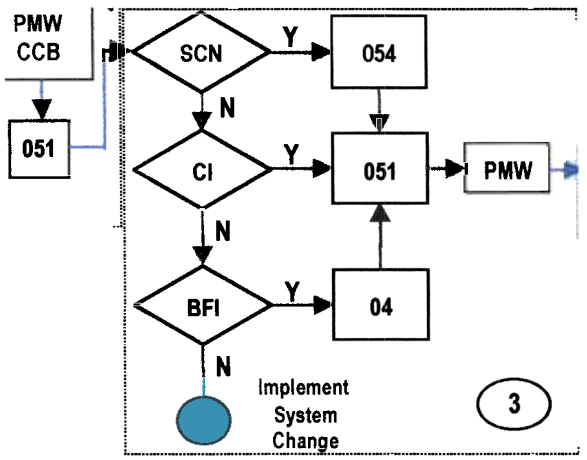


FIGURE 2-5 SPAWAR CCB CR PRE-PROCESSING

At this point it is the responsibility of the PMWs to determine the nature of the change:

1. The first step in this phase is a decision point working with 051 and 054 personnel, to determine if the change affects SCN platforms. If the change does impact one or more of the SCN platforms the change is submitted to the appropriate SPAWAR 054 SCN platform representative.
   a) The 054 platform representative will assist the PMWs in reviewing Functional Interface Diagrams (FIDs) to determine whose signatures are required on the CR.
   b) The 054 platform representative will make a recommendation to either approve or disapprove and forward approved CRs to 051.
   c) The 051 representative will review Ring Charts and the signature list on the CRs and assist the PMWs in initiating the signature process.
2. If the change is not an SCN change, then the CIs (Ring Charts) are reviewed to determine if the change affects Level 2 Ring Charts. If so, the change is submitted to 051.
   a) The 051 representative will assist the PMWs in reviewing the change requirement and the Level 2 Ring Charts to determine whose signatures are required on the CR.
   b) The 051 representative will make a recommendation to either approve or disapprove and assist the PMWs in initiating the CR preparation and signature process.
3. If the change does not affect Level 2 Ring Charts, there is still the possibility that the change will have to be reported to the BFI CCB. The BFI CCB process is described on the NAVSEA BFI CCB website (Reference...). A review of the change requirement by SPAWAR 04F will assist the program manager in determining if a BFI CCB submission is required.
   a) The 04F representative will assist the PMWs in determining whose signatures are required on the CR.
   b) The 04F representative will make a recommendation to either approve or disapprove and forward approved CRs to 051.
   c) The 051 representative will review Ring Charts and the signature list on the CRs and assist the PMWs in initiating the signature process.
4. If it is ultimately determined that the change does not affect SCN design data, BG or shore site Level 2 Ring Charts, or BFI CCB requirements, then the PMWs should work with 04 to implement the change. Otherwise, the PMWs must submit a formal CR to the SPAWAR CCB and begin the CR review process.
5. Proceed to 2.1.4.

2.1.4 CR Review

The review of the CR is accomplished by technical and programmatic representatives from the key organizational components of SPAWAR 04, SPAWAR 05, and the affected PMWs organizations (PMWs with interfaces to the system being changed). Figure 2-6 illustrates the CR Review phase within the SPAWAR CCB process.

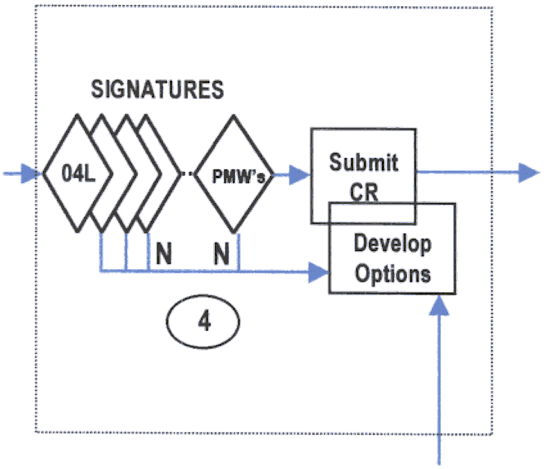


FIGURE 2-6 SPAWAR CCB CR REVIEW

1. The CR Review phase involves routing a Signature page (Figure 2-7)to a technical review group within SPAWAR. Initially, SPAWAR 051 will review the change requirement and advise the originating PMWs as to who exactly should review and sign the CR. The PMWs will then route the CR to appropriate signatories for review.

   Note: Detailed signature sheet guidance is provided in section 7 of this document.

2. Dissenting opinions from representatives who have an issue with the CR will be recorded on an EP (Figure 2-8). Reviewers who indicate disapproval must provide a justification on the EP. In addition, the reviewer must collaborate with the PMWs to develop recommendations and provide them on the EP as well.

3. When completed, the signature page and accompanying exceptions are forwarded to the SPAWAR CCB. Along with the signature page, information about alternatives or options is forwarded to the SPAWAR CCB from those who disagreed with the change proposal and are offering an option or alternative approach.

4. Proceed to 2.1.5. Figure 2-7 illustrates the format of a signature page. The process of routing the signature page and collecting "signatures" will eventually be supported electronically by the SPAWAR Website and its associated email-based communications functions.

SPAWAR CCB CHANGE REQUEST SIGNATURE PAGE

Date_____ **CR** _____
System Nomenclature:_____
PMW:_____
Originator:_____
Change Title: _____
Hamre ltr Compliance: Yes / No/NA
Y2K tracking number:_____ **Change Type: H/W**_____**S/W**_____**Both**_____
Y2K correction: Yes / No **TCD Bust:** Yes / No **FBC Change:** Yes / No
Signature table:

		Signature Required	Approve	Disapprove	Print Name/Signature	Date
System Engineer SPAWAR 051 *						
SPAWAR 051	Shore					
PMW						
PMW						
PMW						
SCN Platform Manager						
Security PMW 161 *						
LAN Connectivity PMW 158						
Platform Managers SSC Charleston						
Logistics Management SPAWAR 04L *						
Afloat Installations SPAWAR 04F						
Shore Installations SPAWAR 04N						
Resources Management SPAWAR 04R						
Plans & Budget SPAWAR 052						
Systems Integration & Test SPAWAR 053 *						
NCTC						
CCB Chair (051) Approval *						

*** Minimum Required Signatures**
Comments:

FIGURE 2-7 SPAWAR CR SIGNATURE PAGE

CR REVIEWER EXCEPTION SUMMARY

CR NO. _____

Reviewer Name _____ **Org.** _____

Summary of Objections to CR:

Recommendations to ensure acceptability of CR:

FIGURE 2-8 EXCEPTION PAGE

2.1.5 SPAWAR CCB Processing

In the fifth phase of SPAWAR CCB processing, the formal SPAWAR CCB convenes to review CRs. The SPAWAR CCB meets on a routine basis (currently every two (2) weeks) to adjudicate CRs, which have been collected in the interim. Each CR will be represented to the SPAWAR CCB with its signature status and the option descriptions from persons who disagree with the change. In addition, each CR will be represented by the originating PMWs and briefed to the SPAWAR CCB.

Figure 2-9 illustrates the actual SPAWAR CCB processing of the CR.

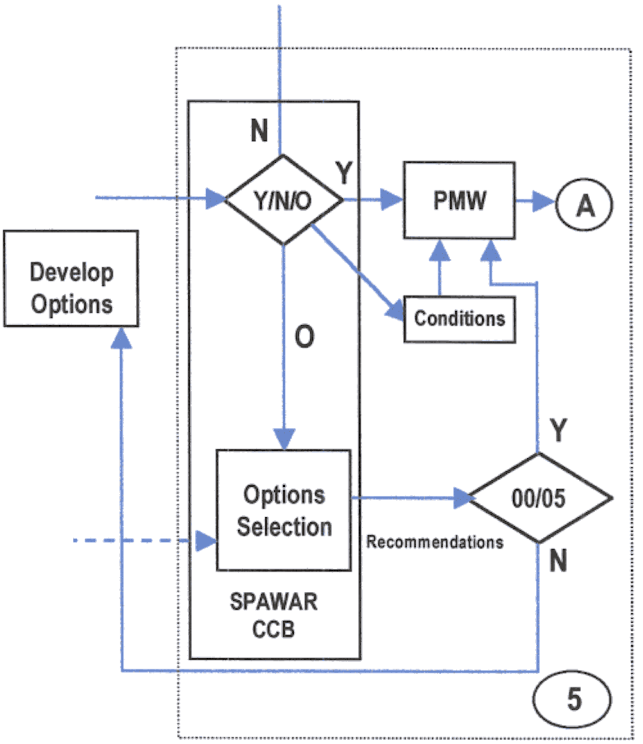


FIGURE 2-9 SPAWAR CCB REVIEW

The SPAWAR CCB processing consists of the following steps:

1. The SPAWAR CCB meets to adjudicate CRs and decides if:
   a. The CR is approved as originally presented. If so, the CR is approved, the PMWs are notified, and the final phase of processing begins.
   b. The CR is approved *with conditions*. In this case, a CR may be approved to be implemented at a certain date or with certain certification or testing constraints. In any event, the PMWs are notified of the approval and the conditions that the SPAWAR CCB has imposed upon the change, and the PMWs can begin the final phase of processing.
   c. The CR is not approved as originally presented, however, one of the options is selected by the SPAWAR CCB as the recommended option. In this case, The SPAWAR CCB forwards the recommendation concerning these options to SPAWAR 05 (the Chief Engineer) and/or SPAWAR 00 (the Commanding Officer) for discussion.
   d. The CR is disapproved. In this case, the disapproval decision is forwarded to the PMWs for rework, review, or to initiate any reclama or appeal process the PMWs wishes to undertake.
2. In cases where a recommendation to select an option or an alternative approach has been forwarded to SPAWAR 05 or SPAWAR 00 an additional decision process is involved. The discussions between the PMWs, the SPAWAR CCB, and SPAWAR 00/05 may either yield a decision to pursue the recommended option or to review other options for their suitability. As illustrated in Figure 2-7 this decision point yields either an agreement to adopt the

recommendation, or a decision to reevaluate the options and resubmit the option package to the SPAWAR CCB.

2.1.6 Reclama Processing

Figure 2-10 illustrates the phase of CR processing in which a program office may attempt to appeal or initiate a reclama proceeding to restore the approval of a CR. Basically this is a single-step process where the program office, in cases where the CCB decision is one with which they do not concur, can appeal again to the CCB, the Chief Engineer (SPAWAR 05) or to the Commanding Officer. The PMW's may also communicate with the CINC's or PSA's to secure waivers to any guidance, which may be preventing the SPAWAR CCB from approving the original CR.

In cases where the PMWs concur with the SPAWAR CCB's decision then proceed to Section 2.1.7.

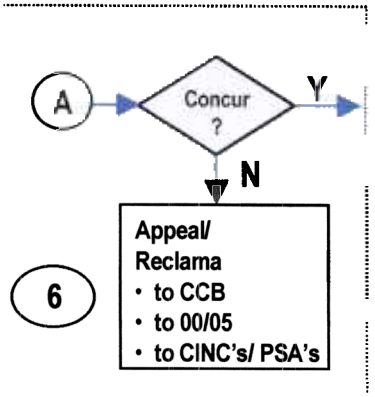


FIGURE 2-10 RECLAMA PROCESSING

2.1.7 BFI CCB Processing & Change Implementation

The final phase of the SPAWAR CCB process (as illustrated in Figure 2-11) is the BFI CCB processing and Change Implementation phase. As indicated in the illustration, the final hurdle in change approval is actually outside the SPAWAR command in the NAVSEA-administered, BFI CCB.

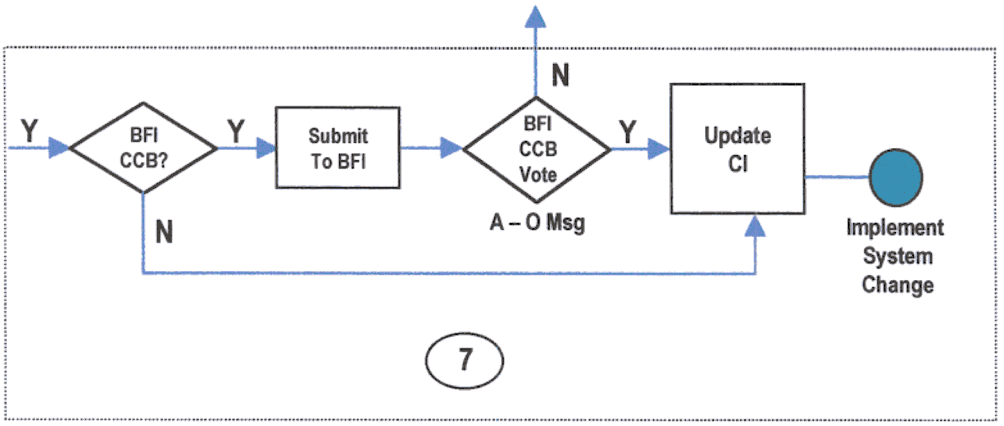


FIGURE 2-11 BFI CCB PROCESSING & CHANGE IMPLEMENTATION

The final phase of the SPAWAR CCB process consists of the following steps:

1. When the PMWs receive the decision of the SPAWAR CCB, the constraints or conditions indicated by the SPAWAR CCB are reviewed. If the conditions attached to the CR by the SPAWAR CCB are considered unacceptable or undesirable, then the PMWs may initiate an appeal or reclama process starting the Chief Engineer (SPAWAR 05) and/or the Commanding Officer (SPAWAR 00).
2. If the PMWs concur with the decision of the SPAWAR CCB, then the Change must be reviewed for possible submission to the BFI CCB for final approval. If it is determined, via a review of the CINC lists for mission critical and thin-line systems, that a BFI CCB submission is required, then the PMWs must initiate the change process with the BFI CCB through the use of the NAVSEA administered risk assessment process.
3. If the BFI CCB returns a negative decision regarding the CR, then the PMW's-SPAWAR own CM organization will review the decision to rework the change or appeal the decision.
4. If a positive decision is rendered by the BFI CCB, the PMWs may update the CI and implement the change.

2.1.8 Amending a CR to Add or Delete Platforms or Sites

There are times when there is a need to amend an existing CR. Specifically, a CR lists the sites or platforms that will receive the change, and there is often a requirement to change this list. In these cases, the existing CR should be amended.

An abbreviated process is provided for this specific type of amendment. In these cases, the CR, along with the list of new platforms and/or sites, will be sent to the original signatories. Each signatory will be asked to review the CR and determine if the change to the new list is acceptable. If all signatories agree (as indicated by a new signature page) then the amended CR will submitted to the appropriate Change Coordinator to be closed. The amendment does have to be reviewed for possible submission to the BFI CCB. See section 2.1.7 to identify the steps required to complete the BFI CCB review process.

3 SPAWAR CCB RESPONSIBILITIES

3.1 SPAWAR CCB Responsibilities for Fleet Modernization Program and Shore Changes

The SPAWAR CCB process is intended to assure that the integrity of SPAWAR's integrated systems are maintained throughout the system design and installation process. Although various CM efforts are underway within each Program Directorate (PD), the SPAWAR CCB will provide a forum for the broadest possible cross-section of SPAWAR engineering representation in an effort to assess the impact of changes to integrated SPAWAR designs and implementation plans.

The following subsections summarize the responsibilities of the various members of the SPAWAR CCB. The organization of the SPAWAR CCB is illustrated in Figure 3-1.

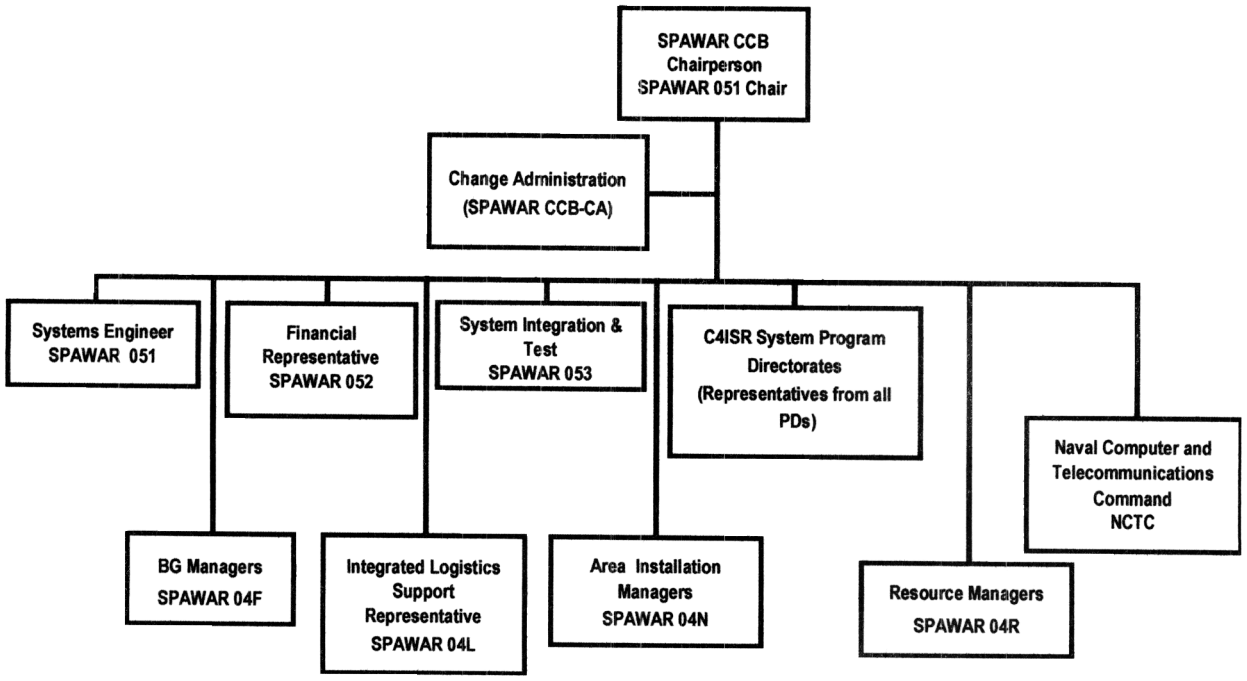


FIGURE 3-1 SPAWAR CCB ORGANIZATION

3.1.1 SPAWAR CCB Chairperson.

SPAWAR 051 shall chair the SPAWAR CCB. The SPAWAR CCB Chairperson shall:

- Convene and chair all SPAWAR CCB Meetings.
- Ensure that the review of proposed changes is properly coordinated among all involved parties.
- Act as the final authority for the approval, disapproval, or deferral of a proposed change.
- Review CRs and submit if appropriate to SPAWAR Headquarters for referral to other system commands.
- Direct the originators of baseline documentation to incorporate approved changes.

- Communicate routinely with the membership of the SPAWAR CCB.

3.1.2 SPAWAR CCB Change Administrator.

The SPAWAR CCB Change Administrator will provide CR staffing support for SPAWAR 051. The SPAWAR CCB CA shall:

- Coordinate the evaluation and processing of all changes submitted to the SPAWAR CCB.
- Schedule, participate in, and document the proceedings and determinations of SPAWAR CCB Meetings.
- Update and maintain the web-based SPAWAR CCB CR system to reflect the most current status of CRs in progress.

3.1.3 SPAWAR 051 Systems Engineer

The SPAWAR 051 Systems Engineer is responsible for the overall SPAWAR C4ISR baseline architecture for BGs shore sites, and SCN platforms. The SPAWAR 051 Systems Engineer shall:

Develop, maintain, and issue a standardized C4ISR System baseline configuration data for each BG and shore site.

- Develop the direction for the SPAWAR CCB, and ensure the direction of the SPAWAR CCB is implemented.
- Develop and submit technically accurate and complete CRs.
- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.

3.1.4 SPAWAR 052 Financial Representative.

The SPAWAR 052 Financial Representative is responsible for the accountability of appropriated funding for SPAWAR's efforts in support of BG and shore site design and installation requirements. The SPAWAR 052 Financial Representative shall:

- Review CRs for financial impact.
- Participate in SPAWAR CCB Meetings as a voting member.
- Coordinate funding actions within SPAWAR as a result of change activity.

3.1.5 SPAWAR 053 System Integration and Test Director.

The SPAWAR 053 System Integration and Test Director is responsible for the testing and certification of integrated, Y2K-compliant systems and the oversight of change management for certified systems. The 053 representative to the SPAWAR CCB shall:

Develop, maintain, and issue a standardized C4ISR System baseline configuration data for each Y2K-compliant system.

- Review CRs for Y2K certified systems.

- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings a voting member.

3.1.6 SPAWAR 04F BG Managers.

SPAWAR BG managers are assigned by SPAWAR to integrate all or part of a BG's C4ISR System. SPAWAR BG managers shall:

- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.
- Ensure the direction of the SPAWAR CCB is implemented

3.1.7 SPAWAR 04L Integrated Logistics Support Representative

The SPAWAR 04L Integrated Logistics Support Representative provides the Command's perspective on the logistics posture and suitability of the proposed change. The SPAWAR 04L Integrated Logistics Support Representative shall:

- Participate SPAWAR CCB meetings as a voting member.
- Assess the Integrated Logistics Support impact of proposed changes.
- Ensure the direction of the SPAWAR CCB is implemented.

3.1.8 SPAWAR 04N Regional Installation Managers

SPAWAR Regional Installation Managers are assigned by SPAWAR to integrate all or part of a shore site's C4ISR system. SPAWAR Regional Installation Managers shall:

Prepare and forward CRs for shore site configurations.

- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.
- Ensure the direction of the SPAWAR CCB is implemented

3.1.9 SPAWAR 04R Resources Management

SPAWAR Resources Management Division budgets and executes the SPAWAR OPN(I) Budget. This includes allocating OPN(I) dollars to SPAWAR System Centers and various planning yards to fund the installation of C4ISR systems and associated advanced planning efforts. The SPAWAR 04R representative to the SPAWAR CCB shall:

- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.
- Ensure the direction of the SPAWAR CCB is implemented

3.1.10 C4ISR PDs

C4ISR System PDs are responsible for the management of programs to develop and install specific C4ISR systems. The PD representatives to the SPAWAR CCB shall:

- Prepare and forward CRs for shore site and FMP configurations.
- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.
- Ensure the direction of the SPAWAR CCB is implemented

3.1.11 Naval Computer and Telecommunications Command.

The Naval Computer and Telecommunication Command (NCTC) is responsible for Network Operations Center (NOC) systems ashore as well as other computer and telecommunications systems. The NCTC representative to the SPAWAR CCB shall:

- Develop and submit technically accurate and complete CRs for shore site configurations, in accordance with guidance from the SPAWAR CCB.
- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Participate in SPAWAR CCB meetings as a voting member.

3.1.12 C4ISR System Program Managers

The C4ISR System Program Managers represent the program offices within SPAWAR that have technical and programmatic responsibility for the constituent components of afloat and ashore C4ISR Systems. The C4ISR System Program Managers shall:

- Review and approve Level 3 drawing data and other Critical Design Review (CDR) information representing BG or shore site designs
- Develop and submit technically accurate and complete CRs, in accordance with guidance from the SPAWAR CCB.
- Conduct a thorough review of all change documentation and provide comments that address the overall impact of the proposed change.
- Identify a single CM focal point to review and verify change proposals, and other key CM issues.
- Participate in SPAWAR CCB meetings to present CRs to the SPAWAR CCB.
- Ensure the direction of the SPAWAR CCB is implemented.

4 The D-30 Process and Ring Chart Management

This section describes SPAWAR's participation in the BG D-30 process and the SPAWAR concept of using Ring Charts as the primary CI for managing C4ISR system configurations.

4.1 The D-30 Process

For BGs in particular, the process of managing the development and installation cycle of each BG has been designated as the "D-30 Process." The term "D-30" refers to a 30 month timeline consisting of milestones which must be met in the design, development, implementation, installation, and testing of integrated C4ISR systems for a specific BG. For example, if a BG featuring the USS Truman was scheduled to deploy in January 2002, the D-30 process would start in July of 1999. The following Figure 4-1 illustrates the SPAWAR participation in the D-30 process.

SPAWAR Organizational Component	KEY D-30 PROCESS PRODUCTS & EVENTS							
	D-30	D-28	D-27	D-24	D-22	D-19	D-16	D-6
051		• IBRs • IBR Message	•IPR • Level 1 Ring Charts = Functionals	• BRB (CIM approval of baseline) • Level 2 Ring Charts = FIDs		• SE for D-19 Conference		
052	• Out year Funded Work Plan							
053					• SIE	• DEP		
04			• JCF		• Level 5 RCs = SARs • Ship Checks • ILS	• Level 5 RCs = SIDs • D-19 Conference	• Installation Lockin • Integrated Test plan	• Final Test Report
PMW's(and field activities)				• Level 3 Ring Charts = Sys Overview & SW Load Plans	• Level 4 Ring Charts = ICDs			
Ring Chart Metrics (work years, bandwidth, data rate, proc. speed)			• Early Fleet Input	• Contract with Fleet	• Test plan development		• Reduced changes	

FIGURE 4-1 SPAWAR D-30 Process Participation

SPAWAR's involvement in the D-30 process starts with the development of Installation Matrices for each ship within a BG by the D-28 point. This information leads quickly to the development of the most important design data for integrated C4ISR system designs for the BGs – Level 1 and Level 2 Ring Charts. Level 1 Ring Charts are developed by D-27 and Level 2. The Ring Charts depict the major systems connectivity, interfaces, and SW versions for each platform in the BG (major and minor release numbers only).

4.2 Ring Charts

Level 2 Ring Charts are the principal CI for each platform and the basis for requiring CRs from each organizational element within SPAWAR. To frame this thought another way, if information on a Level2 Ring Chart needs to be changed, a CR will be required.

Ring Charts are the primary communication mechanism for illustrating and documenting integrated C4ISR system configurations delivered and installed by SPAWAR. The two primary Ring Chart levels are referred to as Level 1 and Level 2 Ring Charts, which depict increasing levels of detail in the information presented. Level 1 Ring Charts (see Figure 4-2) are relatively high level diagrams with a notional representation of the connectivity of the systems on a platform. Level 2 Ring Charts (Figure 4-3) depict more components, more interface information, and significantly more detail than Level 1 Ring Charts contain. A Level 2 Ring Chart depicts the systems installed aboard a single platform, their software version number, the basic connectivity, and the interface specifications for external system connections.

Ring Charts are more completely described in the *SPAWAR Ring Chart Style Guide* which is currently being reviewed and will soon be posted on the SPAWAR CM website (http://spawarsupport.org/config).

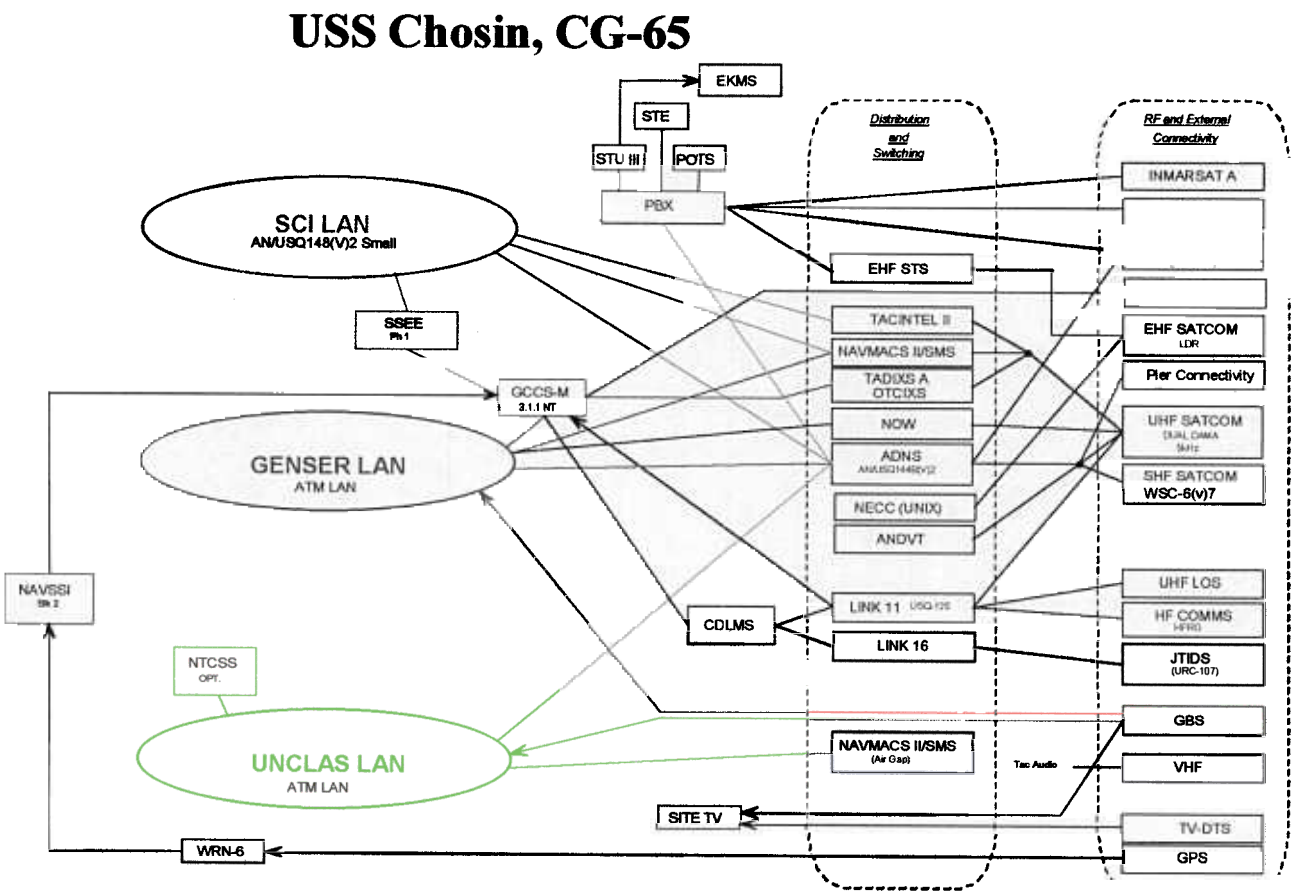


FIGURE 4-2 USS Chosin, CG-65 Functional Diagram (Level 1 Ring Chart)

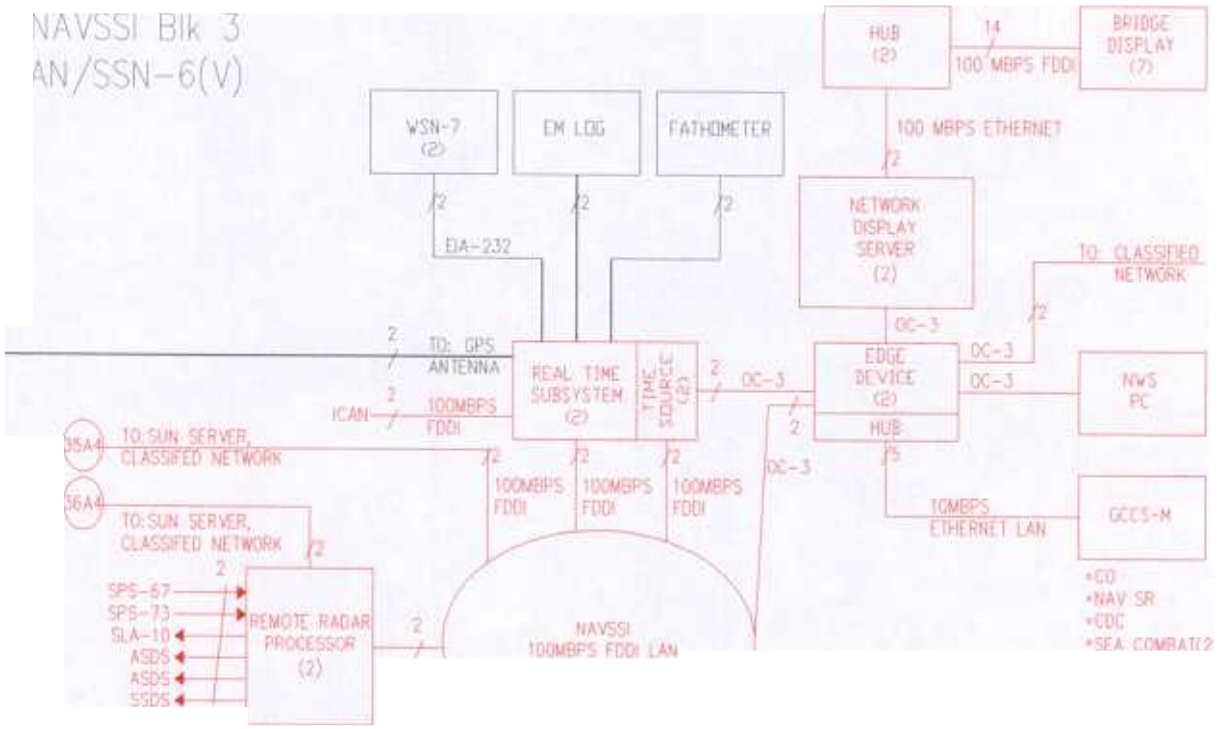


FIGURE 4-3 NAVSSI BLK 3 AN/SSN-6(V) FUNCTIONAL INTERFACE DIAGRAM

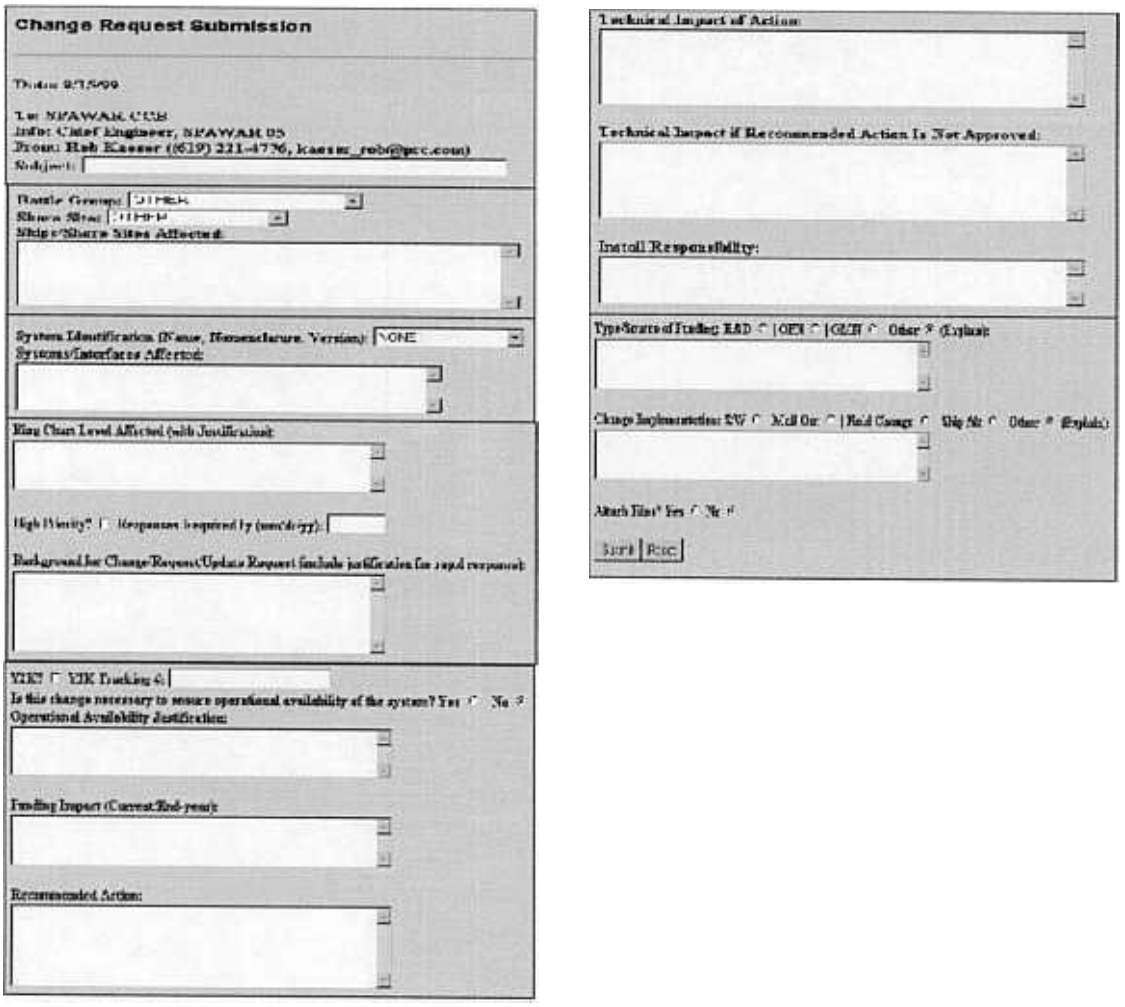
(Segment of Level 2 Ring Chart)

5 Submission of CRs

5.1 Introduction to CR's

The primary communication method for alerting the SPAWAR CCB to a proposed change is to submit a CR. CRs are submitted using the CR forms found on the SPAWAR CM website at http://spawarsupport.org/config. Figure 5-1 provides an overview of the CR submission form, which is described in more detail in this section.

FIGURE 5-1 CR FORM OVERVIEW



NOTE: This section is not a comprehensive tutorial on the use of the entire SPAWAR CM website. It is intended to provide guidance information on the submission of CRs. The website also provides additional information resources for

reviewing CR status and reviewing related documents and information. A website user's guide is actually posted on the website for downloading and review.

5.1.1 CR Submission Criteria

CRs are submitted to the SPAWAR CCB to communicate a requested change to a CI. The primary CIs addressed by the SPAWAR CCB are the Level 2 Ring Charts, which depict integrated C4ISR system configurations for BG ships, SCN ship projects, and shore sites. For the next few months (officially through 15 March 2000) CRs will also be used to propose changes for any SPAWAR system, which is certified as Y2K-compliant. The SPAWAR CCB will receive Y2K system CRs and review them for appropriate test, certification, and change management criteria.

5.1.2 Basic CR Data

In order to submit a CR an "originator" (a person who is responsible for submitting the data) calls up the CR form page on the SPAWAR CM website (http://spawarsupport.org/config). The form will ask for certain data to be entered in selection fields or text fields. The top of the form, illustrated in Figure 5-2, requires basic data from the originator regarding their personal contact information (name, phone number, and email address), and the subject of the CN.

NOTE: The CR form described in this section is being redesigned and is being tested as of this writing. This section will be rewritten to describe the new form when it is available for use.

CR Submission

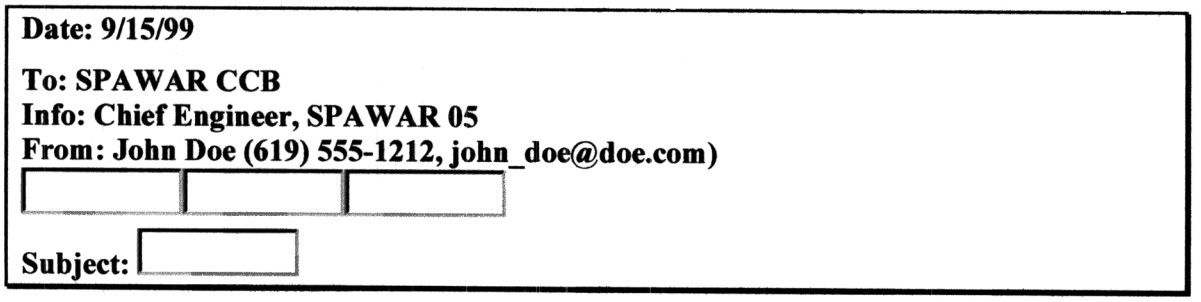


FIGURE 5-2 BASIC CHANGE SUBMISSION DATA

5.1.3 BG/Shore Site Identification Data

In the BG/Shore Site Identification segment of the form (Figure 5-3), two "pull-down" lists are provided to select the BG or Shore Site that is affected by this CR. There is also a memo field to provide a list of specific ships or to add more specific shore site information (such as building numbers, room numbers, and/or addresses.

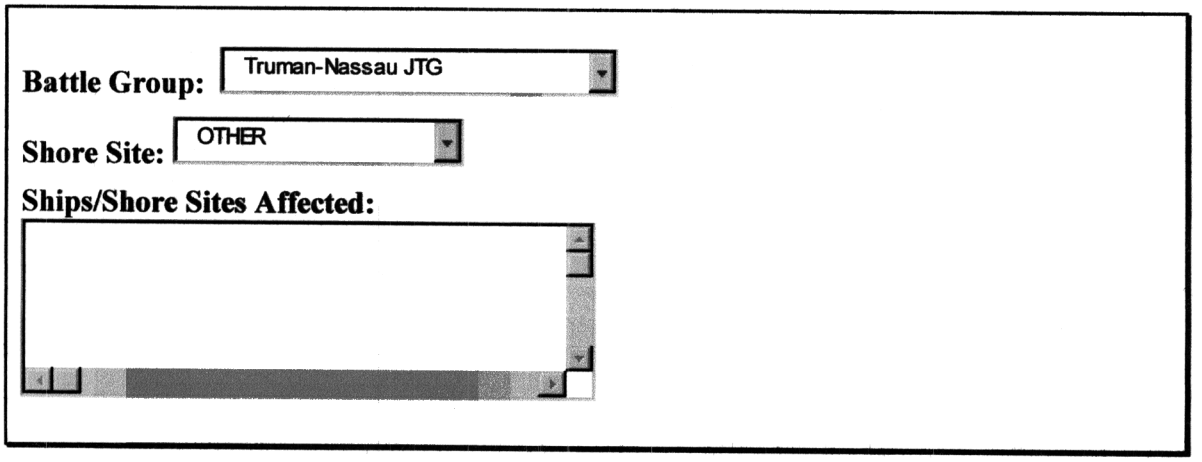


FIGURE 5-3 BG/SHORE SITE IDENTIFICATION DATA

5.1.4 System Identification Data

The system identification data segment of the CR form (Figure 5-4) provides a pull-down list of systems and a field for entering more specific information about systems or interfaces that are affected. It is important that complete information be provided here in order to ensure that the SPAWAR CCB will be able to review and approve the change.

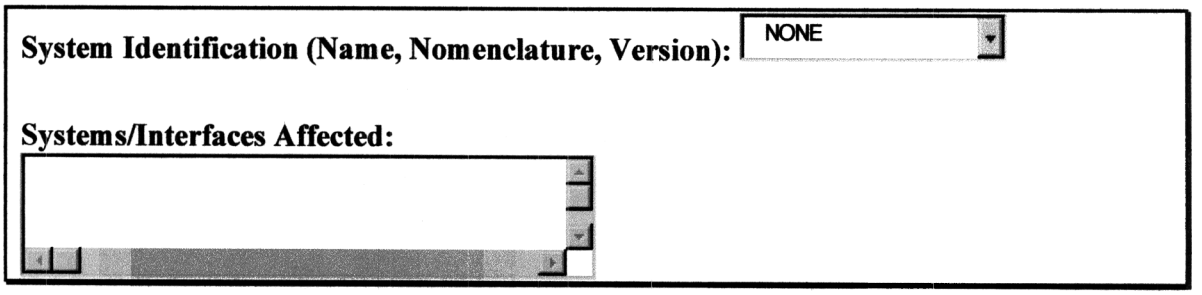


FIGURE 5-4 SYSTEM IDENTIFICATION DATA

5.1.5 Ring Chart and Priority Data

The Ring Chart and Priority Data segment of the CR form (Figure 5-5) provides the SPAWAR CCB with information as to the specific Ring Chart that is affected with an explanation as to what portion of the Ring Chart is changed.

The priority data in this segment of the form lets the SPAWAR CCB know if the CR requires *expedited or rapid response*. The priority selection should be treated with due consideration to avoid a "priority abuse" problem where the majority of the CRs submitted are high priority requiring rapid response. Rapid response requirements should be the exception and not the rule.

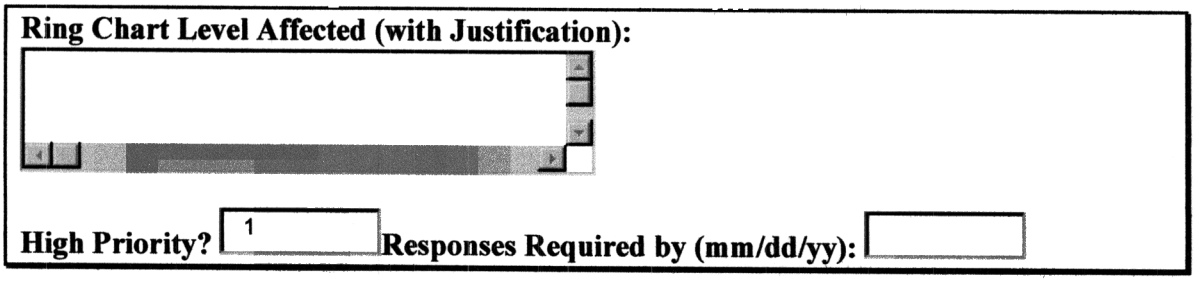


FIGURE 5-5 RING CHART AND PRIORITY DATA

5.1.6 Background Information

The Background Information segment of the CR form (Figure 5-6) should be used to provide the SPAWAR CCB with information as to the circumstances that lead up to the requirement for a change. A typical background statement might describe problems discovered in testing, update requirements based on policy changes, or planned updates required to add capabilities.

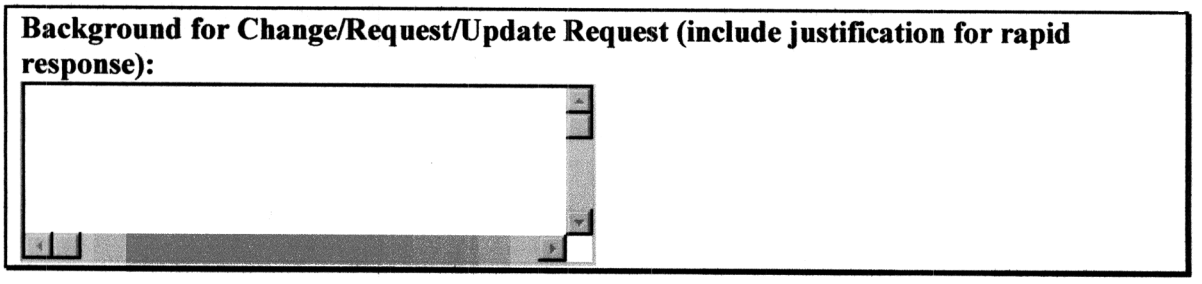


FIGURE 5-6 BACKGROUND INFORMATION

5.1.7 Y2K Tracking Data and Justification

The Y2K tracking data and justification segment of the CR form (Figure 5-7) is essential to achieve approval of CRs through 15 March 2000. No changes will be authorized unless adequate information is given to justify the change and identify the Y2K tracking status of the change. Additional Y2K authority approval is generally required, but this data is the minimum required by the SPAWAR CCB.

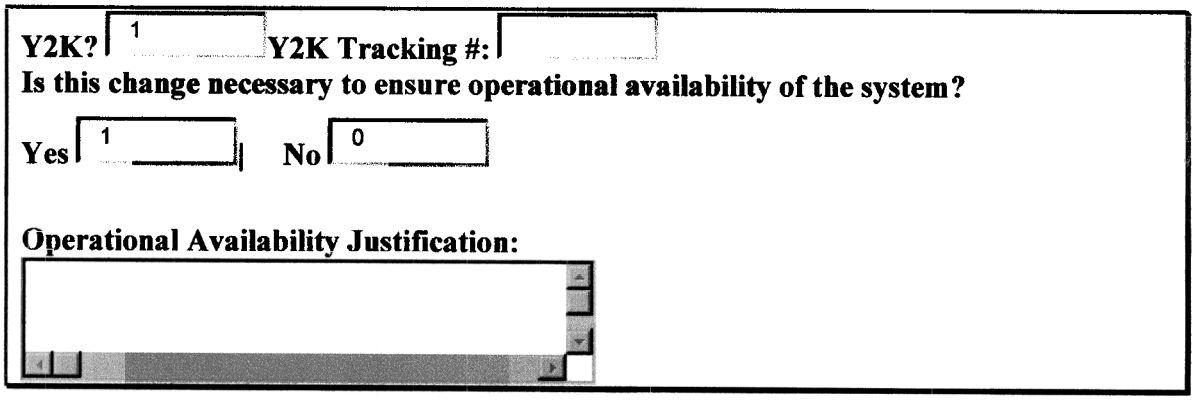


FIGURE 5-7 Y2K TRACKING DATA AND JUSTIFICATION

5.1.8 Funding Impact Description

The Funding Impact description area of the CR form (Figure 5-8) is intended to provide a statement regarding whether unplanned budgetary adjustments are required to accommodate this change. If the change has a funding impact, then some description as to how the funding requirements will be met is required.

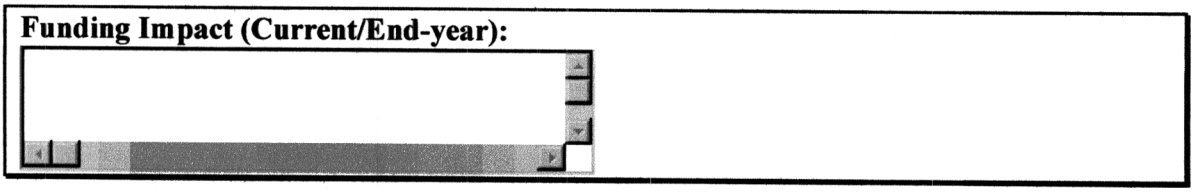


FIGURE 5-8 FUNDING IMPACT DESCRIPTION

5.1.9 Recommended Action Description

The Recommended Action description field on the CR form (Figure 5-9) is intended to describe exactly what change action is required. This description should include statements regarding who will perform the installation, what additional testing may be required, and, specifically, what is the approach to implementing the change being proposed.

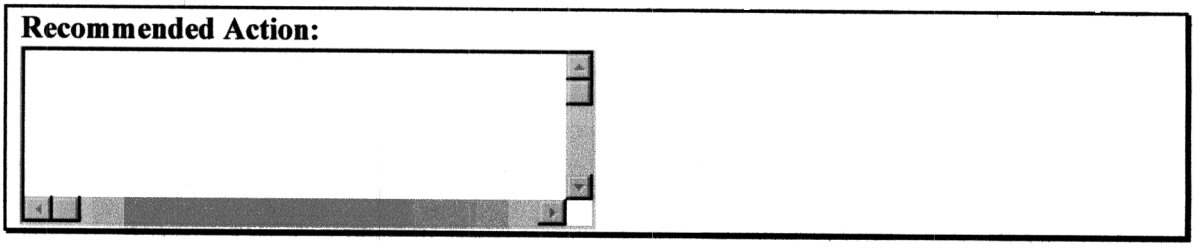


FIGURE 5-9 RECOMMENDED ACTION DESCRIPTION

5.1.10 Description of Technical Impact of Action

The Technical Impact field on the CR form (Figure 5-10) is intended for a more detailed technical description of the change. Specific technical details such as changes to data exchange functions, changes to user interface functions, and/or changes to hardware configurations should be addressed. This impact description should summarize the technical benefits to the end users once the change is properly installed.

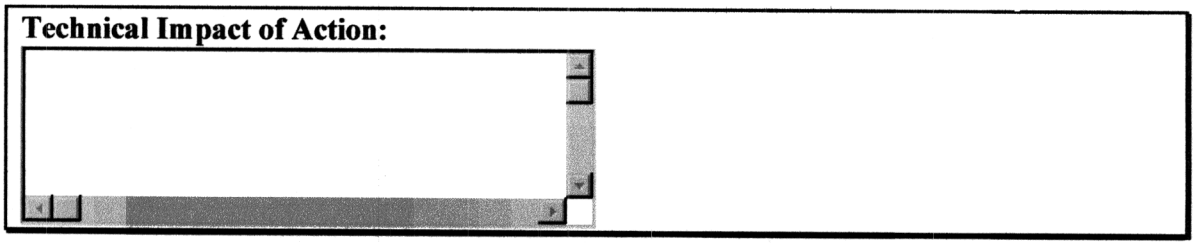


FIGURE 5-10 DESCRIPTION OF TECHNICAL IMPACT OF ACTION

5.1.11 Non-Approval Impact Statement

The "Technical Impact if Recommended Action Is Not Approved" segment of the CR form (Figure 5-11) should alert the SPAWAR CCB regarding the impact of not approving the change action. A typical example would be that disapproval or failure to approve the change would result in a system being unable to properly process FY00 data or that the system would probably fail at some point during its operation.

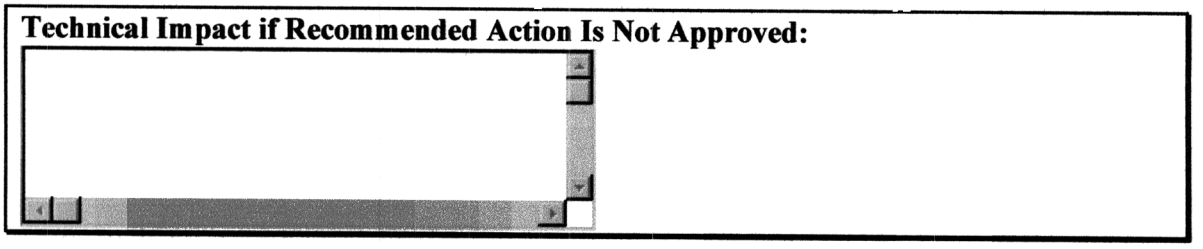


FIGURE 5-11 NON-APPROVAL IMPACT STATEMENT

5.1.12 Installation Responsibility

The Installation Responsibility field informs the SPAWAR CCB as to who will install the change if approved. (Figure 5-12)

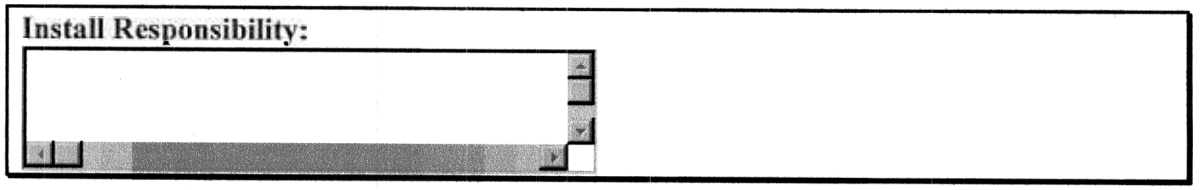


FIGURE 5-12 INSTALLATION RESPONSIBILITY

5.1.13 Funding Data

The Funding Data segment of the CR form (Figure 5-13) provides more detailed information regarding the Type and/or Source of funding for implementing the proposed change. Sources such as R&D, OPN, and OMN should be identified as well as specific project/sponsor information.

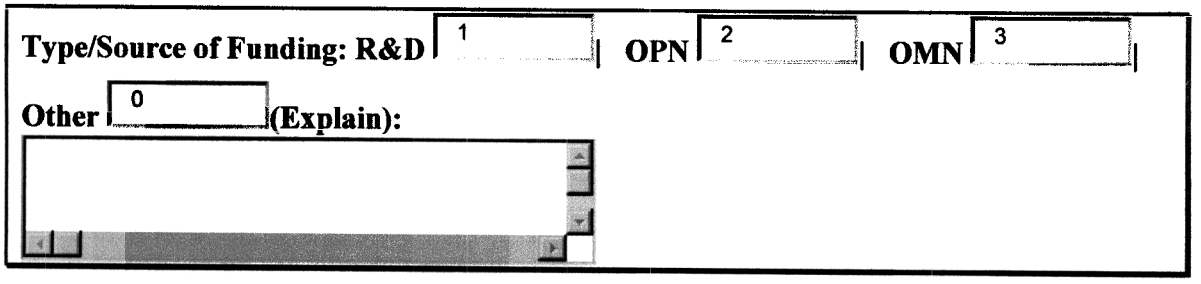
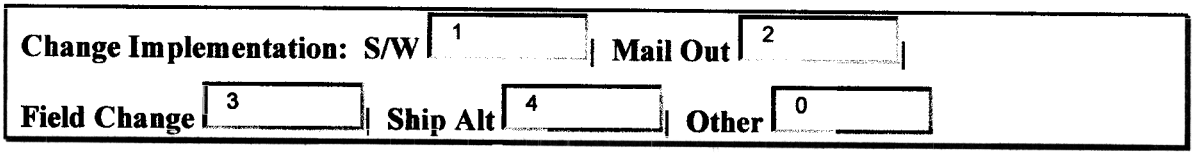


FIGURE 5-13 FUNDING DATA

5.1.14 Change Implementation Data

The final segment of the CR form (Figure 5-14) provides information regarding the implementation of the proposed change including how it will be accomplished (software distribution, mail out, field change, SHIPALT, or other). This segment provides a field for providing further information (the "(Explain)" field) as well as buttons for attaching files.

As a general policy, changes to Level 2 Ring Charts should be accompanied by attached drawings illustrating the "CURRENT" or current configuration of a system and another drawing illustrating the proposed configuration after a change is made.



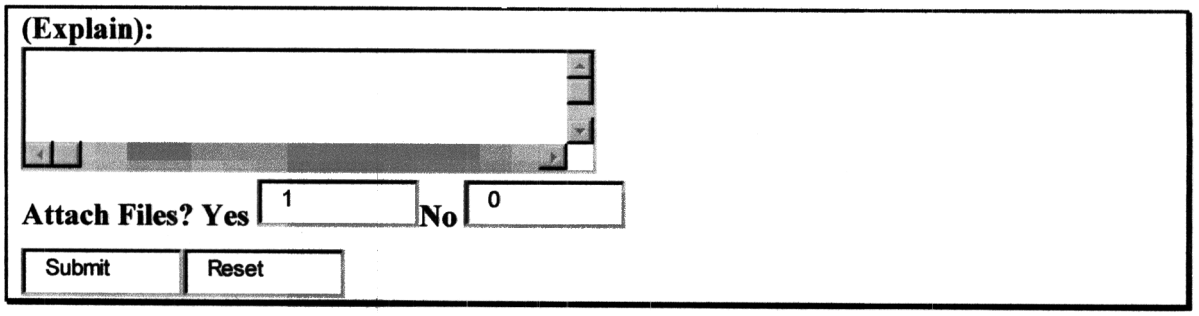


FIGURE 5-14 CHANGE IMPLEMENTATION DATA

6 SPAWAR Software Version Policy Summary

The SPAWAR CCB has implemented a software version management policy for the Command in order to manage the software releases through the SPAWAR CCB process. The fundamental principle of the SPAWAR software version management policy is that the SPAWAR CCB will manage only Major and Minor Software Releases (defined in Section 6.1), delegating other software releases such as Maintenance and Patch releases to PD CCBs.

The Major and Minor software release numbers will be shown on the SPAWAR CCB CI, the FIDs. Where appropriate, software releases will be defined by a Load Plan for each ship which identifies the components and load locations of each component on the ship's LAN.

6.1 Major and Minor Software Version Releases – Definitions

A *Major Software Version Release* is a software version that will change a software program in a significant way with regard to how it functions. A Major Software Version Release will:

- Add significant new functional capabilities
- Add a new external system interface
- Create a significant change to an existing interface
- Accomplish the integration of a major Common Operating Environment (COE) release
- Implement any other type of change which requires an OPEVAL

A *Minor Software Version Release* will change a software program in a less significant way, but will nonetheless change the way a software program functions. A Minor Software Version Release will:

- Implement an enhancement to an existing function
- Implement a change to an interface

The word *Minor* in this case is not intended to imply that Minor Software Version Releases are unimportant. Minor Software Version Releases are still important enough to warrant SPAWAR CCB approval.

6.2 Software Version Identifiers

In order to properly identify software versions, each program office will assign a unique Software Version Identifier to their software product baselines. The Software Version Identifier must identify, at a minimum, major, minor, maintenance, and/or patch level software versions.

6.3 Software Load Plans

Software Load Plans shall be developed which describe each software component within the software product baseline

- As an example, Microsoft Explorer 5.0 is listed as part of a specific Government-Off-the-Shelf (GOTS) Delta Load, which is part of a specific Global Command and Control System – Maritime (GCCS-M) software version.
- Vendor product version numbers will be included in each load plan

6.4 Software Version Designation Requirements

6.4.1 Software Version Identifier

The Software Version Identifier will be include a system name or acronym followed by two or more version designator groups. Each designator group can be made up of one or more characters or digits (e.g. ABCDFE 1.0.12.0).

- The system name will be assigned by the SPAWAR program office and should include the short program name and may include additional identifiers. (e.g. GCCS-M Ashore 1.0.0.0)

6.4.2 Major Release Designator

The Major Release Designator (usually the first designator in the series) will be changed to reflect:

- Significant new functional capability
- A new external system interface
- A significant change to an existing interface
- Integration of a major COE release
- Any other type of change which requires an OPEVAL

6.4.3 Minor Release Designator

The Minor Release Designator (usually the second designator in a series) will be changed to reflect:

- A minor functionality enhancement
- A minor change to an interface
- Figure 6-1 illustrates typical software version identification scheme.

Note: Minor changes are not maintenance releases or "patches" which are intended to fix problems without changing the system's function or its interfaces. Additional designators may be used by individual projects in accordance with whatever local standards apply to identify maintenance releases and/or patches.

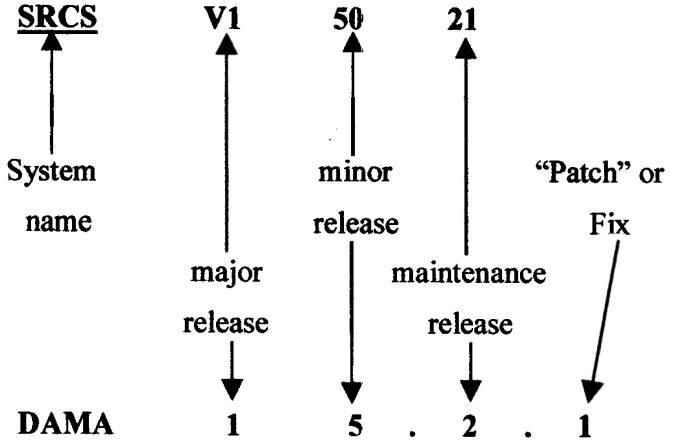


FIGURE 6-1 EXAMPLE SOFTWARE VERSION IDENTIFIERS

7 SPAWAR CCB Signature Page Guidance

For all SPAWAR personnel who may be involved in either establishing signature requirements or communicating with signatories, this section provides guidance to further explain the Signature Page process. The purpose of the SPAWAR CCB Change Request Signature Page requirement is to ensure that adequate review and staff work has been accomplished prior to the SPAWAR CCB voting on the change. The following paragraphs describe how to get started and what signatures may be required.

7.1 Getting Started

All Change Requests submitted to the SPAWAR CCB must be accompanied by a completed signature sheet prior to being voted on by the board. The following steps represent a typical approach to getting the signature process started.

1. Enter Change Request on the SPAWAR CCB website. Make sure all ships and shore sites are listed (see Section 5). Provide installation schedule information either as an attachment or summarized in the Installation Responsibility field.
2. Contact the appropriate change manager (see Appendix B, Table B1) to get briefing templates and signature sheet and discuss outstanding technical issues and concerns. Working with the change manager on a frequent (possibly daily) basis is recommended to ensure a smooth transition to the CCB.
3. Contact 051 (Judy Byram) to identify which signatures are required for the Change Request (see the "Required Signatures" section later in this document). At this point, there will be a discussion regarding the interfaces to your system. A signature will be required from engineers representing each of the systems with which your system has an interface.
4. Contact signatories listed (Appendix B) for review of the Change Request. If there is a disagreement on the change, document the disagreement, and discuss with change manger/051 for best resolution prior to CCB. If no resolution, present to the CCB for discussion and resolution.

The effort to collect signatures starts by contacting SPAWAR 051 (Judy Byram for FMP, Allen Heaberlin for SCN, Charlie Suggs for Shore – see Appendix B, Tables B2, B3, B4, and B5 for contact information) to determine which signatures are required.

Note:

Actual signatures are not required to complete a Signature Page. Signature Pages may be completed by emailing the Change Request package to a reviewer and soliciting an email response in return. Once a response has been received the Signature Page can be annotated appropriately ("Approve" or "Disapprove", and "Signature/Name") indicating the response. Email responses must be retained to validate information indicated on the completed Signature Page.

It is the responsibility of SPAWAR 051 to review signature guidance, system documentation (Functional Interface Diagrams – FIDs), and other information required to assist the Change Request originator in determining who must review and approve the proposed change. The second column in

the Signature Table will be annotated at this point with an indication as to which organizational elements are required to review the Change Request and sign the Signature Page.

7.2 Required Signatures

For all CR's a minimum set of signatures is required. Currently, all CR's require signatures from Systems Engineering (SPAWAR 051), Test & Integration (SPAWAR 053), Logistics (04L), and Security (PMW 161). For SCN platforms, additional signatures are required from the applicable SPAWAR 054 Platform Manager, and SSC Charleston. The SPAWAR CCB Chairperson (051) will provide a final approval to all CR's following approval by the board and completion of any pending actions.

1. For SCN changes, the applicable Platform Manager will review each CR to ensure that no issues exist from the standpoint of funding, schedule, etc. (SCN only).
2. Systems Engineering (051) will be reviewing interface and connectivity information to determine if additional PMW's or other organizations are required to review the proposed change.
3. 04L will review each CR from a logistics support perspective to ensure that funding for spares, training, installation, and other logistics issues are adequately addressed.
4. Security (PMW 161) will review the change to ensure that security requirements for information and communications continue to be satisfied.
5. Integration and Test (053) will determine if adequate testing is planned or has been accomplished in order to proceed with the proposed change.
6. The final signature will be from an 051 representative as a review step prior to submitting the CR for SPAWAR CCB consideration. Upon approval by the SPAWAR CCB, CR's will be signed by the CCB Chair, the SPAWAR Systems Engineer, 051.

Note:

At a minimum, representatives for every component or system which is connected to the subject system (as indicated in a Level 2 FID) must review the proposed change. Additional PMW's may be required to review the change to verify that changes to information exchange interfaces (not always obvious on a Level 2 FID) are handled properly.

7.3 Required Signatures

Additional reviews and signatures will be required when circumstances warrant. The following general guidelines apply for the remaining signatures which may be required.

1. PMW 158 may be asked to review the change to determine if there is a significant impact on LAN connectivity.
2. SPAWAR 04F (Afloat Installations) may review the change to determine if any significant accommodation is required from an installation perspective on afloat platforms. The SPAWAR 04 Work Plan may be reviewed as part of this step.
3. SPAWAR 04N (Shore Installations) may review a change involving shore installations to determine if there is any impact on shore installation planning. Once again, the SPAWAR 04 Work Plan may be reviewed for possible changes.

4. SPAWAR 04R (Resources Management) may review a change that has any potential to change the SPAWAR 04 Work Plan or affect the 04 installation budgets.
5. SPAWAR 052 (Plans and Budget) may review any change that has the potential to affect the command's budgetary or schedule plans.
6. Naval Computers and Telecommunications Command (NCTC) will review any proposed change to a shore-based Navy system.

The following page illustrates the current signature page format.

SPAWAR CCB CHANGE REQUEST SIGNATURE PAGE

Date_____ **CR** _____
System Nomenclature: _____
PMW: _____
Originator: _____
Change Title: _____
Hamre ltr Compliance: Yes / No/NA
Y2K tracking number:_____ **Change Type: H/W**_____**S/W**_____**Both**_____
Y2K correction: Yes / No **TCD Bust: Yes / No** **FBC Change: Yes / No**
Signature table:

		Signature Required	Approve	Disapprove	Print Name/Signature	Date
System Engineer SPAWAR 051 *						
SPAWAR 051	Shore					
PMW						
PMW						
PMW						
SCN Platform Manager						
Security PMW 161 *						
LAN Connectivity PMW 158						
Platform Managers SSC Charleston						
Logistics Management SPAWAR 04L *						
Afloat Installations SPAWAR 04F						
Shore Installations SPAWAR 04N						
Resources Management SPAWAR 04R						
Plans & Budget SPAWAR 052						
Systems Integration & Test SPAWAR 053 *						
NCTC						
CCB Chair (051) Approval *						

*** Minimum Required Signatures**
Comments:

FIGURE 7-1 SPAWAR CHANGE REQUEST SIGNATURE PAGE

7.4 Change Coordinators

SPAWAR 051 has assigned change management coordinators for PD13, PD15, PD16, PD17, PD18, SCN, and Shore to assist in facilitating the change management process. These people have been assigned with the intent of making the change management process run as smoothly as possible. Please consult with them regarding any issues involving Change Request processing and they will attempt to resolve the issues promptly. The table below provides contact information for these individuals.

The following tables provide additional contact information. Table B2 (Appendix B) provides a list of people with responsibilities to sign FMP and Shore Change Request Signature Pages and Table B3 provides a list of people who are responsible for signing LPD-17 Change Request Signature Pages. Table B4 provides a list of people who are responsible for signing all SCN related CVN Change Request Signature Pages. Table B5 provides a list of signatories for SCN related DDG CR's.

APPENDIX A

System Engineer SPAWAR 051	051Judy Byram (FMP) 051Allen Heaberlin (SCN) 051-2 John Myles (Shore)	Review overall technical impacts and ensure conformity, ensure package consistency (ie. presentation accurately supports CR description), review for accurate list of ships and/or shore sites, review proposal for potential impacts to other SPAWAR systems across the 7 network layers, ensure completion of CR Signature Page.
PMW		Level 2 Functional Interface Diagrams (FID's), Installation Control Documents (ICD's), Interface Design Drawings (IDD's) **NOTE: For Submarine Interfaces see Appendix 1**
PMW		Level 2 Functional Interface Diagrams (FID's), Installation Control Documents (ICD's), Interface Design Drawings (IDD's) **NOTE: For Submarine Interfaces see Appendix 1**
PMW		Level 2 Functional Interface Diagrams (FID's), Installation Control Documents (ICD's), Interface Design Drawings (IDD's) **NOTE: For Submarine Interfaces see Appendix 1**
PMW		Level 2 Functional Interface Diagrams (FID's), Installation Control Documents (ICD's), Interface Design Drawings (IDD's) **NOTE: For Submarine Interfaces see Appendix 1**
SCN Platform Manager	Jim Burgess	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information
SCN Platform Manager	Travis Tillman	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information
SCN Platform Manager	Nick Medved	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information
Security PMW 161	Dave Crotty	See Attached Document Appendix 2 and Flow Charts Appendix 3 for process
LAN Connectivity PMW 158	CDR Michael Ziegler	Review for LAN Utilization, if system utilizes the LAN ensures that the SSIL Process has been followed. See Appendix 4 for process
Platform Managers SSC Charleston	Mike Cullison	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information
Platform Managers SSC Charleston	Mike Steinback	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information
Platform Managers SSC Charleston	Nick Medved	Final Installation Control Documents (ICD's), Technical Manuals, Cost Information

Logistics Management SPAWAR 04L	Dave Williamson	Review items identified in Appendix 5 attached
Afloat Installations SPAWAR 04F	Carlos Moller	- FBC Yes/No YES: BFI CCB submission required and determination of TCD bust NO: " Non-Standard " A-O msg. required - What category of install is this. CAT I or II: BFI CCB required Cat III: No BFI CCB - Work plan Submission - Yes/No If a new change: Supply the urgency of the installation requirement. If Installation required: submitted to the work plan for updating TLS. - Certification Requirements – Are all certification requirements complete? (I.E., Y2K, etc) needed for A-O msg.
Shore Installations SPAWAR 04N	Don Alkema	Functional description of system or change, Fielding Plan and Integrated Logistics Support (ILS) Plan
Resources Management SPAWAR 04R	LCDR John Gauthier	PMW fielding plan, Status of ICD/SAR/JCF development and approval, Equipment availability status in relation to planned installation schedules (EDD's), Status of budget to support install (inclusion in the current version of the N6 Matrix etc..)
Plans & Budget SPAWAR 052	Mark Evans	Funding information: subhead, program, type of money, is it in budget, does the impending change increase or decrease the bottom line TOA? Operational impact.
Systems Integration & Test SPAWAR 053	Sherwin Jacobson	Testing coordinated with 053; Testing Events Complete. Review items identified in Appendix 6 attached
NCTC	CDR Rich Wagner	Logistics, Personnel Training, Personnel Support, Equipment Maintenance (warranties, POCs for support, ...), Equipment Consumables, Incompatibilities with Non-SPAWAR C4ISR Systems

On the actual signature sheet the CCB Chair will sign, date, add any comments as necessary and state the CR's disposition.

Appendix A-1 PMW-173 Requirements For CCB Signature

Installation on SSN:

- Document reference for the approved submarine-applicable Ship Alteration Drawing and Ship Alteration record (SAR) or TEMPALT or OPALT or Engineering Change Proposal
- Copy of the System Operational Verification Test (SOVT) (may be unsigned)

Installation on SSBN:

- Document reference for the approved Engineering Change or Installation Change or Temporary Engineering Change Order
- Copy of the SOVT (may be unsigned)

Shore installation:

- Document reference for the approved Base Electronic System Engineering Plan (BESEP)
- Document reference for the approved Installation Design Plan (IDP)
- Copy of the SOVT (may be unsigned)

Documentation establishing operational suitability:

- ***Preferred:*** Document reference for the approved OPEVAL report (OPTEVFOR finding of operationally suitable and operationally effective)
- ***Alternate:*** Copy of the user documentation to be validated and/or verified at land-based test facility (requires that development program supply funding):

  Operator manuals

  Maintenance Manuals

  Vendor Manuals

Hardware and Software interface documentation:

- Copy of the Interface Control Drawings (ICD) or equivalent for all hardware interfaces
- Copy of the Interface Requirements Specifications (IRS) or equivalent for all software interfaces

Land-based integration testing:

- Production system (hardware and software) remains at a land-based submarine test facility
- Integration test report

References:

Ship Alt. Dwg.: SL720-AA-MAN-020 TS-9090-600

SAR: SL720-AA-MAN-020 TS-9090-500B

TEMPALT, OPALT: NAVSEAINST 4720.14 B, NAVSEA S9070-AA-MME-010/SSN/SSBN

Engineering Change, Installation Change, Temporary Engineering Change Order: NAVSEA T9410-BU-PRO-010/MOD SOP, REV.A

BESEP, IDP, SOVT: SPAWAR Shore Installation Process Handbook, promulgated 27 Aug 99

Appendix A-2 PMW-161 Review of SPAWAR CR

The following information provides explanations of the PMW-161 Review of SPAWAR CR flowcharts. The text summaries can be applied equally to either the "PMW-161 is the CA" or "PMW-161 is not the CA" with one exception. For systems that PMW-161 is the CA, the security impact to the target system itself, as well as any systems it interfaces with will be determined. For systems that PMW-161 is not the CA, only the security impact to the systems that the target system interfaces with will be considered.

Any questions regarding the PMW-161 CR review process can be addressed to David Crotty, (619) 524-7341, crottyd@spawar.navy.mil .

Input CR:

- This is the initial notification provided to PMW-161 regarding a particular CR submittal.

Is it an AIS?:

- PMW-161 evaluates the CR to determine of the target system falls within the scope of DoDD 5200.28 (Security Requirements of Automated Information Systems). If it does, further security analysis will be performed. If not, PMW-161 will recommend approval of the CR.

Has the System Addressed IAVAs:

- Information Assurance Vulnerability Alerts (IAVAs) are DISA or NCTF-CND generated alerts targeting serious vulnerabilities found in COTS products or applications. The alert provides details on what the vulnerability is, what can be done to a system if the vulnerability is exploited. The alert also details steps to be taken to eliminate or minimize the vulnerability.
- As the IAVA focal point within SPAWAR, PMW-161 collects IAVA responses and maintains a compliance matrix for systems developed by the command.
- PMW-161 will check the compliance matrix and look for Red (no response) or Yellow (waiver request or uncompleted compliance dates) entries corresponding to the target system.
- If all responses are Green, evaluation of the CR will continue. If one or more responses are either Yellow or Red, PMW-161 will contact the originating PMO to attempt to resolve the issue(s) (see Disapproval Caution Loop description below) and update the IAVA compliance matrix accordingly.

Disapproval Caution Loop:

- Prior to recommending disapproval of a CR, PMW-161 will contact the originating PMO to address the security issue.
- If the issue is addressed satisfactorily, evaluation of the CR will continue.
- If the issue is not addressed satisfactorily, PMW-161 will recommend disapproval of the CR.

Is PMW-161 the CA?

- Whether or not PMW-161 is the Certification Authority (CA) for the system will affect the level of security investigation that will be done for the CR.
- If PMW-161 is the CA, the CR will be evaluated for internal system security issues and security issues with interfaced systems in accordance with this flowchart.
- If PMW-161 is not the CA, the CR will be evaluated for security issues with interfaced systems only. Evaluation will continue with the "PMW-161 is not the CA" flowchart.

Is the System Accredited or does it have an IATO?

- Has the system completed the DoD Information Technology Security Certification And Accreditation Process (DITSCAP) and been granted either full accreditation or Interim Approval To Operate (IATO)?
- If so, does PMW-161 have copies of the current accreditation documentation for the target system?
- If the system does not have formal approval to operate, PMW-161 will evaluate the available security related documentation.

Does Sufficient Security Documentation Exist?

- Has the DITSCAP been initiated for the target system?
- If not, is information regarding security CONOPS, security requirements, security testing and evaluation, and risk assessment for the system available?

Is There a Plan to Produce this Information?

- PMW-161 will discuss the DITSCAP requirements with the affected system's PMO.
- The PMO and PMW-161 will develop an accreditation POA&M for the system's negotiation of the DITSCAP.
- If the plan is satisfactory, evaluation will continue with the required security documentation being produced.
- If an accreditation plan is not generated for the system, PMW-161 will further investigate the issue with the affected system's PMO (see Disapproval Caution Loop description above).

PMO Produces Relevant Security Information

- PMW-161 will work with the system's PMO to obtain proper information to access the security impact of the CR.

Access the CR's Security Impact

- PMW-161's primary evaluation goal will be to determine the impact of the CR to the system's security requirements and the manner in which these requirements are implemented.
- Typical questions are:
  - Does the CR add new security requirements or remove existing requirements?

- Does the CR affect the manner in which the system interfaces to other systems?
- Are new protocols being introduced?
- Does the system adhere to the Fleet Firewall Policy (if applicable)?
- Does the CR introduce connections between differing classification levels?

Is the Impact Significant?

- If the security requirements, or their implementation, is not affected by the CR, PMW-161 will recommend approval.
- If the security requirements, or their implementation, is affected by the CR, evaluation of the CR will continue.

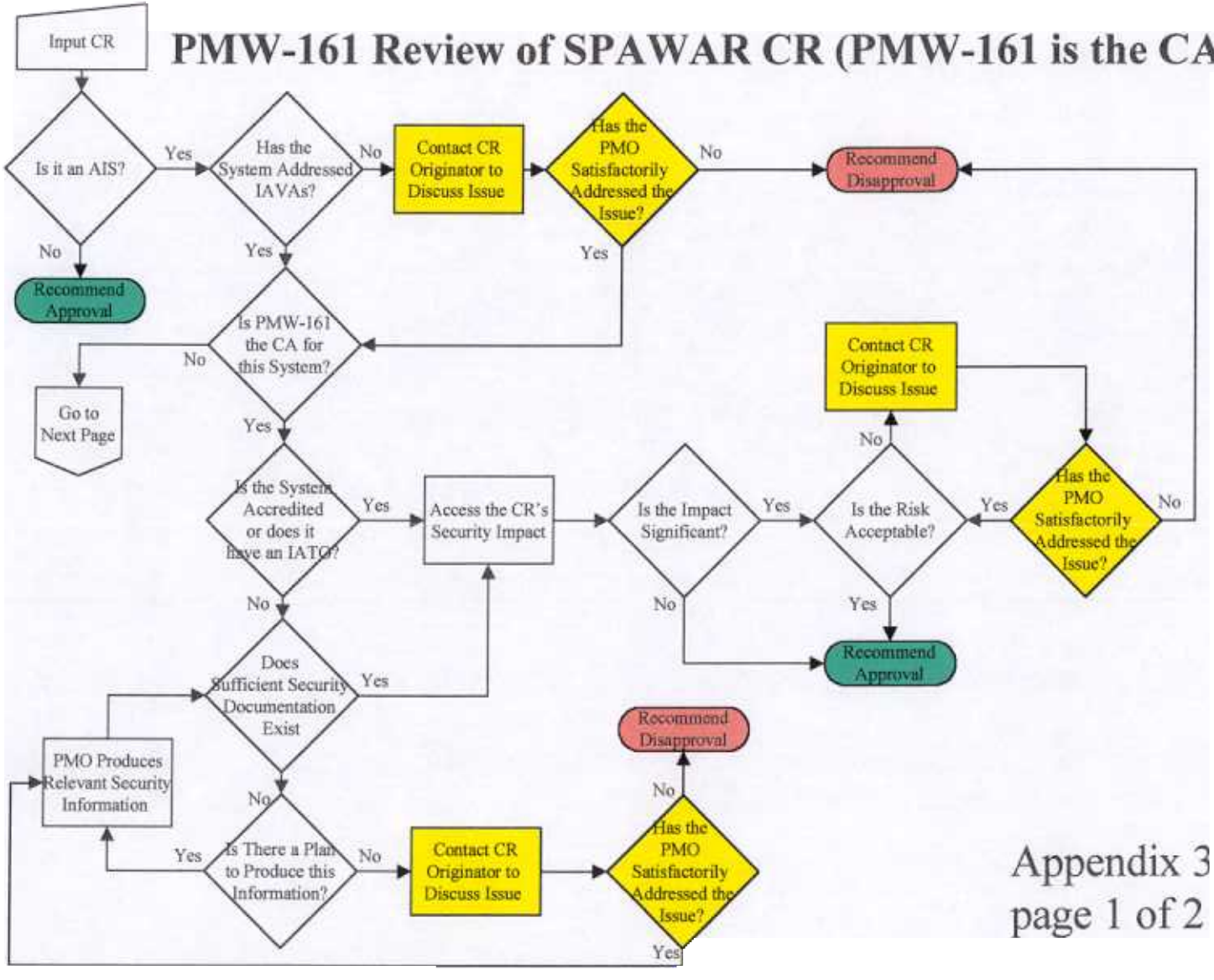
Is the Risk Acceptable?

- If the CR has not introduced any new vulnerability, PMW-161 will recommend approval.
- If a new vulnerability is introduced, what is the chance that it will be exploited? And, what would be the affect of successful exploitation to the target system, or systems the target interfaces with?
- If the introduced vulnerability is not significant, PMW-161 will recommend approval.
- If the introduced vulnerability is significant, PMW-161 will work with the system's PMO to help identify ways to mitigate the new vulnerability (see Disapproval Caution Loop description above).

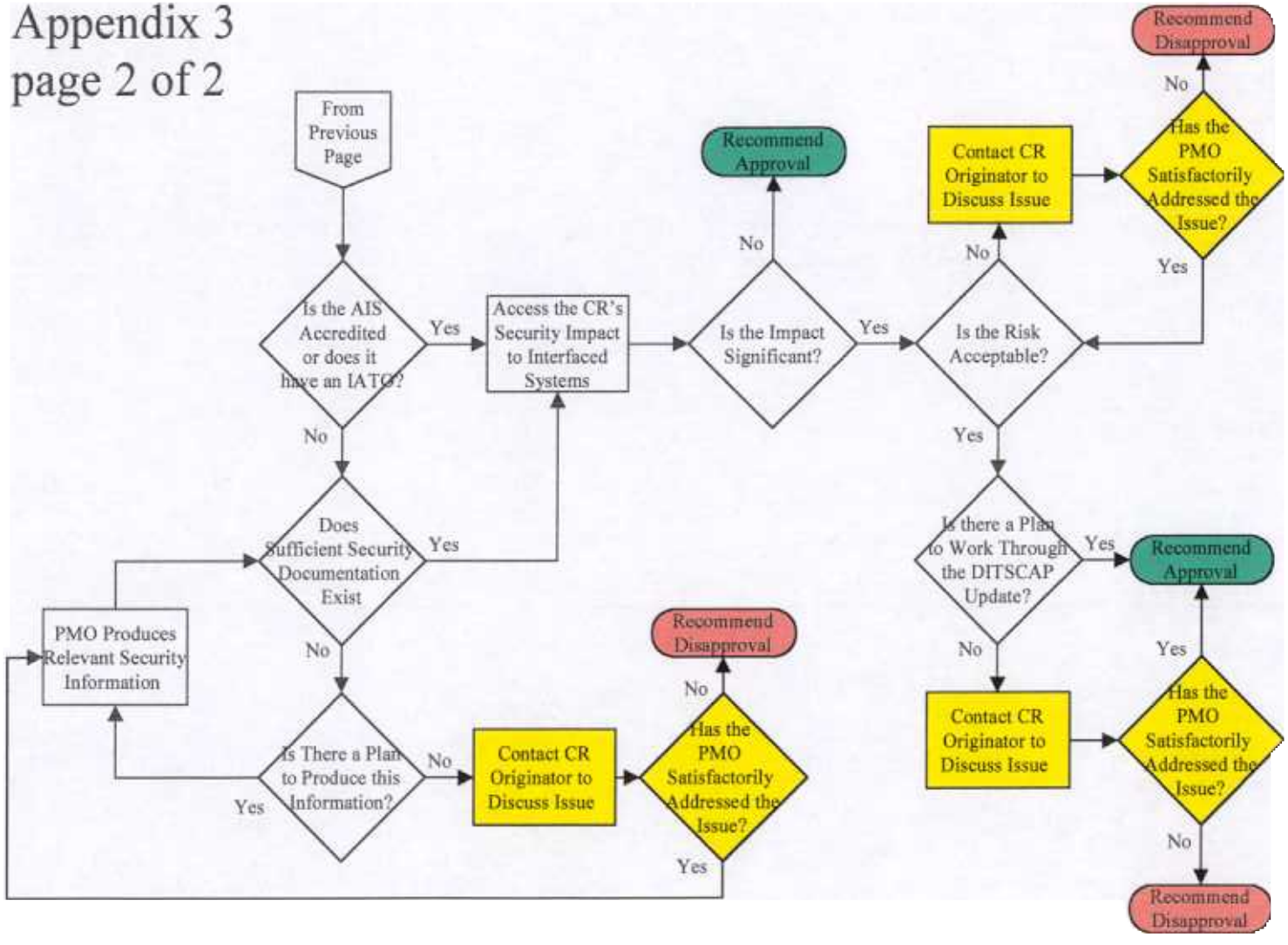
Recommend Approval

- A CR approval recommendation from PMW 161 may require the PMO to perform additional actions to maintain the target system's accreditation package in accordance with the DITSCAP
- If the CR had a significant security impact and the target system is accredited, the System Security Authorization Agreement must be updated, and a re-accreditation statement released by the system's Designated Approval Authority (DAA).
- If the CR had a significant security impact and the target system is operating with an IATO, either new IATO, or accreditation statement must be released by the system's DAA.
- If the CR had a significant security impact and the target system has neither an accreditation statement nor an IATO, the system's DAA must issue an official authorization to operate.
- If the CR does not have a significant security impact, the accreditation documentation is not impacted.

APPENDIX A-3


PMW-161 Review of SPAWAR CR (PMW-161 is the CA)
Input CR
Is it an AIS?
Yes
No
Has the System Addressed IAVAs?
No
Yes
Contact CR Originator to Discuss Issue
Has the PMO Satisfactorily Addressed the Issue?
No
Yes
Recommend Disapproval
Recommend Approval
Is PMW-161 the CA for this System?
No
Yes
Go to Next Page
Contact CR Originator to Discuss Issue
No
Is the System Accredited or does it have an IATO?
Yes
Access the CR's Security Impact
Is the Impact Significant?
Yes
No
Is the Risk Acceptable?
Yes
No
Has the PMO Satisfactorily Addressed the Issue?
No
Yes
Recommend Approval
Does Sufficient Security Documentation Exist
Yes
No
Recommend Disapproval
PMO Produces Relevant Security Information
Is There a Plan to Produce this Information?
Yes
No
Contact CR Originator to Discuss Issue
Has the PMO Satisfactorily Addressed the Issue?
No
Yes
Appendix 3
page 1 of 2

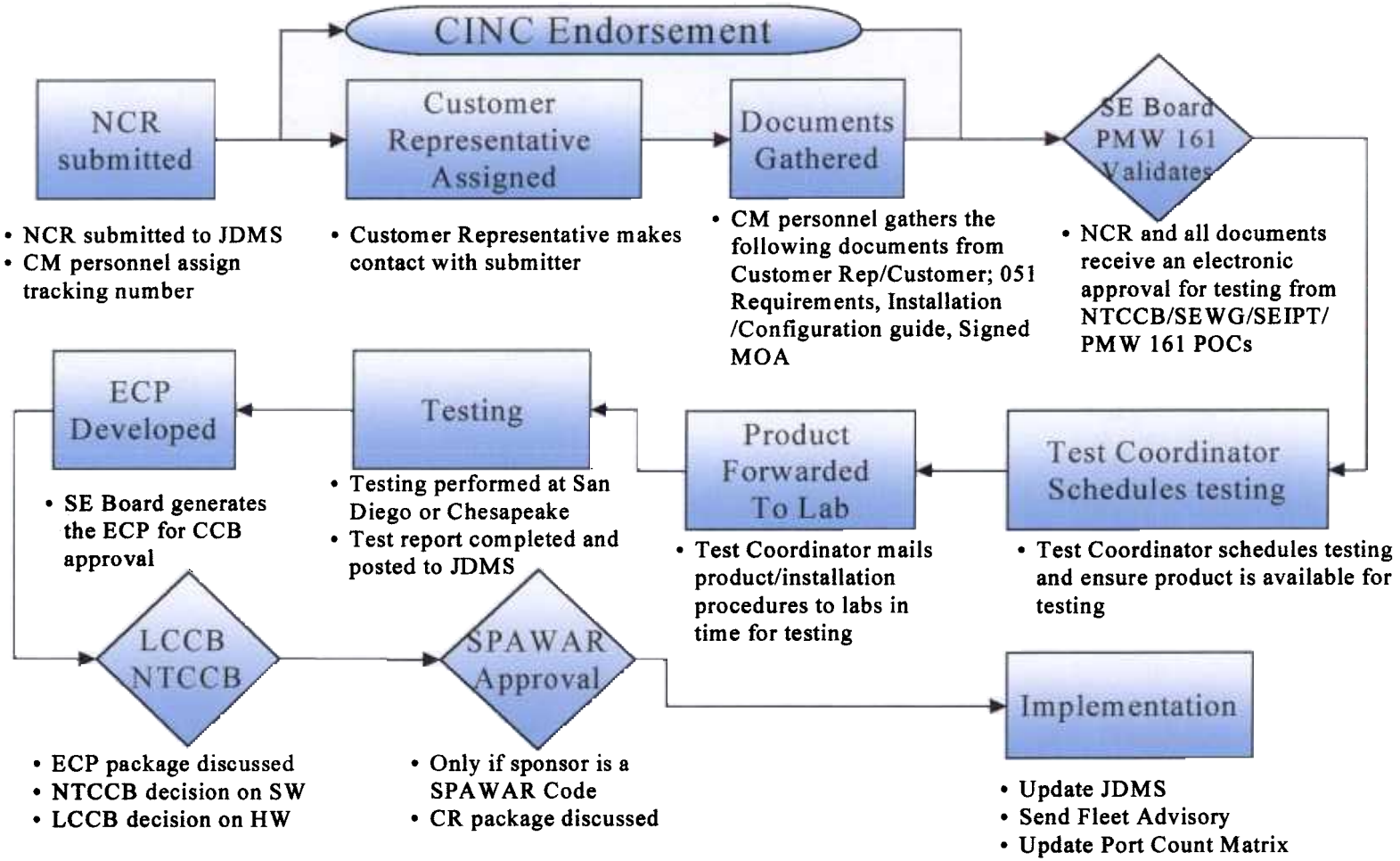
PMW-161 Review of SPAWAR CR (PMW-161 is not the CA)



APPENDIX A-4

SSIL Process

Appendix 4



Appendix A-5 CR Logistics Requirements Checklist

CR NUMBER: **CR DATE:** **SUBMITTED BY:**

SUBJECT: **CODE 04L APPROVAL:**

LOGISTICS IMPACT AREAS: If you answer yes to any of these questions. What ILS support is available or planned to be available to support the logistic impact before installation date?

1 Maintenance Planning, Product Data, Training:

	YES	NO	REMARKS
a. Will this change require an update to the Spares Analysis and/or Maintenance Plan?	☐	☐	
b. Will this change impact on maintenance procedures or periodicity?	☐	☐	
c. Will this change require revision to the maintenance course?	☐	☐	
d. Will this change require revision to or new MRCs?	☐	☐	
e. Will this change require revision to technical manuals?	☐	☐	
f. Will this change require revision to and/or new drawings to be made?	☐	☐	
g. Is a new system's nomenclature required to accurately reflect the change?	☐	☐	
h. Will this change require revision of specifications?	☐	☐	
h. Will this change require revision of Installation Change Drawings (ICD)s ?	☐	☐	
j. Will this change require revision to the PQS or any other training materials?	☐	☐	
k. Will this change require revision to the operator course?	☐	☐	

2. Support Equipment, Facilities, PHS&T:

	YES	NO	REMARKS
a. Will this change require revision to support equipment and/or test equipment needed at either Depot or User levels?	☐	☐	
b. Will this change require any additional facilities at either Depot or User levels?	☐	☐	
c. Will this change require an update to the PHS&T?	☐	☐	

3. Supply Support, Personnel/Manpower,

a. Will this change require revision to provisioning lists and/or spares lists?	☐	☐	
b. Will this change require revision to National Stock Numbers (add, delete, modify)?	☐	☐	
c. Will this change require interim Fleet Support before the supply system is updated?	☐	☐	
d. Will this change require any revision to manpower and/or ratings?	☐	☐	

4. Design Interface, Computer Resources Support:

a. Does this change require retrofit of existing hardware, fielded systems, or on-hand spares?	☐	☐	
b. Will this change require revision to any system power requirements?	☐	☐	
c. Will this change impact on any hardware physical/electrical interfaces?	☐	☐	
d. Will this change require the fabrication of new or modification of existing hardware interfaces?	☐	☐	
e. Will this change require revision of any			

software developed for the system?	☐	☐
f. Will this change require any revision to the commercial software baseline?	☐	☐
g. Will this change require any additional ADP hardware, either in the system or at the SSA?	☐	☐

5. Funding Issues:

	YES	NO	REMARKS
a. Are their any high cost driver(s) that are un-funded as result of this proposed change	☐	☐	
b. Are necessary resources available to implement this change (personnel, equipment, facilities)?	☐	☐	
c. Will contracts and or delivery orders be issued to implement this change?	☐	☐	

Additional space provided for "Remarks" Category - Required for items checked "Yes" above:

Appendix 6 – Change Request (CR) – SPAWAR 053 Checklist

CR NUMBER: **CR DATE:** **SUBMITTED BY:**

System Integration and Testing:

Change Development Process:	**YES**	**NO**	**REMARKS**
a. Are interface requirements defined?	☐	☐	
b. Was testing coordinated with SPAWAR 053?	☐	☐	
1) Was SPAWAR 053 provided with Test Plans?	☐	☐	
2) Was SPAWAR 053 provided with Test Procedures?	☐	☐	
3) Was SPAWAR 053 provided with Test Schedules?	☐	☐	
4) Was SPAWAR 053 provided with Test Configuration?	☐	☐	
c. Was establishment of interoperability testing requirements, coordinated with SPAWAR 053?	☐	☐	

5. CR Approval

a. Interfaces:			
1) Were all defined interfaces tested iaw Test Plan?	☐	☐	
2) Was interoperability (Level 2) testing coordinated with SPAWAR 053?	☐	☐	
b. Results:			
1) Were Testing events completed iaw Test Plan?	☐	☐	
2) Was SPAWAR 053 provided Test Summary?	☐	☐	

c. Trouble Reports (TR)

1) Number of TRs identified? Pri: 1 _____ Pri: 2 _____ Pri: 3 _____ Other: _____

2) Disposition of TR's identified above. (Separate Sheet provide the following information)

a. Priority
b. Description of TR
c. Plan of action
d. Risk assessment

APPENDIX B

SIGNATURE SHEET

CONTACTS

TABLE 1. SPAWAR CCB COORDINATORS

Coordinator	Responsibility	Email	Phone
Phyllis Murchland	PD13, PD16, PD18	Phyllis.murchland@2asc.com	(619) 725-5321
M. J. "Frenchy" Fontenot	PD15	frenchy@spawar.navy.mil	(619) 221-4660
Brian Francis	PD17	Francis_brian@prc.com	(619) 221-4669
Alan Philpott	CVN (SCN)	aphilpot@spawar.navy	(619) 758-1223 (619) 508-5745 (Cell)
John Munnik	LPD (SCN)	John.munnik@2asc.com	(619) 725-5338
Charles Auxter	DDG (SCN)	auxter@tdssd.com	(619) 224-1100 x. 110
John Myles	Shore	mmyles@spawar.navy	(619) 553-0492

The following tables provide additional contact information

TABLE 2 SPAWAR CCB SIGNATURE PAGE SIGNATORIES (FMP AND SHORE)

SPAWAR CCB Signature Page Signatories (FMP and Shore)				
As of 07/25/00				
ORG	**Expertise**	**Signator**	**Telephone**	**email**
051	System Engineering	CAPT Reid Senter Judith Byram (FMP) Allen Heaberlin (SCN) Charlie Suggs (Shore) John Myles (Shore)	(619) 524-7308 (619) 524-7246 (858) 537-0481 (619) 524-7237 (619) 553-4092	senterr@spawar.navy.mil byramj@spawar.navy.mil heaberla@spawar.navy.mil suggs@spawar.navy.mil myles@spawar.navy.mil
052	Funding	Mark Evans	(619) 524-7936	evansml@spawar.navy.mil
053	Integration & Testing	Sherwin Jacobson Larry Carr	(619) 524-7228 (858) 537-0425	jacobson@spawar.navy.mil lcarr@spawar.navy.mil
PMW 151	NTCSS	Sam Anderson	(619) 524-7564	andersos@spawar.navy.mil
PMW 154	TMIP	Sean O'Brien	(619) 524-7563	obriens@spawar.navy.mil
PMW 157	GCCS-M & other 157 systems	Jim Churchill	(858) 537-0253	churchij@spawar.navy.mil
PMW 158	Network	Paul Strazdus	(858) 537-0231	strazdus@spawar.navy.mil
PMW 158	ADNS GENSER & SCI	Nick Freije	(619) 524-7975	freijen@spawar.navy.mil
PMW 158	LAN Connectivity	CDR Michael Ziegler	(619) 524-7596	zieglerm@spawar.navy.mil
PMW 159	CDLMS/JTIDS	Paul Bobrowich	(619) 524-7798	bobrowip@spawar.navy.mil
PMW 161	INFOSEC/STEs	Chris Newborn	(619) 524-7506	newbornc@spawar.navy.mil

PMW 161	Security	Dave Crotty	(619) 524-7341	crottyd@spawar.navy.mil
PMW 163	SSES	Jeffery T. Jones	(619) 524-7892	jtjones@spawar.navy.mil
PMW 173	Submarine Comms	Tom Cox LCDR Jeff Hoyle Mark Evangelista (alt.)	(619) 524-7940 (619) 524-7943 (619) 537-0102	coxth@spawar.navy.mil hoylej@spawar.navy.mil evangelm@spawar.navy.mil
PMW 176	EHF & SHF	Ted Lew	(619) 524-7684	lewt@spawar.navy.mil
PMW 179	Tactical Comms	Vic Popik	(858) 537-0537	popik@spawar.navy.mil
PMW 185	METOC	Nhu-Nga Do	(858) 537-0398	do@spawar.navy.mil
PMW 187	NAVSSI	Walter J. Schoppe	(619) 524-7760	schoppe@spawar.navy.mil
04F	Install (Ship)	CAPT. Tim Naple Michael Chi	(619) 524-7823 (619) 524-7697	naplet@spawar.navy.mil chim@spawar.navy.mil
04L	Logistics	Dave Williamson Leslie Dicenzo Steven Lis	(619) 524-7249; (619) 524-7250 (619) 524-7376	dwilliams@spawar.navy.mil dicenzlh@spawar.navy.mil liss@spawar.navy.mil
04N	Install (Shore)	Don Alkema CAPT (s) T. Flynn Dick Majer	(619) 524-7692 (858) 537-0556 (757) 558-6820	dalkema@spawar.navy.mil (pending) majer@spawar.navy.mil
04R	Resource Management	LCDR John S.Gauthier	(619) 524-7258	gauthier@spawar.navy.mil
NCTC	Shore	CDR Rich Wagner Mr. Joe Ortiz	(202)764-0720 (202) 764-0111	Wagnerr@nctc.navy.mil ortizj@nctc.navy.mil

TABLE 3 LPD SCN SIGNATURE PAGE – SIGNATORIES

LPD SCN Signature Page – Signatories				
ORG	**Expertise**	**Signator**	**Telephone**	**email**
051		Allen Heaberlin	(858) 537-0481	heaberla@spawar.navy.mil
053		Sherwin Jacobson Larry Carr	(619) 524-7228 (858) 537-0425	jacobson@spawar.navy.mil lcarr@spawar.navy.mil
SSC-Charleston		Mike Cullison	(843) 974-5341	cullisom@spawar.navy.mil
RCS		Mike Steinback	(843) 974-5447	steinbac@spawar.navy.mil
SESS		Nick Medved	(843) 974-6880	medvedn@spawar.navy.mil
04L		Leslie Dicenzo	(619) 524-7250	dicenzlh@spawar.navy.mil
PMW 151		FCCS Dante Yumol	(619) 524-7565	yumold@spawar.navy.mil
PMW 157F		CDR Mark Crep	(619) 524-7586	crepm@spawar.navy.mil
PMW 157		Dan Snyder	(619) 537-0623	dsnyder@spawar.navy.mil
PMW 158 ADNS		Paul Rigdon	(619) 524-3587	prigdon@spawar.navy.mil
PMW 158 SI ADNS		Jon Cherry	(619) 524-3733	cherryjc@spawar.navy.mil
PMW 159		Raymin Heshmati	(619) 524-7721	heshmatr@spawar.navy.mil
PMW 161		Dave Crotty	(619) 524-7341	crottyd@spawar.navy.mil
PMW 163		Lenny Coppenrath	(619) 524-7894	coppenl@spawar.navy.mil
PMW 176/PMW 179		Bill Farmer	(619) 524-3311	farmerw@spawar.navy.mil
PMW 187		Patrick Truver	(619) 524-7767	truver@spawar.navy.mil

TABLE 4 CVN SCN SIGNATURE PAGE – SIGNATORIES

CVN SCN Signature Page – Signatories			
ORG	**Signator**	**Telephone**	**Email**
051	Allen Heaberlin	(858) 537-0481	heaberla@spawar.navy.mil
053	Sherwin Jacobson Larry Carr	(619) 524-7228 (858) 537-0425	jacobson@spawar.navy.mil lcarr@spawar.navy.mil
SSC-Charleston	Jim Burgess	(843) 218-4061	burgessj@spawar.navy.mil
RCS	Travis Tillman	(843) 218-4064	tillmant@spawar.navy.mil
SESS	Nick Medved	(843) 218-4751	medvedn@spawar.navy.mil
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PMW 158 ADNS	Paul Rigdon	(619) 524-3587	prigdon@spawar.navy.mil
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PMW 159	Raymin Heshmati	(619) 524-7721	heshmatr@spawar.navy.mil
PMW 161	Dave Crotty	(619) 524-7341	crottyd@spawar.navy.mil
PMW 163	Lenny Coppenrath	(619) 524-7894	coppenl@spawar.navy.mil
PMW 176/PMW 179	Bill Farmer	(619) 524-3311	farmerw@spawar.navy.mil
PMW 185	CDR Andy Brown	(619) 524-7169	browna@spawar.navy.mil
PMW 187	Patrick Truver	(619) 524-7767	truver@spawar.navy.mil

TABLE 5. DDG SCN SIGNATURE PAGE SIGNATORIES

Code/PMW	SPAWAR Rep	Phone #	E-mail Address
051	Allen Heaberlin (051-2)	(858) 537-0481	heaberla@spawar.navy.mil
053	Sherwin Jacobson Larry Carr	(619) 524-7228 (858) 537-0425	jacobson@spawar.navy.mil lcarr@spawar.navy.mil
151	FCCS Dante Yumol ETC Roger Howell	(858) 537-0290	yumold@spawar.navy.mil howerr@spawar.navy.mil
157-F1	CDR Mark Crep	(619) 524-7586	crepm@spawar.navy.mil
157	Tom Reese	(858) 537-0234	reeset@spawar.navy.mil
158	Tim Tuey (SCN Coordination)	(619) 524-3685	tueyt@spawar.navy.mil
159	Raymin Heshmati	(619) 524-7721	heshmatr@spawar.navy.mil
161	David Crotty	(619) 524-7341	crottyd@spawar.navy.mil
163	George Colvin	(619) 524-7375	colving@spawar.navy.mil
176/179	Bill Farmer (SCN Coordination)	(619) 524-3311	farmerw@spawar.navy.mil
187	Patrick Truver	(619) 524-7767	truver@spawar.navy.mil
NAWC AD	Tim Hickey	(301) 862-8483	hickeytphickeytp@webfld.navy.mil

APPENDIX C

ACRONYMS

APPENDIX C: ACRONYMS

B	
BFI CCB	Battle Force Integrated Configuration Control Board
BG	Battle Group
C	
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CA	Certification Authority
CCB	Configuration Control Board
CDR	Critical Design Review
CI	Configuration Item
CM	Configuration Management
COE	Common Operating Environment
CONOPS	Concept of Operations
COTS	Commercial Off-the-Shelf
CR	Change Request
D	
DAA	Designated Approval Authority
DII COE	Defense Information Infrastructure Common Operating Environment
DISA	Defense Information Systems Agency
DITSCAP	Information Technology Security Certification and Accreditation Process
E	
EP	Exception Page
F	
FID	Functional Interface Diagram

G

GCCS-M	Global Command and Control System – Maritime
GOTS	Government Off-the-Shelf

I

IATO	Interim Approval To Operate
IAVA	Information Assurance Vulnerability Alerts

N

NCTC	Naval Computer and Telecommunication Command
NOC	Network Operations Center

P

PD	Program Directorate
PMO	Program Management Office
POA&M	Plan of Action and Milestones

S

SCN	(Refers to new construction)
SPAWAR CCB	SPAWAR Configuration Control Board