

Space and Naval Warfare Systems Center  
San Diego, CA 92152-5001

---

**TECHNICAL MANUAL 708 REV 2**

# **Integrated Installation Team Standard Process Manual Revision 2**

This publication supercedes TM 708 dated June 2001

Approved for public release; distribution is unlimited.

Publishing authority: Space and Naval Warfare Systems Center San Diego, CA 92152-5001.

OCTOBER 2005

---

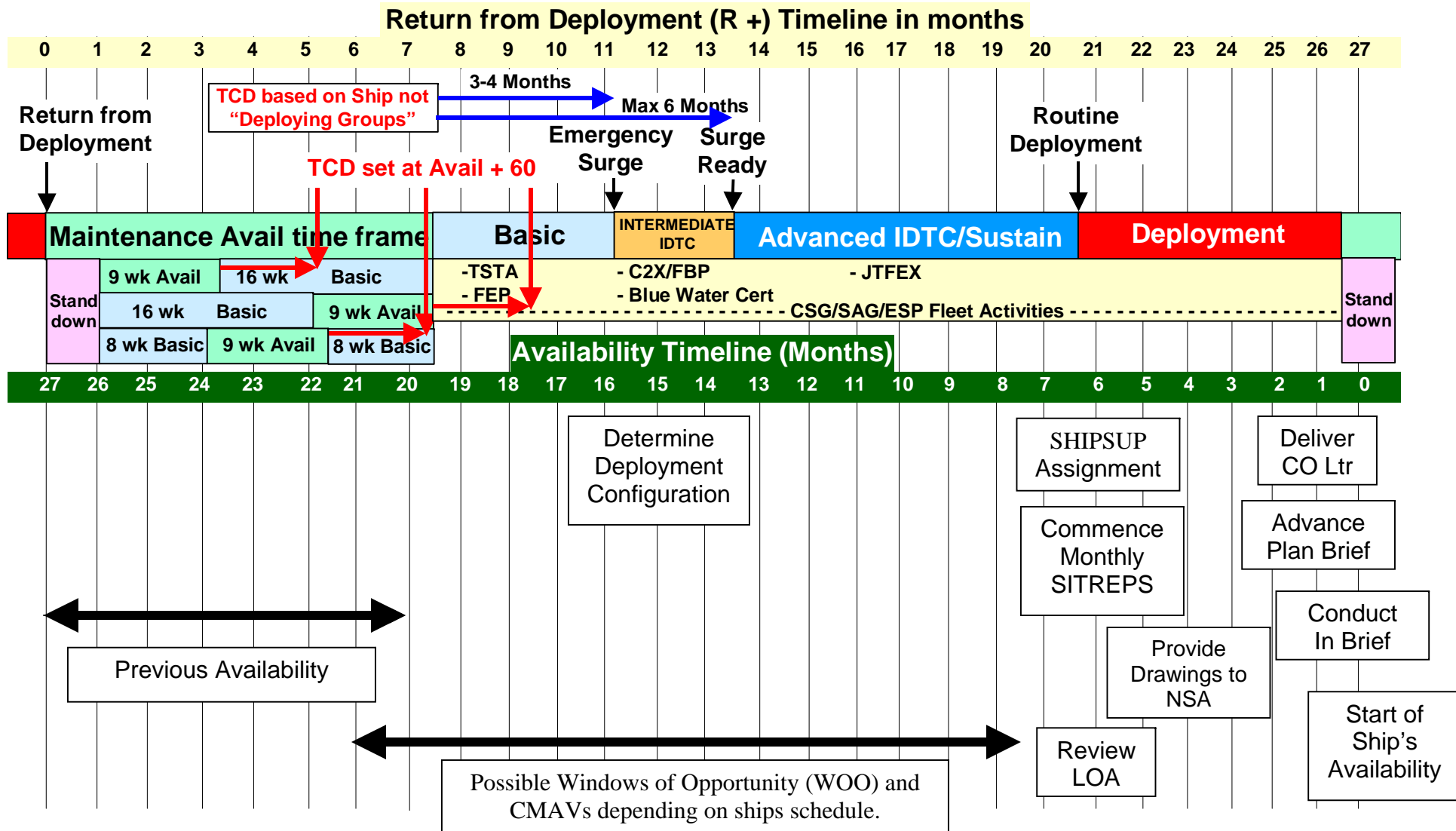




## **INTRODUCTION to the INTEGRATED INSTALLATION TEAM STANDARD PROCESS MANUAL**

1. Purpose. This Integrated Installation Team Standard Process Manual provides policy related process management guidelines for all codes and teams of Space and Naval Warfare Systems Center San Diego (SSC San Diego) involved in the advance planning and execution afloat Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) alteration installations. It is to be used as an indoctrination tool, a training aid, a timeline and event oriented guide. C4ISR alterations are permanent Program and Fleet Alterations to surface ships and submarines.
  
2. Using this Manual. Prior to using this manual, it is recommended that you familiarize yourself with Appendices J and O. Appendix J (Roles and Responsibilities) and Appendix O (Glossary) will provide the terms and the overview necessary to fully understand the processes as laid out in this manual.
  
3. Manual Maintenance. The Installation Management Office (IMO) is responsible for producing and maintaining this and other manuals pertaining to C4ISR installations. This manual will undergo annual review by the IMO. Updates should be forwarded to the IMO. When urgent change to process must be communicated quickly, the IMO will promulgate such changes by way of serialized Process Change Notice.
  
4. Timelines. Two timelines are referenced on the next page. The first is the Fleet Response Plan (FRP) with "R+" and the availability timeline, which is a Fleet Forces Command (FFC) established process to guide the integrated modernization of a Strike Group. It is keyed to count down the months leading to the start of the deployment. The second timeline references the start of availability for a specific ship. It is listed as A-days to start of availability. Under each of these timelines there are key milestones that need to be met and products from them that lead to successful integrated installations.

# Installation Timeline

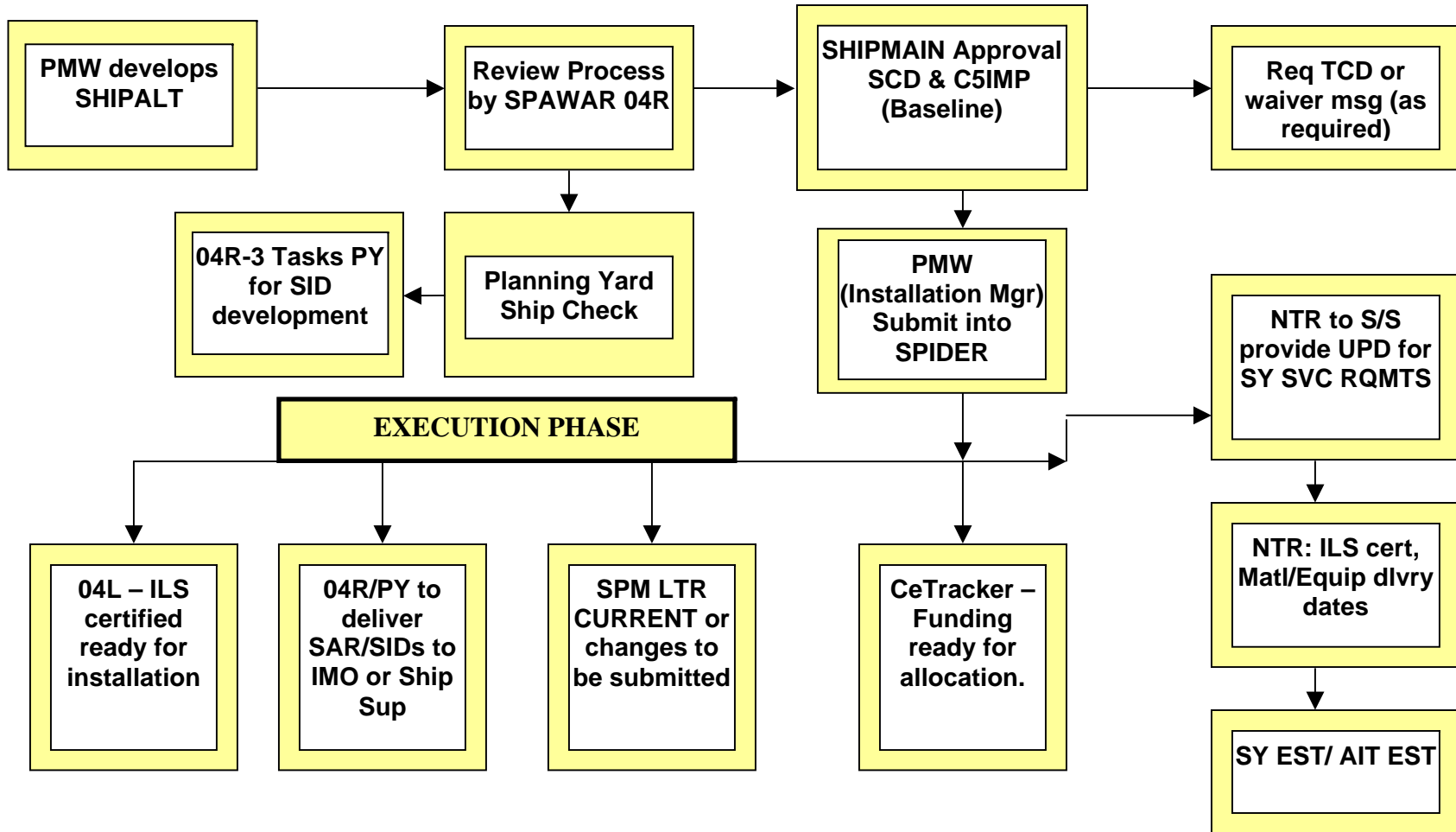
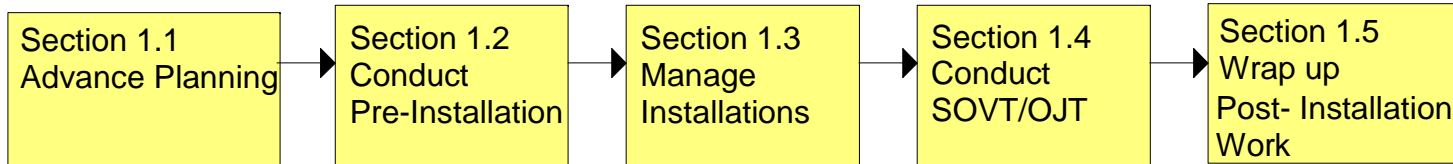


# Table of Contents

Record of Changes	2
Introduction to the Integrated Installation Team Standard Process Manual	3
Installation Timeline	4
Table of Contents	5
Afloat IIT Standard Process	7
Advance Planning Responsibilities	8
Pre-Installation Phase Responsibilities	9
1.1 Perform Advance Planning (A-300 to A-100)	10
1.1.1 Determine Deployment Configuration current and future	10
1.1.2 Attend SPAWAR 04F Advanced Planning Meeting	11
1.1.3 Coordinate with Design War Room to determine shipcheck dates	12
1.1.4 Assign Ship Superintendent	12
1.1.5 Conduct Transfer of Ship Planning Data	12
1.1.6 Verify Alteration Maturity	12
1.1.7 Commence monthly planning SITREPS	13
1.1.8 Prepare for WPIC	13
1.1.9 Receive approved SID from Planning Yard	14
1.1.10 Attend Work Package Integration Conference	14
1.1.11 Provide Approved Drawings	15
1.1.12 Review Final Letter of Authorization	15
1.1.13 Receive/Verify/Respond to SWRMC Industrial Program Manager (IPM/NSA) AIT ID email (A-105)	15
1.1.14 Review NSA Tasking Message	15
1.1.15 Receive NSA estimate	15
1.1.16 Provide Approved Drawings to contractor for bid	15
1.2 Initiate Pre-Install Phase	16
1.2.1 Verify Equipment Delivery Dates	16
1.2.2 Submit AIT Support Requirements	16
1.2.3 Receive Funding for Install	16
1.2.4 Award Delivery Order	16
1.2.5 Provide Funding to NSA	16
1.2.6 Attend Advanced Planning Meeting	17
1.2.7 Re-Verify Equipment and Kit Delivery	17
1.2.8 Deliver Commanding Officer's Letter	17
1.2.9 Check-in with RMMCO	17
1.2.10 Generate NSA Readiness to Start message	18
1.2.11 Invite NSA/SGO/SGS/Branch Head/NTRs to A-15 in-brief	19
1.2.12 Attend Advanced Planning Meeting	19
1.2.13 Commence Weekly IIT SITREP	19
1.2.14 Send Government Clearance Message	19
1.2.15 Conduct In-brief	19
1.2.16 Attend Arrival Conference	18

1.3 Manage Installation: Execution Phase	19
1.4 Conduct SOVT/OJT: System Operation Verification and Testing to include training	26
1.5 Wrap Up: Post-Installation Work	28
Appendix A – Weekly/Monthly Planning SITREP	A-1
Appendix B – Generic Install Gantt Chart POA&M	B-1
Appendix C – Ship Installation Plan Message	C-1
Appendix D – In-Brief Template	D-1
Appendix E – Commanding Officer’s Letter	E-1
Appendix F – Government Clearance Message	F-1
Appendix G – Afloat Funding Procedures	G-1
Appendix H – The I-2000 Contract timeline	H-1
Appendix I – AIT Universal planning Document	I-1
Appendix J – Roles and Responsibilities	J-1
Appendix K – Change Order Request Notification	K-1
Appendix L – Liaison Action Record and Reverse Liaison Action Record	L-1
Appendix M – SPIDER / Cost Estimate Tracker databases	M-1
Appendix N – Glossary	N-1

# AFLOAT IIT STANDARD PROCESS



## 1.1 Perform Advance Planning (A-390 to A-100)

The IIT is responsible for conducting the following advanced planning process in accordance with the following timeline. These timelines contain No Later Than (NLT) milestones:

<b>Time</b> Days (Months)	<b>Step</b> #	<b>Action</b>	<b>Responsibility</b>	<b>Page</b>
A-390 (A-15)	1.1.1	Determine Deploy Configuration	SGO/SGS	10
Varies	1.1.2	Attend 04F Advance Planning Meeting	SGO/SGS	11
A360-345 (A-12 to A-11.5)	1.1.3	Coordinate with Design War Room	SGO/SGS	12
A-180 (A-6)	1.1.4	Assign Ship Superintendent	Ship Superintendent Branch Head	12
A-180 (A-6)	1.1.5	Conduct Transfer of Ship Planning	SGO/SGS	12
A-180 (A-6)	1.1.6	Verify Alteration Maturity (Authorization Planning Letter-APL)	SGS	12
A-180 (A-6)	1.1.7	Commence Monthly Planning SITREPS	Ship Superintendent	13
A180-150 (A-6 to A-5)	1.1.8	Prepare for Work Plan Integration Conference (WPIC)	Ship Superintendent	13
A-180 (A-5)	1.1.9	Receive Approved SID	From Planning Yard to Ship Superintendent	14
A-120 (A-4)	1.1.10	Attend WPIC	Ship Superintendent	14
A-120 (A-4)	1.1.11	Provide Drawings to NSA	Ship Superintendent	15
A-180	1.1.12	Review Letter of Authorization (LOA) by appropriate Ship Superintendent	SGO/SGS/ Ship Superintendent	15
A-105	1.1.13	Review/Verify/Respond to AIT Identification (ID) email	Ship Superintendent	15
A-105	1.1.14	Review NSA Tasking Message (Msg)	Ship Superintendent	15
A-105	1.1.15	Receive NSA Estimate	Ship Superintendent	15
A-100	1.1.16	Provide Approved Drawings to contractor for I200 bid review	COR	15



## 1.2 Initiate Pre-Install Phase

<b>Time Days (Months)</b>	<b>Step #</b>	<b>Action</b>	<b>Responsibility</b>	<b>Page</b>
A-180	1.2.1	Verify Equipment Delivery Dates (EDD)	NTR/Ship Superintendent	17
A-135	1.2.2	Submit AIT Support Requirement to NSA	Ship Superintendent	17
A-120	1.2.3	Receive Funding for Install	SGS/ NTR	17
A-120	1.2.4	Award Delivery Order (DO) I-2000	COR	17
A-100	1.2.5	Provide Funding to NSA	SGS/NTR	17
A-60 through A-0	1.2.6	Attend Advance Planning Meetings	Ship Superintendent/NTR	18
A-30 (A-1)	1.2.7	Re-Verify Equipment Delivery Dates (EDD)	Ship Superintendent /NTR	18
A-30	1.2.8	Deliver CO to CO Letter	SGO/SGS/Ship Superintendent/Branch Head	18
A-30 (A-1)	1.2.9	Check in with RMMCO	NTR	19
A-30 (A-1)	1.2.10	Review NSA Ready to Start Message	Ship Superintendent	19
A-30 (A-1)	1.2.11	Invite NSA to A-15 In-brief	Ship Superintendent	19
A-30 (A-1)	1.2.12	Attend Advanced Planning Meeting	Ship Superintendent	19
A-30 (A-1)	1.2.13	Commence weekly IIT SITREP	Ship Superintendent	19
A-22	1.2.14	Send Government Clearance Message	Ship Superintendent / NTR	19
A-15	1.2.15	Conduct In-brief	Ship Superintendent / NTR/SGO/SGS/ Branch Head	19
A-7	1.2.16	Attend Arrival Conference	Ship Superintendent	20

## 1.1 Perform Advance Planning Process

### 1.1.1 Determine Deployment Configuration current and future

This is formally tasked from the composition message - Afloat matrix – and prior year as tasked by Space and Naval Warfare Systems Command (SPAWARSYSCEN SYSCOM) 04 Directorate.

These are notional dates for the usual case. Exact dates must be calculated so shipchecks can occur prior to the deployment, normally between A-13 and A-9. All shipchecks must be completed by A-9 for SID development and delivery to the NSA NLT A-6.

#### 1.1.1.1 Verify Group Composition

The first step in advanced planning is the determination of the ships that the Fleet Forces Command (FFC) has assigned to the Strike Group. A deploying group is assigned to an Integrated Installation Team (ITT). A Strike Group typically consists of the ships assigned to a Carrier Strike Group (CSG), Surface Action Group (SAG), or Expeditionary Strike Group (ESG) and a few (one to three) Marine Expeditionary Forces (MEFs). "Other" groups that may be assigned to a deploying group for installation planning and tracking purposes are Cooperation Afloat Readiness and Training (CARAT) groups and Counter Drug Operations groups (CDOPS) and Naval Special Warfare Squadron (NSWRON). In addition to U.S. Navy ships, it is also likely that an allied Navy ship and/or a Coast Guard vessel may be assigned as part of the Strike Group.

##### 1.1.1.1.1 Verify name of single deploying group

This name is keyed on the capital ship of the force and the associated calendar year the Strike Group deploys.

##### 1.1.1.1.2 Identify the name and hull number of all the ships in the single deploying group

This can be done through the following methods (from the most accurate to the least accurate):

1. Strike Group composition message via message traffic
2. Commander Naval Surface Force U.S. Pacific Fleet (CNSP) Strike Group matrix via email
3. SPAWARSYSCEN SYSCOM 04 deployment schedules via email
4. Navy Data Environment – Navy Modernization (NDE-NM) utilizing the Afloat Master Planning System (AMPS)

##### 1.1.1.1.3 Contact current IIT for each ship

A ship in the single deploying group may be part of an upcoming Strike Group or it may be assigned to the "Other" category mentioned in the Determine Group Composition.

##### 1.1.1.1.4 Obtain the ships schedules

Sources for the information include:

- Strike Group composition message via message traffic
- Quarterly CNSP visit scheduling messages via message traffic
- CNSP Strike Group matrix via email
- SPAWARSYSCEN SYSCOM 04 deployment schedules via email
- Fleet Modernization Program Management Information System (FMPMIS) via Internet
- CNSP Projected Maintenance Schedules via email

- COMSUBPAC/SSC-SD Quarterly Scheduling Conference

#### **1.1.1.1.5 Contact respective ship's POC**

This is an opportune time to be introduced to the Point of Contact (POC) of ship's company. The POC is usually the Combat Systems Officer (CSO) or Electronic Material Officer (EMO). (CSMO in the case of a CV/CVN, COMMO or C4I officer in the case of some LHA/LHDs). On AEGIS ships, the Systems Test Officer (STO) may be the POC. For submarines, the Navigator (NAV) or Weapons Officer (WEPS) is normally the POC.

#### **1.1.1.1.6 Obtain C4ISR Installation package information**

Build a picture of the C4ISR installation package SPAWARSYSCEN has installed or is currently installing as well as any difficulties the ship may have encountered recently related to SPAWARSYSCEN installations. Sources for this information include Ship Superintendent and SGO/SGS from the previous cycle, SPAWAR 04F capabilities matrix, or historical data archived in SPAWAR PEO Integrated Data Environment and Repository (SPIDER).

#### **1.1.1.2 Determine Tasks**

SPAWARSYSCEN San Diego receives a tasking letter yearly. The PEO C4I and Space and SPAWAR 04 Work Plan submitted via SPIDER (previously known as the IDB), is the source used to determine installation tasking.

#### **1.1.1.3 Determine Primary and Secondary Installation Windows and Shipcheck dates**

Two installation windows are required for planning purposes: a primary and secondary. For ships, the primary installation window is the CNO availability. PMW/Avail Start and PMW/Avail End will list the availability dates and the PA Start/PA End dates are used by the Performing Activity to record the proposed dates of installation. Additional columns are available to record the actual installation start and end dates. All dates can be obtained and are required to be recorded in SPIDER by Strike Group Superintendent or by Ship Superintendent as assigned. Submarine availability windows are coordinated quarterly with TYCOM. The PMW/Avail Start and PMW/Avail End dates as well as the PA and Actual dates are required to be entered into the SPIDER.

The secondary installation window is coordinated between the IIT, ship, ISIC and TYCOM and is determined by taking into consideration the employment schedule of each ship. Choose a secondary installation window that you can reasonably arrange, taking into consideration the installation window requirement and the operational requirements of the ship. Consider the SID and equipment Estimated Delivery Dates (EDD), allowing sufficient time to meet the A-120 and A-60 milestones. Designating D-14 to D-11 (14 to 11 months prior to the deployment date) as the start date of the secondary installation period can assist with successful planning.

Inform the Type Commander (TYCOM) of any secondary (or tertiary, etc.) installation windows that may be needed as soon as possible. It is imperative that these windows be reasonably feasible to avoid continuous changes being submitted to TYCOM. Enter installation dates (confirmed or tentative) for all tasked installs into SPIDER via TLM in SPIDER.

#### **1.1.2 Attend SPAWAR 04F Advanced Planning Meeting**

Under FRP, deployment compositions and deployment dates are fluid. SGS/SGO tracks. PM Design IPT, NTR participation, funding, schedules, etc., will be 04R-3, PMW, ISEA, NTR conducted. IMO receives final product – SIDs. SGS/SGO maintains liaison with 04F for advance planning purposes, to include (a) review/provide updates to APL (Advance planning

letter); (b) review anticipated work plan via SPIDER/CE-TRACKER. SGS/SGO track/ensure funding is programmed to anticipated work plan.

### **1.1.3 Coordinate with Design War Room to determine shipcheck dates.**

Review Planning Yards (PY) shipcheck dates in SPIDER. Discuss and resolve disparities with SPAWAR 04R3 focusing on what is offered to the Fleet and what is planned for shipchecks. This does not apply to submarines in this document.

### **1.1.4 Assign Ship Superintendent (A-180)**

No later than A-180, a Ship Superintendent should be assigned by his or her cognizant supervisor, so as to appropriately pre-plan the Ship's installations within the CNO availability (or window of opportunity if outside of an availability).

### **1.1.5 Conduct Transfer of Ship Planning Data (required at the assignment of the Ship Superintendent)**

If Ship Superintendent's duties/responsibilities are transferring from Strike Group Superintendent, Strike Group Officer or other Ship Superintendent they must conduct a turnover of all planning data, job status and configuration to newly assigned Ship Superintendent.

### **1.1.6 Verify Alteration Maturity (APL: Advance Planning Letter) (A-180)**

Identify to Regional Maintenance and Modernization Coordination Office (RMMCO) areas of concern in Master list for correct/verification to support later check-in. Contact RMMCO to check Master list status of planned ship alterations (SHIPALTS). Per comment, authorization process, APL will list "authorized" and "planned but not authorized" (PNA) installs. These will represent/identify maturity of alterations. Ship Superintendent/SGS/SGO will work with 04F to get any other installs planned listed on the LOA that issued at A-120 (A-4).

#### **1.1.6.1 Review status via RMMCO Master List**

Review status of:

SHIPALT Alteration Record (SAR) (approved by Ship Program Manager (SPM))

SID's (approved by Planning Yard)

Integrated Logistics Support (ILS) (certification endorsed by SPM)

Equipment Delivery Date (EDD)

Field change bulletins (FCB) or Electronic Change Orders (ECO)

Software deliveries (SWD)

- Note that the above applies to all surface ships (except Coast Guard and Mine Warfare ships) the following list also applies:
  - Ship Change Document (SCD) approved by Fleet NLT A-360
  - SID approved by Planning Yard by A-180
  - ILS approved by SPM by A-120
  - EDD delivery on track for A-30
- Under Ship Maintenance (SHIPMAIN) FCB, ECO, or SWD are accomplished as Program Alterations and must receive SHIPMAIN approval to proceed.
  - FCB and ECO will continue to be develop and be approved by 04R-3 as guidance to the IMO for their implementation
  - SWD will be written as ECOs for easier configuration control

#### **1.1.6.2 Review status in SPIDER**

Items to check for are:

- SAR (should be approved by SPM) (Subs Only)
- SCD approved by the Fleet
- SID (should be approved by PLANNING YARD/SPM)

- ILS (certification endorsed by SPM)
- Funding (not critical at this point)
- Equipment EDD
- Field change bulletins (Subs only)
- Engineering Change Order (Subs only)
- Software deliveries (Subs only)

### **1.1.6.3 Resolve Status Differences between RMMCO Master List and SPAWAR 04 source data from SPIDER**

Work with appropriate representatives for resolution. Ensure RMMCO is provided with latest correct status.

- SCD – SPAWARSYSCEN 04R-3
- SAR – SPAWARSYSCEN 04R-3 (Subs Only)
- SID – SPAWARSYSCEN 04R-3
- ILS – SPAWARSYSCEN 04L
- LOA – SPAWARSYSCEN 04R-3
- Test Plans – NTR
- Funding – IMO Financial
- Equipment EDD – SPAWARSYSCEN 04R-2
- Field change bulletins – SPAWARSYSCEN 04R-3
- Engineering Change Order – SPAWARSYSCEN 04R-3
- Software deliveries – SPAWARSYSCEN 04R-2

### **1.1.6.4 Track to resolution all SITREP issues**

List issues in monthly and weekly planning SITREP and identify responsible parties.

### **1.1.7 Commence monthly planning SITREPS**

See appendix A

### **1.1.8 Prepare for WPIC (A-180 to A-150)**

#### **1.1.8.1 Obtain AIT UPD from each NTR with Notional POA&Ms**

Obtain AIT Universal Planning Document (UPD) (Appendix I) with notional POA&Ms (Appendix B) from each NTR. These provide basic information necessary for Southwest Regional Maintenance Center (SWRMC) to integrate all CNO work and write the work specifications for what we need the SWRMC/support facility to provide.

- Support services include:
  - Crane lifts
  - Lay downs
  - Rigging
  - Power
  - Air
  - Welding, painting, lagging, gas-free services, fire watches
  - Shop support
  - Non-destructive Testing (NDT)
  - Gases
  - Forklifts
  - Packing material

- Shipping services
- Site access & parking
- Storage (CONNEX Boxes)
- Paint abatement

### **1.1.8.2 Consolidate UPDs into one integrated IUPD**

The Ship Superintendent and QA Manager conduct a Quality Review of the UPDs and Ship Superintendent consolidates individual UPDs into an integrated version for all installs in a specific availability.

### **1.1.8.3 Integrate POA&Ms and Identify conflicts**

### **1.1.8.4 Conduct pre-WPIC UPD/POA&M review w/ NTRs**

Review work splits with SWRMC. It is required that work is reviewed and integrated for testing and mutual support issues.

### **1.1.8.5 Review Ship Letter of Authorization (LOA)**

The NAVSEA LOA must include all Program Alterations SPAWARSYSCEN will be executing, to include Field Changes (FCs), Engineering Changes (ECs), and Software updates (SWDs).

### **1.1.8.6 Request additions or deletions**

If any additions and deletions are required to the LOA coordinate with SPAWAR 04R-3 and Participating Manager (PARM) to request either to LOA. If an additional system is identified before A-120, contact SPAWAR 04R-3 for assistance. If system is identified inside the A-120 mark, contact the PARM and SPAWAR 04F to request initiation of TYCOM message authority for inclusion on the LOA.

### **1.1.9 Receive approved SID (A-180) From Planning Yard to Ship Superintendent and provide to NTR/ISEA**

Work with SPAWAR 04R-3 to resolve issues with SHIPALT Installation Drawings (SIDs) that are not delivered by A-180. Per FRP LOA A-180 requirements and design IPT SIDS will be delivered at A-180.

#### **1.1.9.1 NTR/ISEA approved SIDs in preparation for production.**

##### **1.1.9.1.1 Submit LAR as applicable in ref to appendix M.**

### **1.1.10 Attend Work Package Integration Conference (WPIC) (A-120)**

The WPIC is scheduled and hosted by the Regional Maintenance Center (RMC). The intent of the conference is for the Naval Supervising Agent (NSA) to determine all the work planned for the CNO availability and resolve any conflicting schedules and determine support requirements that RMC will be responsible to provide.

As per NAVSEA reference NSTS 9090.310(series):

- Integrated Universal Planning Document (IUPD): (see Appendix I)
- Scope: Notional Schedule; Location of Work; Special Requirements
- References
- Requirements: Services; Storage; Man-days; Facilities; Conditions/Climate Control
- Additional Notes

-Integrated installation POA&M (**see Gantt Chart POA&M in appendix B**). Provide copies of SIDs for NSA installation work to be accomplished.

Submarine specificity: approved Memorandum of Agreement (MOA) - a SUBPAC requirement – must be delivered to TYCOM prior to production start date.



### **1.1.11 Provide Approved Drawings (A-120)**

These approved drawings are provided to NSA for any installation work tasked to them.

### **1.1.12 Review Final Letter of Authorization (LOA) (A-180)**

The LOA should include all planned and approved alterations for upcoming CNO availability. If not, coordinate with SPAWARSYSCEN 04R-3-class desk and the PARM for TYCOM approval. Approval must be received by A-75.

### **1.1.13 Receive/Verify/Respond to SWRMC Industrial Program Manager (IPM/NSA) AIT ID email (A-105)**

The NSA AIT identification email will list all IIT system installations identified at the WPIC and special requirements. Strike Group Superintendent or Strike Group Officer will verify systems approved and respond as necessary.

### **1.1.14 Review NSA Tasking Message (A-105)**

This message from the IPM tasks individuals to attend the monthly advance planning meetings to commence at A-90 and will contain action items from WPIC or the advance planning meetings. This may not occur concerning submarines.

### **1.1.15 Receive NSA estimate (A-105)**

This estimate provided by the NSA for support services and installation tasking identified at the WPIC and in the IUPD.

### **1.1.16 Provide Approved Drawings to contractor for bid (A-100)**

#### **1.1.16.1 NTR/SME provide Draft SOW (A-100)**

A draft copy of the Statement of Work will be generated by the Advancement Planning team and Ship Superintendent, then delivered to the Naval Technical Representative (NTR) or Subject Matter Expert (SME) for final review and approval. The NTR/SME will provide the final SOW to the Contract Office Representative (COR) for development of contract.

#### **1.1.16.2 Provide approved drawings to all concerned**

With SIDs delivered at A-180, Ship Superintendent will provide SOW and SIDs to COR for I-2000 contract/follow-on. NTR will provide to contractor when not processing through IMO.

## **1.2 Initiate Pre-Install Phase**

### **1.2.1 Verify Equipment Delivery Dates (EDD) (A-180)**

Equipment delivery by designated PMW should be delivered by A-60.

The Ship Superintendent is to contact NTRs and verify equipment has been ordered. If milestone is not met, identify in IIT Monthly planning SITREP and engage SPAWARSCEN 04R2 representative for resolution.

### **1.2.2 Submit AIT support requirements (A-135)**

For ships entering their CNO Availabilities, the SHIP SUPERINTENDENT must submit AIT requirements to the Naval Supervising Activity (NSA) by this date.

### **1.2.3 Receive Funding for Install (A-120)**

All installations tasked and planned for the upcoming availability should have funding allocated, prior to the start of installation. If funding is not allocated, contact SGS/SGO to request a funding allocation for the installation.

### **1.2.4 Award Delivery Order (DO) (A-100)**

#### **1.2.4.1 Generate SOW (A-100)**

The Advance Planning Team and SHIP SUPERINTENDENT work together with the NTR/SME to develop the SOW in accordance with applicable SPAWARSCEN Instructions for delivery to the COR.

Refer to Appendix H, Statement of Work (SOW)/DO Development/Preparation.

If the DO involves more than one system the funding is determined by ending the ships Customer Order Number (CON) with the numerals "04". (Ensure amounts on the DO are within limits of the system plan in ERP). If the DO involves only one system the funding for specific hull/system is used. See Appendix H on Afloat Funding Procedures for further detail.

#### **1.2.4.2 Route SOW to Contract Officer's Representative (COR)**

The SHIP SUPERINTENDENT will route the SOW through the COR for QA review, generating CDRL and providing the required contract supporting documents to submit to SSC San Diego Contracts Office for potential Contractors.

#### **1.2.4.3 Process DO**

IIT COR will create a Delivery Order in SAP and route to the IIT Financial Office for funding review. IIT Financial Office will validate funding availability, appropriate accounting data (ERP WBS number, ITPS, Subhead, etc) and approve DO in SAP. See Appendix G on Afloat Funding Procedures for further detail.

Delivery Orders over \$500K, route to Code 260 for approval.

### **1.2.5 Provide funding to NSA (A-90)**

Funding is provided to support services and for tasked installation work (OFD).



### 1.2.5.1 Provide information

The Ship Superintendent must provide the SGS/SGO with definition of work and funding amount. The SGS/SGO will complete the OFD Request Form and submit to the IIT Financial Office. SGS/SGO will ensure the requested OFD amounts are within limits of the Contract allocated amounts and planned amount in SAP.

### 1.2.5.2 Prepare Outgoing Funding Document (OFD)

IIT Financial Office will create the appropriate OFD record in SAP to send funding to organization identified on the OFD request submitted by SGS/SGO. The IIT Financial Office will validate funding availability of the ERP Contract WBS in SAP. Discrepancies will be identified and referred to the SGS/SGO for resolution prior to the release of the OFD.

### 1.2.5.3 Route OFD

OFD record will be routed via SAP from the IIT Financial Office to SSC San Diego Comptroller Office for signature and distribution to NSA.

### 1.2.5.4 Process OFD

Comptroller Office will review the OFD record in SAP and create the appropriate Outgoing Funding document, approve and distribute the hard copy to the NSA. IIT Financial Office will print out a hard copy of the signed approved OFD from SAP. Upon receipt of the signed OFD from NSA, the IIT Financial Office will link the accepted OFD into SAP.

### 1.2.6 Attend Advanced Planning Meeting (A-60)

At the Advanced Planning Meeting, the Ship Superintendent will provide the latest updated/detailed POA&M to NSA and ship.

### 1.2.7 Re-Verify Equipment and Kit Delivery (A-30)

Government Furnished Material/Government Furnished Equipment (GFM/GFE) milestone is A-30.

The Ship Superintendent will contact NTRs and verify equipment has been delivered. If milestone is not met, identify in IIT Weekly planning SITREP and engage SPAWARSSYSCEN 04R2 representative for resolution.

### 1.2.8 Deliver Commanding Officer's (CO's) Letter (A-30)

This is dependent on ship returning from deployment.

The Letter as specified in **Appendix E** is to be delivered to each ship CO early in the process, preferably when the Ship Superintendent is first assigned. It is a CO-to-CO letter that has been written by the SPAWARSSYSCEN SYSCEN Commanding Officer and is to be issued without alteration. The areas for specific information to the particular ship have been highlighted for your ease of use in the enclosed sample letter. Likewise, the questionnaire (enclosure with the letter) and the route sheet for the letter are to be used without alteration. This letter will be prepared by the Branch Heads administrative assistant and hand-delivered to the ship's CO by the Ship Superintendent.

### 1.2.9 Check in with RMMCO (A-30)

The NTR will abide by RMMCO instruction SWRMINST 4790.3 and complete enclosure (10) of this instruction for each alteration.

**1.2.10 Generate NSA Readiness To Start (RTS) message (A-30)**

SGO/SGS will generate ready-to-start message.

**1.2.11 Invite NSA/SGO/SGS/Branch Head/NTRs to A-15 in-brief (A-30)****1.2.12 Attend Advanced Planning Meeting (A-30)**

Provide contractor production schedule/integrated installation plan if available, otherwise provide latest/updated POA&M and Integrated Universal Planning Document (IUPD).

**1.2.13 Commence weekly IIT SITREP (A-30)**

Refer to IIT SITREP in **Appendix A**.

**1.2.14 Send Government Clearance Message (A-22)**

Refer to template in **Appendix F**.

**1.2.15 Conduct In-brief (A-15)**

Appendix D is the in-brief template. In-briefs, as a minimum, must contain the information specifically called for in the NSTS 9090-310(series). The information specified for the installations, especially the capabilities, limitations, and requirements for ship's force to support the installation, must be included. This in-brief presentation is given 1–2 weeks prior to the start of the first SPAWARSYSCEN installation in the IDTC. The brief is to be scheduled at a time when the CO can attend, or the issue must be brought to the attention of the SSC San Diego San Diego Commanding Officer. A copy of the brief is to be left with the CO, CSO and EMO. Please note that a top level integrated Microsoft® (MS) Project POA&M is provided that details each installation's milestones and key phases; as supplied by the NTR's/SME's and integrated by the Ship Superintendent. The key areas of coverage for the in-brief are:

- a. Overall Team POCs (Ship Superintendent/ Prime contractor) and system POCs (NTR/SME contractors)
- b. Overview of install phases
- c. Ship support required (e.g., satellite air time for SOVT, ordering crypto, support for training and LAN cutover, general space access, etc.) as identified in the Integrated Universal Planning Document
- d. Review of training requirements for ship and schedule
- e. Plan for Integrated Logistics Support (ILS) delivery
- f. Discussion of End-to-End verification testing and time frame
- g. Capabilities and limitations, specific impact items (e.g. mast work, Communication Security (COMSEC) Material System (CMS) vault access, power outage requirements, LAN cutover date and process, etc.), POA&M specific to system

Note: It is best if Pre-Installation Check-Out is concluded prior to In-Brief

**1.2.16 Attend Arrival Conference (at Shipyard)**

This is arranged by the NSA for the pre-berthing instructions of the upcoming CNO Availability.

## 1.3 Manage Installation: Execution Phase

- Reference:
- (a) NSTS 9090.310 (series)
  - (b) Navy Standard Items (Note particularly the following items, not to minimize any other item within their importance): Item nos. 009-07 Housekeeping, 009-11 Lagging requirements, 009-12 Welding requirements, 009-24 Isolation, tagging requirements, 009-32 Painting requirements, 009-35 Confined Space Entry, and Category II Government checks and its requirements.
  - (c) Quality System Plan – Technical Document 3121 and NAVSEA Inst 9304.1 series.
  - (d) Statement of Work (SOW) of I2000 N66001-01-D-5020
  - (e) SPAWARSYSCENINST 4720.3 series
  - (f) OPNAV Inst 4720.2 series FMP Policy
  - (g) SPAWARSYSCEN /SUPSHIP Memorandum of Agreement (MOA)
  - (h) SSC-SD 26001 Operational Procedure OP-03-01 Realization Contract Review
  - (i) Shipboard Safety (to include PPE, Hose handling for hot work, air, power, etc., fire watches, grinding, lead-tests, gas-free tests and Competent Persons, electrical safety, tag-outs, etc.)
  - (j) Lay-down and Crane instructions.
  - (k) SWRMCINST 4790.3 series (RMMCO)
  - (l) NAVSEA 4130.12B Software configuration data on Navy Platforms and associated training sites
  - (m) TEMPEST: DON Information Assurance (IA) Publication Module 5239-31; OPNAVINST C5410.93 series DON Tempest/PD Procedures; NSTISSAM Tempest series
  - (n) EMI/EMP: Electro Magnetic Interference/Electro Magnetic Pulse
  - (o) DON Information Assurance Certification & Accreditation (C&A) Publications, to include the Security Test and Evaluation (ST&E) Checklist for Integrated Shipboard Network Systems (ISNS)
  - (p) PCMS: RIM 05T1-99 Passive Countermeasures System
  - (q) MIL-STD-2042 Fiber Optic Topology Installation Standard Methods for Naval Ships Section 6 (Tests)
  - (r) MIL-S-24235 For Stuffing Tubes & MIL-S-24705 For Penetrations, and all other relevant and pertaining Military Standards and instructions WRT cables and cableways.
  - (s) OSHA Regulations

### 1.3.1 Execution of Integrated Installation

As per 1.2.9 at A-30 requirements are IRT reference (k) and its enclosure (12), WRT the RMMCO check-in requirements, to include the visitor clearance message, third party indemnity for inside of the shipyard. Funding needs to be allocated to AITs /IITs and Official Funding Document (OFD) to MSRs or SUPSHIP for the shipyard if in the shipyard and available. All items must need to be met before authorization is given for the AIT to start any production work onboard the ship at A-0.

**1.3.2** It is assumed that all items noted in Advanced Planning stage 1.1 and Pre-installation 1.2 should be completed, or at least a date provided and published, that will support the

installation(s) onboard the designated ship. The following checklist reflects those required items before checking into with SWRMC / RMMCO as per reference (a), (e) and (f).

- \_\_\_\_\_ ILS certification or waiver
- \_\_\_\_\_ TCD Waiver if passed TCD
- \_\_\_\_\_ Authorization Letter for each individual installation planned
- \_\_\_\_\_ Is the ship planned to be decommissioned within 5 years?  
If so, SECNAV waiver requested and approved
- \_\_\_\_\_ Received SAR/SCD SIDs, and/or TEMPALT (data package)
- \_\_\_\_\_ Funding allocated
- \_\_\_\_\_ GFE/GFM Equipment available
- \_\_\_\_\_ Installation Contract awarded and D.O. sent
- \_\_\_\_\_ SUPSHIP/NSA (in contract with) Shipyard MSR funded
- \_\_\_\_\_ Clearance/Visit messages and third party indemnity sent to NSA
- \_\_\_\_\_ In-brief/POA&M completed NLT A-15 with ship
- \_\_\_\_\_ Ship's training for each installation scheduled as required

**1.3.3** During availability the following services may be required:

- Work items
- Crane request
- Lay down
- Lead checks
- Hot work request
- QA checks WRT Navy Standard Items
- WAFs

**1.3.4** The SSC San Diego installation "Team" will attend Arrival Brief, scheduled by NSA (SUPSHIP PM).

**1.3.5** NTR is responsible to pick up approved check-in sheet with RMMCO prior to ships availability date.

**1.3.6 PICO Validation (A-15)**

Refer to 9090-310 (Series) on page 34 paragraph 3.5.5. Ships force is to perform Pre-installation Check-Out (**PICO**) with verification by the NTR for perspective system.

**1.3.7** Ship Superintendent sets up AIT (contractor) and NSA, Port Engineer/SWRMC, SUPSHIP, with Shipyard meeting to review and discuss details, concerns, questions, POCs, and POA&Ms for each installation.

To include:

1. Technical requirements that involve working in spaces with other contractors, i.e. decking and new system installations, mast preservation and new antenna installations, etc.
2. Shipyard chat system and requirements.
3. Location of Knack box, lay down area, office space, HAZMAT if required, etc.
4. Weekend work, shift work, turnover, and quality assurance responsibilities.
5. Reporting requirements.
6. Power and air requirements.
7. Gas-free requirements.
8. Scaffolding and where.
9. Crane and rigging, what, how many and where.

**1.3.8** Contractors are required to attend Ship Safety classroom/certification requirements within the shipyard.

**1.3.9** Ship Superintendent, SGO or SGS, NTR and AIT Lead are to attend NSA/Commanding Officer Weekly Progress Meetings with overall status and significant events, concerns and schedule changes.

**1.3.10** Ship Superintendent will initiate regular meetings with SPAWARSYSCEN SYSCEN production contractors and NTR to include daily reports and weekly updated POA&M (i.e., “what is planned today and tomorrow, and what was done yesterday; how many personnel are working onboard; will AITs be working onboard during off-duty hours or weekends/holidays;.what spaces will be accessed, and if the ship needs to be in those spaces; what “tag-outs” are required and what equipment will be affected; is chill water needed for testing, etc.”)

**1.3.11** Ship Superintendent will monitor and track any change to Scope of Work. CORNs are initiated and submitted by SSC contractors to the IMO front office who will endorse and submit up the chain-of-command for approval. It should be noted that contractors are responsible for submission of their own CORNs upon discovery of an issue.

**1.3.12** Ship Superintendent will monitor and supervise SPAWARSYSCEN contractors to ensure quality; safety and discipline procedures are followed. Work with the NTR, and ensure a government representative is readily available to coordinate efforts, optimization in any situation, emergent or routine, and ensure system installations are kept within schedule.

**1.3.13** Ship Superintendent will report safety, security or ethical violations immediately, unless plausible to handle on the spot if considered a minor offense, i.e., not life-threatening or threatening to the National Security of the country.

**1.3.14** Ship Superintendent will ensure NTR completes weekly reports and provides copies to Ship Superintendent, to be maintained in the installation notebook throughout availability.

**1.3.15** Ship Superintendent will create installation notebook, ensuring all contractual, financial, specific technical or schedule/financial changing emails, messages, or any type of official data or reports are kept.

**1.3.16** Ship Superintendent will send Weekly SITREP via email to Commanding Officer, Executive Officer, Ship's Liaison (STO, EMO, CSO), and addee's "SITREP-TO" and "SITREP-CC" (see Appendix A).

**1.3.17** The NTR is responsible to verify and complete a physical check of all requirements noted in Navy Standard Items (ref (j)), cableway requirements in (refs (h) and (i)), that watertight integrity is per required tests in these references and Quality System Plan (ref (k)), and all other applicable instructions. The NTR and the AIT lead is to ensure that the inspection is conducted, sited and signed by at least a senior enlisted ship's force per the NSTS 9090.310 series (ref (a)). It is recommended that the AIT prepare a document with all penetrations, and have the ships force sight every new penetration, to ensure total buy-in by the ship, of their cableways.

**1.3.18** NTR is responsible to ensure that compartment closeouts and underway-for-sea checks are completed, that all man-a-loft requirements complete are checked out at CSMC, that all tags are cleared WRT electrical or piping safety, and that all security requirements are met in secure and classified spaces IAW all DON Security directives. Ensure that any HAZMAT used is stowed and/or removed from the ship/pier.

**1.3.19** Ship Superintendent is responsible to ensure each space is walked through with a visual check for debris, safety, and or/and ready for compartment closeout for the ship. Normally this is noted on the NSA (SUPSHIP PM) and Shipyards POAM, where the SSC San Diego representative will give that report to, after signing off with the designee of ship's force.

**1.3.20** The goal of the POAM is to plan for production completion by Engineering Light Off, and system checks by Combat Systems Light Off.

## **NOTE: Quality and Safety Requirements.**

### ***Shipboard Quality and Emergency Reporting Requirements.***

Before AITs are to go onboard any U.S. Navy ship, the following documents need to be familiar to those personnel:

1. Shipyard Employment E-Tool Working Conditions  
[http://www.osha.gov/SLTC/etools/shipyard/standard/working\\_conditions/index\\_wc.html](http://www.osha.gov/SLTC/etools/shipyard/standard/working_conditions/index_wc.html)
2. TS9090-310 (series)
3. NOSC TD-600: Civilians Boarding Navy Ships
4. SSC San Diego Technical Document 3121: Quality System Plan for C4ISR IIT
5. Naval Safety Center, Afloat Directorate: Guide to safety in an availability  
<http://www.safetycenter.navy.mil/afloat/surface/downloads/availabilityguide.doc>
6. Web Sites applicable:  
<http://www.safetycenter.navy.mil/instructions/default.htm#afloat>  
<http://www.swrmc.navy.mil>  
<http://www.rmmco.navy.mil>  
<http://www.continentalmaritime.com>  
[http://www.baesystems-sandiegoshiprepair.com/vessel\\_req](http://www.baesystems-sandiegoshiprepair.com/vessel_req)  
<http://www.nassco.com/>



As referenced above, the Quality Assurance Plan/Quality System Requirements need to be met in accordance with NAVSEA's instruction, TS9090-310 (series) Appendix D. As quoted per TS9090-310D, the following is provided at a minimum:

"The AIT shall perform, or have performed, the inspections and tests required to substantiate product conformance to approved design drawings, specifications, and contract or task requirements and shall also perform, or have performed, all inspections and tests otherwise required by applicable SHIPALT records, installation drawings, contract or tasking documentation. Inspection, Test Plans, and Records shall be available upon request by NSA.

The Quality System shall include the following additional requirements, clarifications, and processes:

- 1.1 Master Test Plans (MTPs). An MTP shall be prepared for each alteration (permanent or temporary). During accomplishment of an alteration, associated MTPs shall be provided to the ship, and designated NSA.
- 1.2 Test Procedures (TPs). Shall cover in detail the procedures for accomplishment of each of the equipment unique tests required to demonstrate the proper operation of all equipment impacted by accomplishment of the alteration. This includes all equipment that was modified or relocated as a result of the accomplishment of the alteration. Testing will be adequate to demonstrate compliance with applicable installation certification requirements (SIGSEC, TEMPEST, RADHAZ, EMI, EMC, SUBSAFE, etc).
- 1.3 Process controls. An integral part of the quality system. In addition to process controls that may be required by the SHIPALT record, installation drawing, or contract or tasking documentation, the AIT will provide and maintain such process controls as are necessary to ensure the quality of shipwork. At a minimum, process controls shall include the following:
  - 1.3.1 Design product control procedures.
  - 1.3.2 Installation process control procedures. Instructions shall be developed which identify requirements necessary to preclude damage to the ship or injury to personnel during the accomplishment of shipwork. These instructions shall include, but are not limited to:
    - a. Control of magnetic material
    - b. Material storage at the work site
    - c. Storage and use of hazardous materials
    - d. Fire prevention
    - e. Sight and hearing protection
    - f. Material for staging and screening temporary covers and shelters
    - g. Installation of cofferdams, patches, and shaft wraps
    - h. Hotwork
    - i. Uncrating/unpacking of equipment
    - j. Storage and use of tools and test equipment
    - k. Protection of pipes, cables, and equipment during shipwork
    - l. System or equipment de-activation/reactivation
    - m. Control of connector fabrication
    - n. Workmanship

#### 1.4 Personnel Certifications.

##### 1.4.1 Hot work

- 1.4.1.1 Competent Person
- 1.4.1.2 Firewatch personnel

- 1.4.1.3 Tank cleaning personnel
- 1.4.1.4 Persons performing hot work
- 1.4.1.5 Test personnel qualification (NDT)

1.4.2 Insulation work. Qualified person with a written designation who will take and count samples, monitor personnel, inspect affected spaces, and certify affected areas are safe to enter.

1.4.3 Fluorocarbon use

1.4.4 Electrical/Electronic Connector Work

1.4.5 Accomplishment of NDT

1.4.6 Painting of Critical Surfaces

1.4.7 Entry into Confined Spaces

1.4.8 SUBSAFE work

1.4.9 Electrostatic Discharge (ESD) work

1.4.10 PCMS work

#### 1.5 Headquarters Centrally Procured Material (HCPM)

1.5.1 Receipt of HCPM (with use of DD-1348-1 and Government Bill of Landing (GBL) retained by AIT). Calibration as required.

1.5.2 Records of HCPM

#### 1.6 Configuration Status Accounting.

1.6.1 Equipment accounting (not material) to be installed onboard ship.

1.6.2 Software accounting

1.6.3 Weight accounting (removed)

1.7 Problem Resolution Process. Procedures shall be maintained that allow for documentation of actions to resolve any quality problems with installation or work control. The necessary documentation shall be made available to the AIT Manager and applicable NSA.”

### **EMERGENCY:**

In case of any emergency, the Ship’s Emergency Procedure must be adhered to. If on a U.S. Naval Base, or within any shipyard, adherence to their Emergency Procedure and Policies is required at all times.

OPNAVINST 5100.19D is the AFLOAT SAFETY INSTRUCTION for all Military and DOD employees and specific attention is drawn to the following Chapters and Appendixes that are used on a more routine basis:

<http://www.safetycenter.navy.mil/instructions/afloat/510019D.htm>

OPNAV 5100.19D A3-A, A3-B, Chpt A6, A0604 Appx A6-E, Appx A6-H, B7, B11, B12, Chpt C9, Chpt C11, C18, C23



For reporting requirements OPNAVINST 5102.1D -- Navy & Marine Corps Mishap and Safety Investigation, Reporting, And Record Keeping Manual (<http://www.safetycenter.navy.mil/instructions/ashore/5102/default.htm>) will be used.

As a Ship Superintendent or NTR, an investigation is required in accordance with Uniform Industrial Process Instruction 0900-453 NNSY SUPP-2; Critique and Problem Analysis Matrix Processes; Problem Identification and Investigation, i.e., ELECTRICAL SHOCK or ANY accident onboard the ship.

## 1.4 Conduct SOVT/OJT: System Operation Verification and Testing to include Training

The following references used within this instruction, are emphasized within AIT.

- Reference:
- (a) NSTS 9090.310 series
  - (b) TEMPEST: DON Information Assurance (IA) Publication Module 5239-31; OPNAVINST C5410.93 series DON Tempest/PD Procedures; NSTISSAM Tempest series
  - (c) EMI/EMP: Electro Magnetic Interference/Electro Magnetic Pulse
  - (d) DON Information Assurance Certification & Accreditation (C&A) Publications, to include the Security Test and Evaluation (ST&E) Checklist for Integrated Shipboard Network Systems (ISNS)
  - (e) PCMS: RIM 05T1-99 Passive Countermeasures System

### Introduction

A System Operation Verification and Testing (SOVT) is created at the time the system is developed or modified by the Program Office. It is the responsibility of the ISEA to review each SOVT package before using onboard the ship that their system is being installed. Note that too often same class ships still have differences and can therefore breach the SOVT package to the point of operational impact at the time of testing and verification. The ISEA will ensure all other systems touching their system of installation has been verified for integrity of integration and operation before the system is approved for installation. Per SPAWARSYSCENINST 4720.3 (series) and PEOC4I/274 14Jun04 Software Maintenance Policy, and applicable NAVSEA policies and processes referenced in this instruction, the ISEA will ensure all other systems touching their system of installation have been verified for integrity of integration and operation before the system is approved for installation.

### The following is discussed in this Chapter:

- Sea Trials and underway testing, CMS, and transmitting requirements.
- SOVT discrepancies, deadline dates, and activity responsible.
- Installation Logistics Support (ILS) requirements, redline drawings and Deviations From Specifications.

#### 1.4.1 Test Plan

Depending on the installation, there may be a requirement to conduct a portion of the SOVT during Sea Trials. The NTR will provide the Ship Superintendent any system operational requirements for underway testing, i.e.. crypto, antenna direction/alignment requirements, and radio message for request of operational frequency usage, etc. for coordination with the Ships Test Officer and/or Port Hueneme's Combat Systems Test Director.

#### 1.4.2 Conduct SOVT

SOVT or the System Operations Verification and Testing are initiated after the Cold Checks and Hot Checks have been accomplished. COLD CHECKS are accomplished to ensure all connects are complete and to verify continuity of wiring through all cables and connectors within a system installation. HOT CHECKS are then accomplished to verify the correct voltage

is present to safely turn on the equipment in order to begin the SOVT. These checks should be accomplished by the installing contractor as part of their Quality System Plan prior to start of SOVT.

- 1) NTR will verify that all equipment, technical manuals, installation drawings, and operational programs required for conducting SOVT are physically onboard and available to shipboard personnel.
- 2) NTR will verify and have ships CMS custodian verify crypto and fill devices are available and operational if applicable. Ensure key material is onboard.
- 3) NTR will coordinate with ships force via the Ship Superintendent for any at-sea testing requirements and provide list of ship riders. Verify that external equipment/systems required to support SOVT would be available and operational.
- 4) NTR will demonstrate system operation to the designated ship's maintenance and operating personnel in order for the installation to be accepted by the ship.
- 5) NTR is responsible for having SOVT signed by a senior enlisted or higher, normally the Electronics Material Officer (EMO) or as designated by the Commanding Officer. Discrepancies should be listed in the SOVT document and the General Report of the AIT package along with an estimated completion date and the activity responsible to correct. The NTR/ISEA is responsible for tracking open discrepancies through closure.

#### **1.4.3 1.4.3 EMI, TEMPEST and PCMS**

The NTR is responsible to ensure that all TEMPEST, EMI, and PCMS is accomplished as required in reference (b), (c) and (e).

#### **1.4.4 LAN certifications and security checks**

The ISEA is responsible to provide requirements to accomplish any LAN certifications and security checks as required in reference (d).

#### **1.4.5 Training**

On-the-Job Training will be conducted by the AIT, NTR/SME, or contractor, for ship's force in the areas of operation and maintenance of new and/or modified equipment. Ensure training is documented on the Training Verification Statement (Attachment 5) of the Alteration Completion Report.

## 1.5 Wrap Up Post-Installation Work

The following references used within this instruction are emphasized within SOVT.

Reference: (a) NSTS 9090.310 (series)  
(b) SWRMCINST 4790.3 (series) (RMMCO)

### Introduction.

At this point, production work and SOVT is complete. This chapter discusses the documentation and reporting requirements necessary to complete the installation (appendix (c) of ref (a)).

The following is discussed in this Section:

- DD-1149's
- ILS / Red-Line drawings
- Alteration Completion Reports
- Installation Completion Report / Final Completion Report (radio message transmitted by ship)
- Outbrief
- RMMCO Check-out

### 1.5.1 DD-1149

DD-1149s are the official forms that are used for all equipment being removed from and coming onboard the ship. It is used as a tracking document within the logistical world of supplies that come and go. On this form the model, make, serial number, quantity, manufacture, etc. will be noted. Although the NTR is responsible to ensure this form is used, it is normally the Contractor/AIT Lead who will fill it out and have the ship sign. Copies will be provided to the NTR and the ship.

### 1.5.2 Integrated Logistics Support (ILS)

**1.5.2.1** As part of the ILS installation package, the ISEA is responsible for providing CDMD-OA Validation Aid pages (VALAIDS) to the NTR. The NTR will then conduct a physical configuration validation at the completion of system installation. The marked-up VALAIDS will then be turned over to the ISEA for final update of the CDMD-OA concurrently with the Alteration Completion Report.

**1.5.2.2** The NTR is responsible to ensure ILS is delivered to the Supply Officer with redlines delivered to the Electronic Material Officer (EMO) or designated representative. This includes the OPNAV 4790.CKs, VALAIDS, Allowance Part Lists (APLs), Maintenance Index Pages (MIPs) and MRCs or Maintenance Requirement Cards, spare parts, electronic replacement cards, and software packages. Redline drawings will be provided to the Ship Superintendent as procedures from AIT. Ship Superintendent will deliver to the NTR and PY. NTR will provide redlines to the Ship along with the ILS.

### **1.5.3 Alteration Completion Report**

An Alteration Completion Report (ACR) with attachments 1–5 is required for all alterations. The NTR is responsible for filling out the Alteration Completion Report to include signatures and data filled in on applicable attachments IAW ref (a). A copy of the ACR will be provided to the ship, the ISEA, and the IMO.

### **1.5.4 Completion Report**

NTR is responsible to ensure the ships force receives a soft or hard copy of the Completion Message. The ship is responsible to send/transmit this message. If discrepancies were noted in the SOVT, provide ship with sample Final Completion Message to be sent/transmitted by the ship when all discrepancies are closed.

### **1.5.5 Outbrief**

The NTR will conduct an outbrief with the ship and obtain required signatures on SOVT acceptance agreement and the Alteration Completion Report cover sheet. The TYCOM, NSA, Ship Superintendent, RMMCO/CHET and, when applicable, the PY On-Site Representative will be invited to attend all outbriefs.

### **1.5.6 RMMCO Checkout**

IRT reference (b) and its enclosure (12), RMMCO checkout requirements are the responsibility of the NTR.



***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX A  
WEEKLY/MONTHLY PLANNING SITREP**

# Appendix A

## Weekly/Monthly Planning SITREPS

The Monthly/Weekly IIT SITREP provided by the Ship Sup is designed to be a communication to ALCON from the CO's personal representative, the Ship Superintendent. No management review or editing of this e-mail report is to occur before the fact of sending. The SITREP is sent monthly from A-180 and shifts to weekly at the A-30 point. This shift can occur sooner if necessary and may move back and forth if there is more than one installation availability for SPAWAR during the IDTC.

The format provided in the example below is to be followed specifically. The bolded text is to be used in the order specified and verbatim. Some categories of expansion discussion may be left out in their entirety if the color code at the beginning is Green... otherwise they must be included with discussion comments. The final section on CO comments must be solicited from the ship's CO and only the CO. This ties in with the requirement for the Ship SUP to visit the ship CO daily during execution. If the ship is not in port or for other reasons during the planning phase the CO has no comment please indicate "none".

The Installation Management Office maintains the minimal addressee's for this SITREP. The intent is to include all parties at high levels who are action or party to making the action happen to provide the fleet with an efficient quality installation. SITREP's are not to be distributed to superiors of the customer ship/submarine.

E-mail format requirements are as follows. Font: Arial (Western), pitch 10. All titles, sections, subsections and categories are to be CAPITALIZED; inserted text should reflect applicable upper and lower case letters, except for ships' names, which are always in CAPs. No bullets should be used; topic categories at top and bottom are numbered. No bold highlighting is required, and all words should be in black and white text, even color words (RED, YELLOW, GREEN). (Any bold text in the template herein is used purely to identify the basic template vs. example text.)

E-mail heading.

**To** (from standard [To] SITREP POC Distribution List provided by IMO)

**Cc** (from standard [Cc] SITREP POC Distribution List provided by IMO)

**Bc** (include all other BFOs, BFSs, Ship Sups and IIT members to improve corporate experiences, lessons learned, and technical articulation.)

**Subject:** WEEKLY (or MONTHLY as appropriate) IIT SITREP USS GERMANTOWN (LSD-42) 15 DEC 2000

E-mail body.

**SPAWAR SYSTEMS CENTER, SAN DIEGO (SSC)  
INTEGRATED INSTALLATION TEAM (IIT)**

**WEEKLY IIT SITREP FOR USS GERMANTOWN (LSD-42)  
15 DEC 2000**

**SHIP LOCATION:** 32nd St Naval Station, San Diego, CA  
Also include Shipyard if at shipyard

**IIT INSTALLATION PERIOD:** 01 Nov 00 through 31 Jan 01

**SHIP SUPERINTENDENT:** John Hoxsie

**OVERALL IIT ASSESSMENT:** Yellow

**SKED:** Green

**FUNDING:** Green

**DRAWING PKG:** Green

**CONTRACTS:** Green

**EDD/MATERIAL:** Yellow

**IIT EXECUTION:** Green

**LOGISTICS PACKAGE, INCLUDING TRAINING AND DOCUMENTATION:** Green

**CO/CREW CUSTOMER SATISFACTION:** Green

**Color-coded ratings**

**Green = High level of confidence, no major issues.**

**Yellow = Some concerns or some reservations that the installation is in danger or delay.**

**Red = No confidence in completion on time without exceptional action, will definitely delay installation completion.**

**INSTALLATIONS:**

IT-21 100MBPS LAN & MCSU S/A 1250K

**CONTRACTOR:** San Denshi Kogyo Co.

**SKED:**           Planned   Revised   Actual

**START DATE:** 08 Nov 00   13 Nov 00   15 Nov 00

**COMP DATE:** 31 Jan 01

HVAC MODS (associated with ISNS LAN) AER 27/99

**CONTRACTOR:** SRF Sasebo

**SKED:**           Planned   Revised   Actual

**START DATE:** 27 Nov 00   15 Dec 00

**COMP DATE:** 31 Jan 01



INMARSAT B DUAL (second system) S/A 1281K

**CONTRACTOR:** San Denshi Kogyo Co.

**SKED:**           Planned   Revised   Actual

**START DATE:** 18 Nov 00                   18 Nov 00

**COMP DATE:** 31 Jan 01

#### **1. SKED**

a. No issues to report.

#### **2. FUNDING**

a. No issues to report.

#### **3. DRAWING PKG**

a. No issues to report.

#### **4. CONTRACTS**

a. No issues to report.

#### **5. EDD/MATERIAL**

a. AER 27/99 HVAC UPGRADE: Fan Coil Units have an EDD of 08 Jan 01. The MATERIAL A assessment Level will remain YELLOW until the Fan Coil Units are received on site.

b. IT-21 100 MBPS & MCSU: COMNAVSURFPAC MSG 122356Z Dec 00 indicates COMSPAWARSYSCOM PMW-158 will purchase 44 new computers for installation on USS GERMANTOWN; EDD of new computers has not been confirmed as of 15 Dec 00.

#### **6. IIT EXECUTION**

a. IT-21 100MBPS & MCSU, Cable Installation: Fiber is 100%; CAT5 is 95%, Power is 100%. Foundation installation for Switches and Racks is 90%. 35% of Drop Boxes installed.

b. DWTS: Installation is 85% complete.

c. INMARSAT B DUAL: No progress this week; all efforts of the contractor have been focused on the IT-21 Installation. No adverse effect; INMARSAT Installation will be completed by scheduled date.

d. Work Plan Changes: None to report.

#### **7. LOGISTICS PACKAGE, INCLUDING TRAINING AND DOCUMENTATION**

a. No issues to report.

#### **8. CO/CREW CUSTOMER SATISFACTION**

a. No issues to report

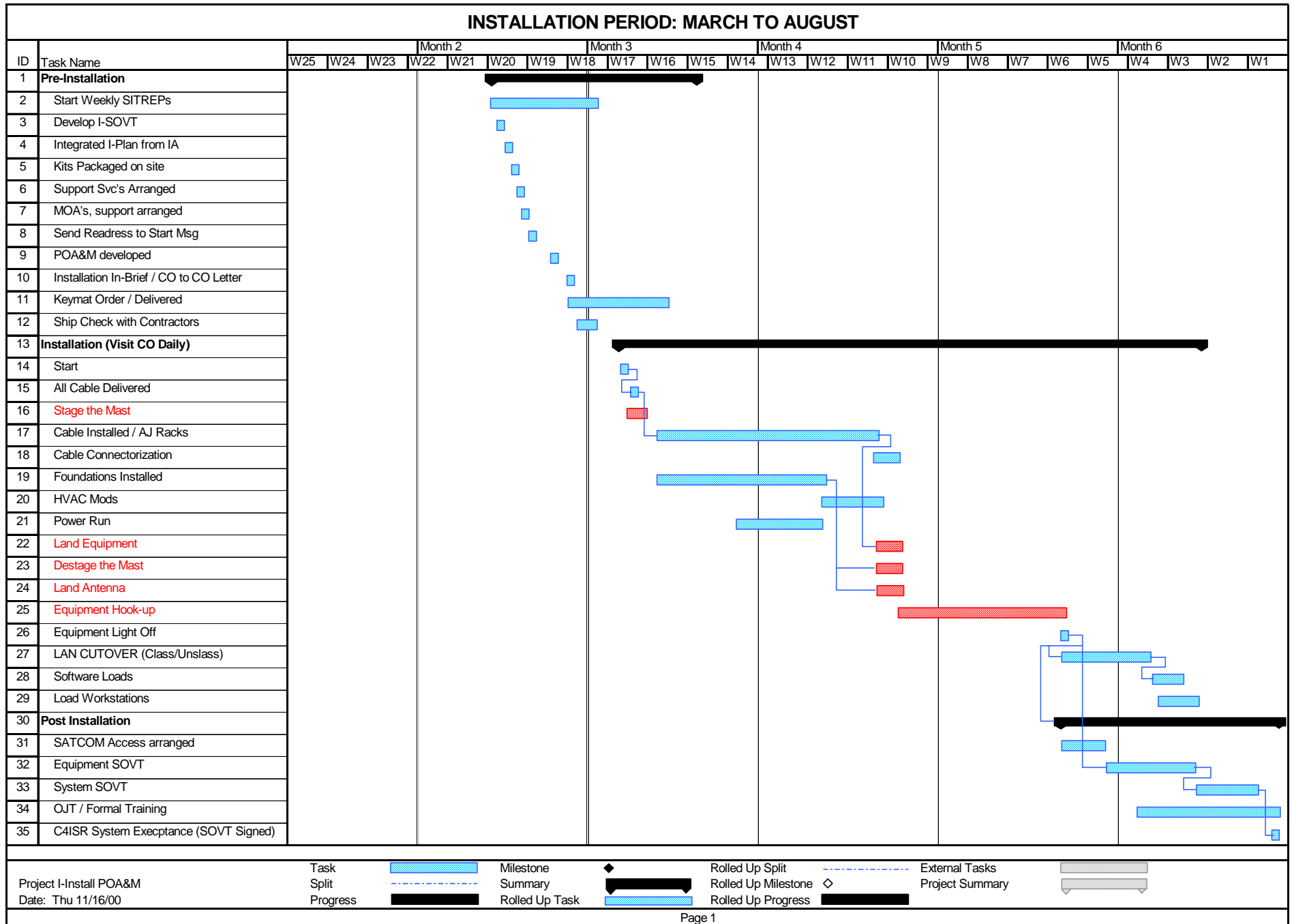


***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX B  
GENERIC INSTALL GANTT CHART POA&M**

# Generic Installation Gantt Chart POA&M





***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX C  
SHIP INSTALLATION PLAN MESSAGE**

# Appendix C

## Ship Installation Plan Message

RTTUZYUW RUWFOAA0062 0692014-UUUU-RHMCSUU.  
 ZNR UUUUU  
 R DDHHMMZ MMM YY ZYB  
 FM SPAWARSSYSCEN SAN DIEGO CA//D6X/D60F/D60C// *(use IIT Division for "X")*  
 or SPAWARSSYACT PAC PEARL HARBOR HI//D91//  
 or SPAWARSSYACT PAC YOKOSUKA JA//D92//  
 TO APPROPRIATE TYCOM  
 SHIP  
 INFO APPROPRIATE ISIC  
 COMNAVSEASYS COM WASHINGTON DC//07/071/911/931//  
 SUPSHIP SAN DIEGO CA//100/600// *(if in CNO Avail in SD area)*  
 NAVSHIPYD AND IMF PEARL HARBOR HI//270/271// *(if in CNO Avail in HI area)*  
 COMNAVSURFGRU PACNORWEST//N43/N6// *(if in the PACNW)*  
 COMNAVSURFGRU MIDPAC//N4/N44/N6// *(in the HI area)*  
 APPROPRIATE PEO  
 APPROPRIATE PLANNING YARD  
 SOUTHWEST RMC SAN DIEGO CA//40/41/42//  
 SIMA SAN DIEGO CA//3000//  
 COMSPAWARSSYSCOM SAN DIEGO CA//04F//  
 SPAWARSSYSCEN SAN DIEGO CA//D6X/D60F/D60F// *(if sent by D90)*

BT

UNCLAS //N04710//  
 MSGID/GENADMIN/SPAWARSSYSCEN SAN DIEGO CA//  
 SUBJ/SHIP INSTALLATION PLAN//  
 REF/A/TELCON/SSC-SD/DDMMMYY//

AMPN/REF A IS BTWN SSCSD (NAME) AND USS SHIP (NAME) DISCUSSING INBRIEF DATE.//

POC/BFO/RANK/BFO DIVISION/PRIPHN DSN XXX-XXXX/-/TEL:SECPHN  
 (XXX)XXX-XXXX//

RMKS/ 1. THE FOLLOWING IS A LIST OF SHIPALTS PLANNED FOR SHIP WITH SHIPALT RECORD (SAR) STATUS, INTEGRATED LOGISTICS SUPPORT (ILS) CERTIFICATION STATUS, EQUIPMENT DELIVERY DATE (EDD), SHIP INSTALLATION DRAWING (SID) STATUS, SHIP PROGRAM MANAGER (SPM) APPROVAL STATUS, AND INSTALLATION INCLUSIVE DATES. ALL SPAWARSSYSCOM INSTALLATIONS WILL BE COORDINATED BY THE SSC-SD SHIP SUPERINTENDENT. RISK FACTORS INDICATE THE FOLLOWING:  
 -LOW: CLEAR PATH TO SUCCESSFUL ON TIME COMPLETION ANTICIPATED.  
 -MEDIUM: POTENTIAL EXISTS FOR ISSUES THAT MAY PREVENT SUCCESSFUL ON TIME COMPLETION.  
 -HIGH: SIGNIFICANT POTENTIAL EXISTS FOR ISSUES THAT MAY PREVENT SUCCESSFUL ON TIME COMPLETION.

A. SHIPALT: \_\_\_\_\_  
 SAR STATUS: (ex. NAVSEA APPROVED; AWAITING NAVSEA APPROVAL; SPAWAR APPROVED...)

ILS CERTIFICATION STATUS: (ex. NAVSEA APPROVED; AWAITING NAVSEA APPROVAL; SPAWAR APPROVED...)

EDD: MM/DD/YY

SID STATUS: (ex. EDD FROM xxxPY MM/DD/YY; SPM APPROVED MM/DD/YY; AWAITING SPM APPROVAL OF PY FINAL DWGS...)

SPM APPROVAL STATUS: (ex. AWTG SPM APPROVAL; SPM APPROVED; SPM APPROVAL PENDING DELIVERY OF PY APPROVED SID...)

INSTALL DATES: MM/DD/YY - MM/DD/YY

RISK: INDICATE HI, MEDIUM OR LOW

COMMENTS: (IF NECESSARY FOR RISK LEVEL)

2. ALL NEW INSTALLS WILL REQUIRE SOME CS TO BE FUNCTIONAL DURING SOVT.

3. REQUEST TYCOM AUTHORIZATION TO CONDUCT INSTALLATIONS IAW PLAN DETAILED ABOVE. UNODIR INBRIEF WILL BE HELD ONBOARD USS SHIP ON DD MMM YY (REF A REFERS).

4. BATTLE FORCE OFFICER FOR GROUP IS BFO NAME, PHONE XXX-XXX-XXXX, EMAIL BFO EMAIL AT SPAWAR.NAVY.MIL. SHIP SUPERINTENDENT FOR SHIP IS SHIP SUP NAME, PHONE XXX-XXX-XXXX, EMAIL SHIP SUP EMAIL AT SPAWAR.NAVY.MIL.//

BT

#0062

NNNN



***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX D  
IN-BRIEF TEMPLATE**

# Appendix D

## In-Brief Template

The following pages are an example of the standard In-brief to be presented to the Ship's Commanding Officer and other key players. If the CO is not going to attend this In-brief, this issue must be discussed with your IIT Lead in light of our Command policy that this is the minimum formal presentation of the installation work package that the ship CO will need to be informed of our requirements and coordination necessary with the ship. We are also providing the minimum 'capabilities and limitations' of the systems we are installing.

The information specified for the installations, especially the capabilities and limitations and requirements for ship's force to support the installation, is to be included. This in-brief presentation is to be given 1–2 weeks prior to the start of the first SPAWAR installation in the IDTC. A CD ROM of the brief is to be left with the CO, CSO, and EMO. Please note that a top level integrated MS Project POA&M (see Appendix B) is to be provided that details each installation's milestones and key phases as supplied by the NTRs/SMEs and integrated by the Ship Superintendent. The key areas of coverage for the inbrief are:

- a. Overall Team POCs (IIT BFS/O, Ship SUP, Prime contractor) and system POC's (NTR/SME, contractors)
- b. Overview of install phases
- c. Ship support required (e.g., satellite air time for SOVT, ordering crypto, support for training and LAN cutover, general space access, etc.)
- d. Review of training requirements for ship (IBFT briefed) and schedule
- e. Plan for integrated ILS delivery
- f. Discussion of End-to-End verification testing and time frame.
- g. Each system should cover capabilities and limitations, specific impact items (e.g., mast work, CMS vault access, power outage requirements, LAN cutover date and process, etc.), POA&M specific to system.

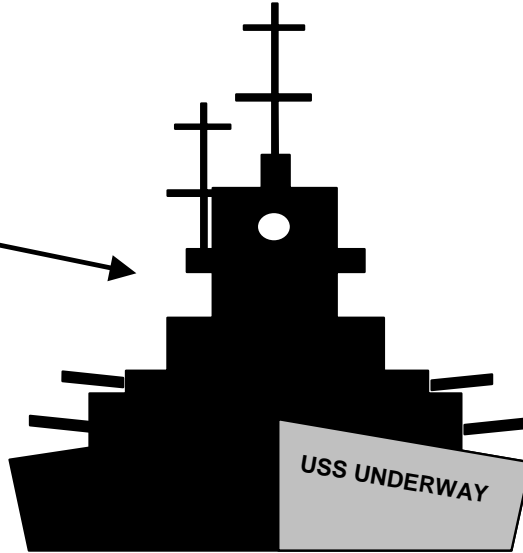




# SHIPBOARD IN-BRIEF

*Replace Italics with  
actual specifics /  
comments*

Picture of Subject Ship



## List of Systems

*TV-DTS  
NEXT SYSTEM  
NEXT SYSTEM  
ETC.*

## USS UNDERWAY SHIPBOARD IN-BRIEF C4ISR SPAWAR SYSTEMS CENTER

Presented By: *C4ISR Representative*  
Date: *Month Day Year*



# Overview

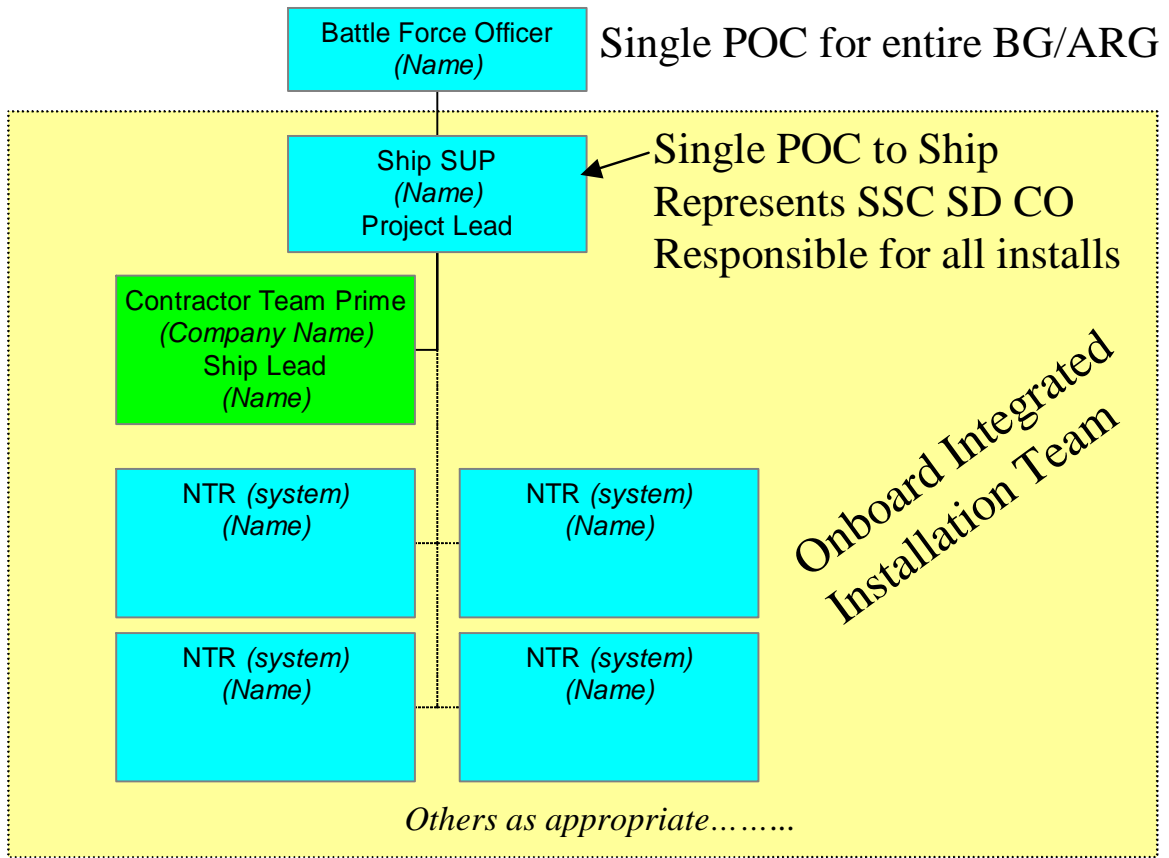
*Replace Italics with  
actual specifics /  
comments*

- **Integrated Installation Team Structure for USS *Shipname* Installations**
- **Installation Process Initiatives**
  - Integrated Teams
  - Training (IBFT)
  - Contracting
  - Fleet Interface (Weekly SITREP and CO to CO letter)
- **Top-Level POA&M for USS *Shipname* Installations**
- **Ship's Force involvement**
- **Planning process and issues status to date**
- **Individual System detail briefing**
  - Install POA&M
  - CAPS/LIMS...



# Organizational Structure for USS Shipname Integrated Install Team

*Replace Italics with actual specifics / comments*



This Team is supported by the design, engineering, ILS, financial and contract members of the IIT Warroom at SSC SD and SPAWAR.



# INTRODUCTION

*Replace Italics with  
actual specifics /  
comments*

Name	System	Title	Phone #	E-mail
<i>Super Tech</i>	<i>TV-DTS</i>	<i>NTR</i>	<i>555-1234</i>	<i>NTR@.com</i>
<i>I Do Care</i>	<i>Next System</i>	<i>Ship Sup</i>	<i>555-4321</i>	<i>SS@.com</i>
<i>Call Me First</i>	<i>Next System</i>	<i>Waterfront Manager</i>	<i>555-0123</i>	<i>WFM@.com</i>

List of POCs

**Points of Contact should include:**

**Ship Superintendent (SS)**

**Naval Technical Representatives (NTR)**

**Subject Matter Experts (SME)**

**IMO Waterfront Manager**

**Battle Force Manager at SPAWAR**

**Contractor Companies and Lead person**

**If known, the Ship Force POCs  
should also be included**



# SSC San Diego Installation and Fleet Support Initiatives

Downloaded from <http://www.everyspec.com>

- IIT Design & BG/ARG War Rooms
  - The War Room in OT2 is a 20,000 square-foot area created to collocate key organizations that are involved with the design, planning, and execution of shipboard integrated installations, including the planning yards and industry partners.
- Sailor to Engineer (IOC in April 2001)
  - Fleet Engineering support for the Sailor
  - SPAWAR providing solutions to the warfighters, globally
- SPAWAR C<sup>4</sup>ISR Institute
  - Providing hands on formal training to the warfighter
  - Increased Sailor learning focus in a classroom environment with access to System Engineers
- Weekly Sitrep Reporting
  - Improved Communications of issues between SPAWAR, Maintenance Community, Industry and Fleet warfighters
  - Driving installation issues to resolution more expeditiously
- CO to CO Letter
  - Direct Command feed-back on installation Planning, Execution, and Quality
  - Fleet CO is assured of SPAWAR Commitment to Fleet Satisfaction
- Inbrief to CO
  - Standardizing to provide thorough capabilities/limitations, installation coordination issues, and overall install plan
- Integrated Installation Incentive Contract (I-2000)
  - Enables efficiencies, better contractor teaming and systems integration approach to the capability being delivered.

**Single Integrated Solution to complex C4ISR Systems**

## INTEGRATED INSTALLATION TEAM WAR ROOM

IIT War Room provides a common meeting space to work out issues central to the design and installation of C4ISR capabilities.

The Design War Room area is a location to get all players (Planning Yards, System Designers, Installers, and Industry) together in one spot to standardize designs and processes relating to implementation of Integrated System Design.

The BG/ARG War Rooms are situated adjacent to the Design War Room. Installers, ISEAs, PMWs, Ship Sups, NTRs, and Planning Yards..... Plan and Execute SPAWAR Installations.

The concept of the IIT War Room is to tear down the walls that divide the key players and provide a forum for streamlined communication throughout the installation process—from initial R&D through installation and life-cycle support.





# SPAWAR C4ISR INSTITUTE

---

## *Background.....*

- SPAWAR Institute Initiative created out of need to solve Fleet Training problems with C4ISR IT systems
- Key Systems
  - Lan connectivity and System Administration
  - INMARSAT
  - ADNS
  - GCCS-M
  - ISNS (IT-21)
- Typical problem areas
  - No End to End System Training
  - No Training Provided
  - No Standardized OJT training method
  - Systems fielding and changing faster than school house pipeline can pace



# SPAWAR C4ISR INSTITUTE

## *Training Support Initiatives*

- Grey Beard Training
  - **Example: XYLAN, ISNS, GCCS-M, ADNS, INMARSAT, 5KHZ** system experts direct interaction with fleet technicians at SPAWAR Institute
- Train the Trainers
  - **Insertion into existing IBFT courses when available**
  - **Familiarization**
  - **ATG, FTSC, FTC, FCTCPAC**
- System Level Training Completed (Aboard several PACFLT CVN's)
  - **WSC-3, DAMA, OTCIXS, TADIXS, BGIXS, TRE, USC-38, NECC, ADNS, NAVMACS WSC-6, CA III, SHF Baseband, GCCS-M, ISNS, CTAPS, JDISS, XYLAN, ROUTERS/NT**
  - **Team effort ties in End to End verification - Check Out - Training - Metrics Analysis**
  - **Will include Afloat University (SPAWAR Reserves commercial training)**
  - **TYCOM Funded (CNAP strongly endorses as transition training process)**
- Integrated Battle Force Training (IBFT) Website
  - **Identifies and provides quotas for C4ISR training requirements**
  - **SPAWAR Institute provides IBFT training**
  - **URL <http://c4iweb.spawar.navy.mil/04/ibft>**
  - **IBFT PACFLT Coordinator located at SPAWAR Institute**
    - OS1 Chuck Daniel 619-524-2264





# SPAWAR C4ISR INSTITUTE

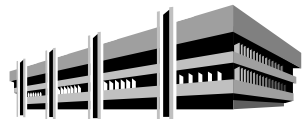
## Contact List.....

<p><u>SPAWAR Institute Director</u>  Ken Garcia  (619) 524-3238  kgarcia@spawar.navy.mil</p>	<p><u>PAC Fleet Rep. / IBFT Coordinator</u>  OS1 Daniel  (619) 524-2264  Danielc@spawar.navy.mil</p>
<p><u>Fleet Training Liaison</u>  STSC Michael Kelly  (619) 524-3339  mkkelly@spawar.navy.mil</p>	<p><u>Fleet Training Rep. / IBFT Liaison</u>  ETCM (SW) Eduardo C. Flores  (619) 524-3850  eflores@spawar.navy.mil</p>

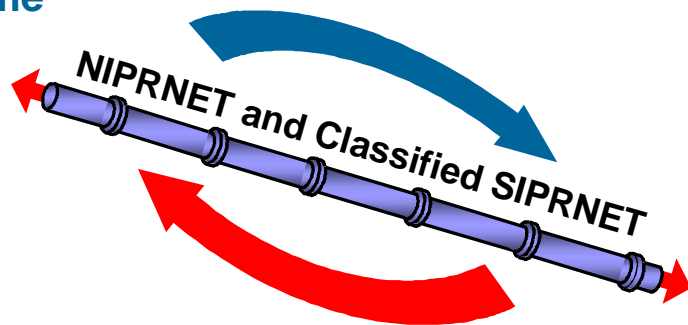


# Sailor-to-Engineer Connectivity for All Systems In the Battle Group

## NSWC Port Hueneme



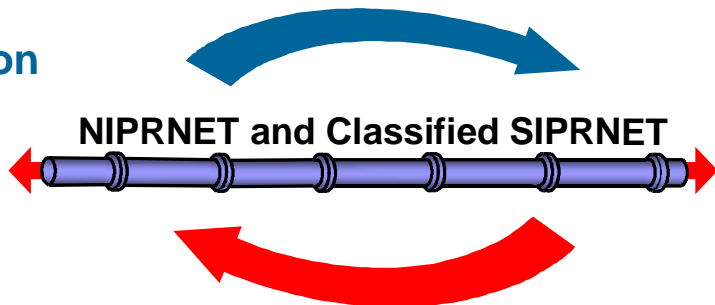
Combat/Weapon Systems



## SSC SD/Charleston



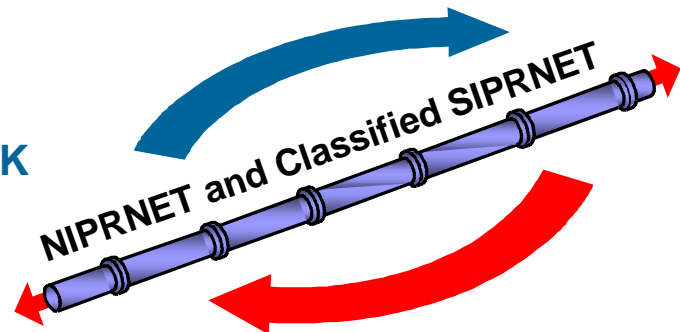
C4ISR and IT Systems



## NSWC CARDEROCK



HM&E Systems



## Sailor-to-Engineer Connectivity



FLEET ENGINEERING SUPPORT FOR THE SAILOR



# I-2000 Contract Initiative

CONTRACT FEATURES	I-2000	EF&I	OTHERS
Incentivizes Kr for savings	✓		
Provides for competition	✓		
Provides for integration on installation by Kr	✓	✓	
Prime coordinator of integration plan vice GOV	✓	✓	
Provides for onsite rep in design process	✓	*	*
Focused on incentivizing kr for integration of mgmt, sked, and info plan	✓		
Provides for QA system, required by AIT TECH spec 9090-310C	✓	*	

\* Some Elements are covered by this contract.

**I-2000 Contract is a key element in achieving integration and efficiencies.**



## **Award Fee Plan Goals**

---

- **Provide motivation for excellence in contract performance, technical quality and cost savings**
- **Criteria:**
  - **Quality, Products, Services, and Deliverables**
  - **Schedule**
  - **Financial Management**
  - **Personnel Management**
- **Emphasis on system integration of installations**



## **Weekly SITREP**

---

- **Format is email SITREP from the “deckplate” IIT Ship SUP (no other management review prior to sending)**
- **Alerts all key players in the support community to issues requiring resolution for successful installation**
- **Sent to Ship CO, SSC San Diego CO, SPAWAR 04 and Staff, SPAWAR Program Manager, Port Engineer, Planning Yard CO, SPM, SUPSHIP CO, Contractors and others as required**
- **Specific intent not to send from SSC to ship’s Chain of Command, but to be passed at CO’s discretion**



# SITREP Example (Header)

---

**WEEKLY IIT SITREP** USS GERMANTOWN (LSD-42)  
15 DEC 2000

**SHIP LOCATION:** Naval Station (32 Street) San Diego, Pier 13

**IIT INSTALLATION PERIOD:** 01 Nov 2000 through 31 Jan 2001

**SHIP SUPERINTENDENT:** John Hoxsie

**Overall IIT Assessment: Yellow**

SKED: **Yellow**

FUNDING: **Green**

DRAWING PKG: **Yellow**

CONTRACTS: **Green**

EDD/MATERIAL: **Green**

IIT EXECUTION: **Yellow**

LOGISTICS PACKAGE, INCLUDING TRAINING AND DOCUMENTATION: **Green**

CO/CREW CUSTOMER SATISFACTION: **Green**

**Color-coded ratings:**

**Green** = High level of confidence, no major issues.

**Yellow** = Some concerns or some reservations that the installation is in danger or delay.

**Red** = No confidence in completion on time without exceptional action, will definitely delay installation completion.



# SITREP Example (Body Synopsis)

---

## INSTALLATIONS:

IT-21 100MBPS LAN & MCSU S/A 1250K

CONTRACTOR: San Denshi Kogyo Co.

SKED: Planned Revised Actual

START DATE: 08 Nov 00 13 Nov 00 15 Nov 00

COMP DATE: 31 Jan 01

HVAC MODS (associated with ISNS LAN) AER 27/99

CONTRACTOR: SRF Sasebo

SKED: Planned Revised Actual

START DATE: 27 Nov 00 15 Dec 00

COMP DATE: 31 Jan 01

INMARSAT B DUAL (second system) S/A 1281K

CONTRACTOR: San Denshi Kogyo Co.

SKED: Planned Revised Actual

START DATE: 18 Nov 00 01 Nov 00

COMP DATE: 07 Dec 00 20 Nov 00



# SITREP Example (Body Synopsis)

---

## 1. SKED

- a. No issues to report.

## 2. FUNDING

- a. No issues to report.

## 3. DRAWING PKG

- a. No issues to report.

## 4. CONTRACTS

- a. No issues to report.

## 5. EDD/MATERIAL

- a. AER 27/99 HVAC UPGRADE: Fan Coil Units have an EDD of 08 Jan 01. The MATERIAL assessment will remain YELLOW until the Fan Coil Units are received on site.
- b. IT-21 100MBPS & MCSU: COMNAVSURFPAC 122356ZDEC00 indicates COMSPAWARSYSCOM PMW-165 will purchase 44 new computers for installation on USS GERMANTOWN; EDD of new computers has not been confirmed as of 15 Dec 00.

## 6. IIT EXECUTION

- a. IT-21 100MBPS & MCSU, Cable Installation: Fiber is 100%; CAT5 is 95%, Power is 100%. Foundation installation for Switches and Racks is 90%. 35% of Drop Boxes installed.

## 7. LOGISTICS PACKAGE, INCLUDING TRAINING AND DOCUMENTATION

- a. No issues to report.

## 8. CO/CREW CUSTOMER SATISFACTION

- a. No issues to report.





# SITREP Example (Body Issues)

---

**SKED:**

- Potential for Underway requirement in late SEP would impact LAN install. Delay of 2 weeks

**FUNDING:**

- CORN not approved for ship requested work scope expansion; no extra funds available.

**DRAWING PKG:**

- Awaiting approved structural Drawings for INMARSAT B
- If approved SIDs not received by 25 Aug, SPM authorization to proceed with structural mark-up required by 28 Aug to avoid impact on install completion.

**CONTRACTS:**

- No issues to report this SITREP.

**EDD/MATERIAL:**

- Unavailability of three power transformers is being worked by contractor, port engineer and planning yard.

**IIT EXECUTION:**

- Late Drawings for INMARSAT have delayed the topside work.

**LOGISTICS PKG, PLUS TRAINING & DOCS:**

- ILS Certification expected prior to SOVT.

**CO/CREW CUSTOMER SATISFACTION**

- (Normally, this area is used to convey or quote shipboard comments of satisfaction and/or dissatisfaction.)



# CO to CO Letter

---

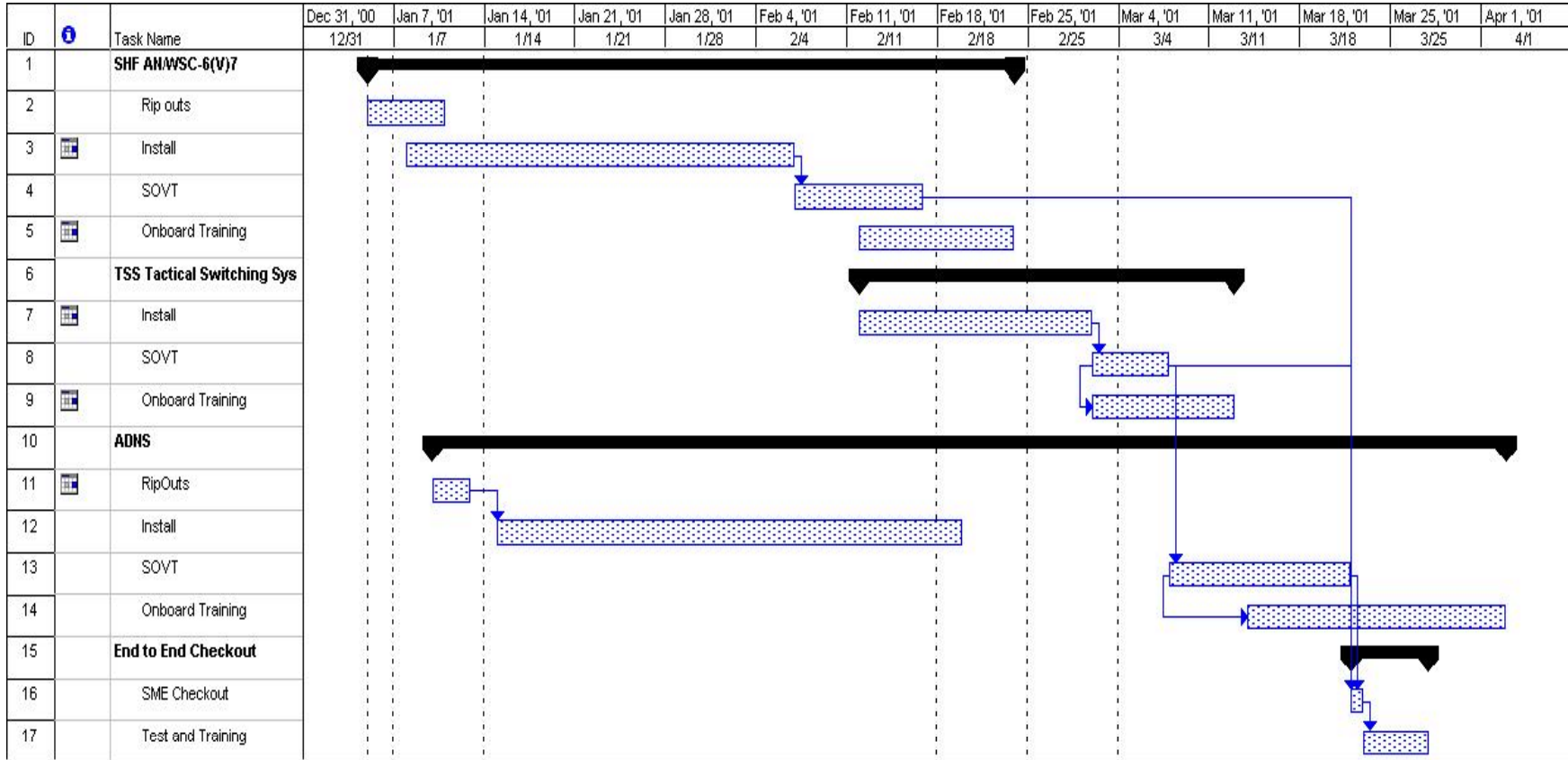
- **Provided to Ship's CO from SPAWAR Systems Center CO by Ship Superintendent**
  - **Introduces Ship Superintendent**
  - **Solicits Feedback**
  - **Promotes teaming by making Ship Superintendent part of wardroom**
  - **Specifies requirement for Ship Superintendent to brief CO daily during install activity windows**
  - **Starts the dialogue for the IDTC**

# Installation Plan



# Overall POA&M

*Insert High level  
POA&M of all system  
major milestones*





# SYSTEM BACKGROUND

---

*Replace Italics with  
actual specifics /  
comments*

- *Brief History*
- *System Lineage*
- *Improvements over previous system*
- *Fleet Benefits*
- *Possible future expectations of system*



# SYSTEM CAPABILITIES

---

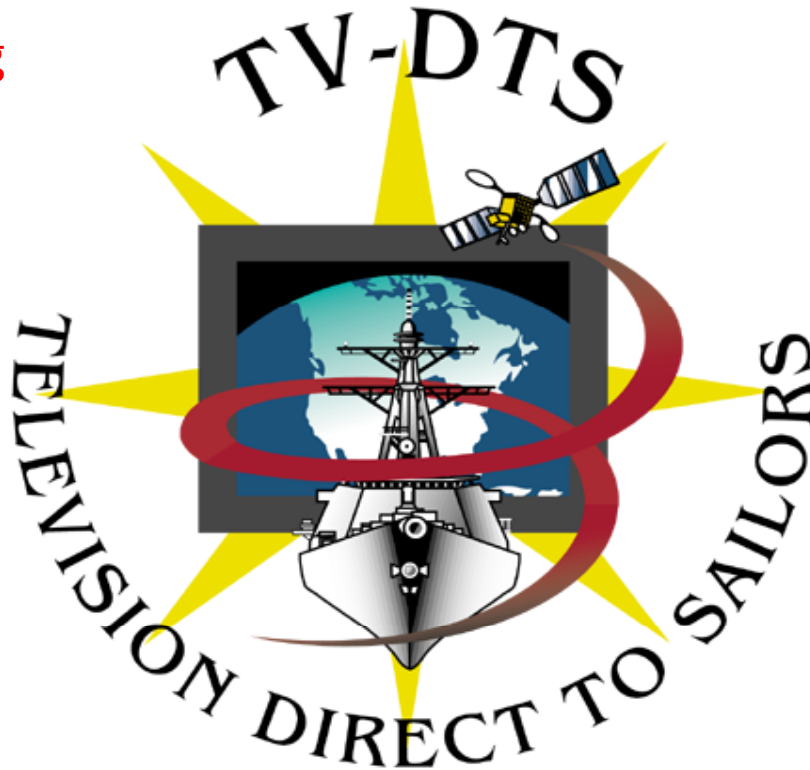
- **POC**
- **System Description**
- **Concept of Operations**
- **Limitations**
- **Data Products**
- **Training**
- **System Support**



# SYSTEM CAPABILITIES

---

Sample using  
TV-DTS





# System Capability (Description)

- **TV-DTS is an Initiative to Bring Enhanced Situational Awareness and Quality of Life Programming to Sailors and Marines at Sea... Anytime... Anywhere.**

**Sample using  
TV-DTS**







# System Capability (Limitations)

---

## Sample using TV-DTS

- **C-Band Electromagnetic Interference**
  - SPS-49
  - SPY-1
  - SPS-48E
- **Physical Blockage**
  - TV-DTS is Low Priority for Topside Space
  - CG & DDG classes have extreme blockage



# INSTALLATION PLAN

*Replace Italics with  
actual specifics /  
comments*

- *Introduce Contractor Leads*
- *Discuss Installation schedule and POA&M*
  - *Tag-out Safety*
  - *Fire Watch Safety*
  - *Installation hours*
  - *Testing requirements / dependencies...*
- *Possible number installation personnel*
  - *Clearance needs*
- *Pier usage*
  - *Vehicle access*
  - *Material storage*
  - *Crane Services*
- *Hull cut requirements, if any*



# System Logistic Support

## 4790CK Requirements

### Delivery Schedule for :

Tech Manuals

Quick Reference Guides

Integrated Logistic Support

**Sample using  
TV-DTS**

- Point of Contact
  - Help Desk 1-877-477-2927

## OE-556/U Antenna Group

PMS Cards Completed: Jan 99

APLs Completed: Feb 99

NAVICP MSD: Dec 99

Minimal Preventive Maintenance

Corrective Maintenance:

- Fault Isolation to LRU
- OBRPs Procured and Delivered with Each System
- Interim Support Provided by ISEA

Document	Reference	Dated	Status
ILS Certification PMS 312	Letter	Dec-98	Approved
ILS Certification PMS 377	Letter	Nov-98	Approved
ILS Certification PMS 400	Letter	Feb-99	Approved



## Formal Training / OJT

---

- **Factory Training**
  - ATG, Santee, CA
  - ATG, Virginia Beach, VA
  - FTSCs & ISEA Personnel
- **Initial Training**
  - OJT / OBT During Installation and SOVT
  - ET (E5) and IC (E5 or E6)
- **Follow-On Training**
  - Integrated Battle Force Training Web Site:
    - <http://c4iweb.spawar.navy.mil/04/ibft/>
  - FTSC & ISEA OJT as Required
  - OEM Training Video

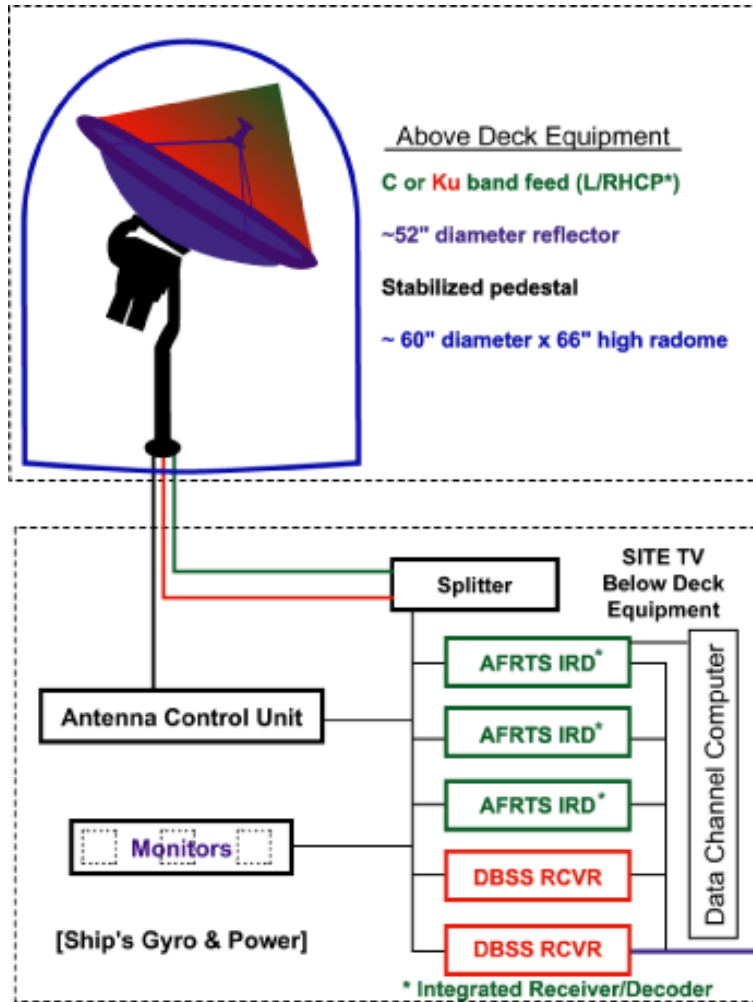
**Sample using  
TV-DTS**

**Note:**

***Training for Equipment Added to SITE System will be Incorporated into SITE Operator and Maintainer's Course, Ft. Meade, MD***



# BLOCK DIAGRAM



GLOBAL C BAND		Mbps
VIDEO/AUDIO 1	NEWS/SPORTS	1.544
VIDEO/AUDIO 2	ENTERTAINMENT/ SPORTS/NAVY USE	1.544
STEREO/AUDIO 1	RADIO/STEREO	.128
STEREO/AUDIO 2	RADIO/STEREO	128
MONO AUDIO - AFSTRS	VOICE LINE	.064
EPG	PROGRAM GUIDE	.064
128k DATA	PUBLIC AFFAIRS	.128
TOTAL DATA RATE		3.600

LITTORAL Ku BAND	
100+ VIDEO/AUDIO 1	
100+ VIDEO/AUDIO 2	

OPTIONAL	
EXTRA DBSS RECEIVERS	

**Sample using  
TV-DTS**



# SYSTEM BACKGROUND

*Replace Italics with  
actual specifics /  
comments*

- *Brief History*
- *System Lineage*
- *Improvements over previous system*
- *Fleet Benefits*
- *Possible future expectations of system*

**Next System**  
**Repeat to cover all Installs**



***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX E  
CO's LETTER**

# Appendix E

## CO's Letter

1 February 2000

CAPT Robert J. Gilman  
USS NIMITZ (CVN-68)  
FPO AP 96621-2820

Dear Captain Gilman:

Space and Naval Warfare Systems Center, San Diego (SSC San Diego) has been tasked to plan and execute a package of C<sup>4</sup>ISR installations for USS NIMITZ (CVN-68) to provide you with the latest C<sup>4</sup>ISR capability prior to your next deployment. Our goal is to provide you and your crew with a totally integrated installation package which includes: planning, design and engineering, production, system operational verification testing, logistics package delivery, on-the-job training for your crew, and most importantly, ensuring that you are completely satisfied with the results.

To conduct these integrated installations, we have formed a strong government/contractor team made up of specialists qualified in shipboard installations, systems engineering, and C<sup>4</sup>ISR testing. Mr. Glenn R. Jimenez has been assigned as the C<sup>4</sup>ISR Ship Superintendent (SHIPSUP) for USS NIMITZ. Glenn is our single Point of Contact (POC) and project team leader, responsible for all aspects of installation planning and execution. Glenn will make routine visits to USS NIMITZ to oversee progress and coordinate all government/contractor effort during periods of planning, production, and testing. As we move into the critical production and test phase, I have asked Glenn to see you on a daily basis to give you a brief update on progress and key issues. He will also provide weekly written e-mail situation reports, with copies going to key individuals at SPAWAR Headquarters, NAVSEA, and SSC San Diego.

When the actual production effort begins, the government/contractor team will work many long hours aboard USS NIMITZ to complete installation and testing, and to bring your C<sup>4</sup>ISR systems and crew up to their highest state of readiness. Historically, the best results have been achieved when the SHIPSUP has been incorporated and welcomed into the wardroom. This will enable a closer working relationship between our project team leader and your crew.



*Beyond the important work on USS NIMITZ, I need your direct feedback to improve the process of planning, engineering, and executing these difficult integrated installation packages. A call from you is always welcome, and I also ask that you take a moment to give me written feedback by filling out the questionnaire attached as enclosure (1). Your feedback on how the installation team performed will be used to strengthen our ship installation and support program. I would appreciate your utmost candor, including your view on whether or not we were successful in meeting our final objective, which is to leave you in the highest state of C<sup>4</sup>ISR readiness.*

If you need anything beyond the help Glenn can provide, please feel free to contact me at (619) 553-3000. Glenn can be contacted at (619) 524-2048. The Strike Group Officer POC is LCDR Wayne Slocum at, (619) 524-2654.

Sincerely,

T. V. FLYNN  
Captain, U. S. Navy  
Commanding Officer

Enclosure: SSC San Diego Installation Process Feedback  
Questionnaire

## Status Sheet

SHIP: USS Abraham Lincoln (CVN-72)  
FPO AP 96612-2872

CO: CAPT Kendall L. Card

Phone: U/W

Ship Sup: George Karabinos

Start date: 5/15/03

### INSTALLATION SUMMARY:

AN/SSN-6(V)4 NAVSSI Blk 4	S/A 8997K
AN/SYQ-26(V)1 NAVMACS II/SMS	S/A 8902.2K
AN/UMQ-4A(V)1 NITES 2002	S/A 9044K
AN/USQ-152(V)1 TBMCS HOST	S/A 9088K
Ship Video Distribution System (SVDS)	S/A 9043K
BGPHERS Timeplex	S/A 8947K
BGPHERS SYGATE Backfit	FC6
BGPHERS (ARS-ST) 3.1.3.0P4	SWD
ISNS GOTS-D 4.1.2	SWD
C2P M4R411	SWD
AN/SMQ-11 Terascan 3.0.7	SWD
ADNS TACLANE	FC1
SCI Networks PC Shock Mounts	FC6
SCI Networks HD Upgrade	FC7
EMS 2.0	FC2/SWD
SHF VME Upg	FC1
TAC VTC VIXS/JWICS Upg	ECO2

**SPAWAR SYSTEMS CENTER, SAN DIEGO  
 INTEGRATED INSTALLATION TEAM (IIT)  
 PROCESS FEEDBACK QUESTIONNAIRE**

Please check ? or fill in applicable blocks.

**SHIP: USS NIMITZ**

**Hull: CVN-68**

**Date:**

Overall View of Installation Package						
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-installation Notification/Coordination.
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site Survey.
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In-Brief.
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Routine Status Reporting.
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Installation (physical aspects).
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Integrated Logistic Support (ILS).
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training (OJT).
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System Operation Verification Test.
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standards of Conduct (Government and Contractor)
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall Impression of Installation
	<b>Unsat</b>	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>	<b>Superb</b>	

11. What areas could be improved for future installations?

---



---



---



---



---



---



---

ENTER APPROPRIATE CLASSIFICATION

**ROUTE SHEET**

CLASSIFICATION

**UNCLASSIFIED**

*(DOWNGRADE TO UNCLASSIFIED WHEN MATERIAL IS DETACHED)*

DATE RECEIVED \_\_\_\_\_

USE APPROPRIATE CLASSIFIED COVER SHEET

ORIGINATOR

CODE 262/263/264

FILE AND SERIAL NO

DATE

SUBJECT/DOCUMENT DESCRIPTION

WARNING: DO NOT ENTER CLASSIFIED INFORMATION

**SHIPS CO LETTER FOR**

CODE	INITIALED		ACTION	REMARKS  <i>(Please write on first available line in order to provide space for all who may wish to comment)</i>
	BY	ON DATE		
26204 26304 26404			I	
262S 263S 264 S			/	
262 263 264			I	
260S			I	
260			S	
26204 26304 26404			A	


SYMBOLS: A - ACTION                      C - COMMENT                      I - INFORMATION                      P - PREPARE REPLY                      R - RETAIN COPY                      S-  
SIGNATURE

**ENTER APPROPRIATE CLASSIFICATION**

CLASSIFICATION

**UNCLASSIFIED**

*(DOWNGRADE TO UNCLASSIFIED WHEN MATERIAL IS DETACHED)*

**USE APPROPRIATE COVER SHEET WHEN ATTACHED MATERIAL IS CLASSIFIED**

NOSC-SD 5511/74 (10-91)  
SD FORMS 5216/25, 5511/3, 5511/11

REPLACES NOSC-



*SPAWAR  
Systems Center  
San Diego*

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX F  
GOVERNMENT CLEARANCE MESSAGE**

# Appendix F

## Government Clearance Message

(EASTPAC example)

R DDHHMMZ MMM YY ZYB

ZNR UUUUU

FM SPAWARSCEN SAN DIEGO CA//D6X/D60F/D60C/D62/D63/D64// ("X" = IIT Division)

or SPAWARSSACT PAC PEARL HARBOR HI//D91//

or SPAWARSSFAC PAC YOKOSUKA JA//D92//

TO USS SHIP

INFO CINCPACFLT PEARL HARBOR HI//N6/N43/N431//

Appropriate TYCOM

COMNAVAIRPAC SAN DIEGO CA//N43/N436/N432// if ship is a CV/CVN

COMNAVSURFPAC SAN DIEGO CA//N6/N62/N64/N641/N43// if other than  
CV/CVN or Submarine

COMSUBPAC PEARL HARBOR HI//N4/N45/N6// if ship is a Submarine

COMSPAWARSSCOM SAN DIEGO CA//04F/04R/04C/04L//

Appropriate Battle Group Commander or ISIS

COMCRUDESGRU \_\_\_ or

COMCARGRU \_\_\_, and

COMPHIBGRU THREE if ship is an AMPHIB

COMDESRON \_\_\_ if ship is a Combatant

COMPHIBRON \_\_\_ if ship is an AMPHIB

COMSUBRON \_\_\_ if ship is a Submarine

COMNAVSURFGRU PACNORWEST//N43P3// if ship is home ported in Bremerton or  
Everett Washington (PACNORWEST)

SOUTHWEST RMC SAN DIEGO CA//40/41/42/43/43B//

FTSCPAC SAN DIEGO CA//200/203//

FTSCPAC DET PEARL HARBOR HI//00PH// if ship is an AMPHIB

PEO EXW WASHINGTON DC//PMS470// if ship is a Combatant

SPAWARSSACT PAC PEARL HARBOR HI//D91/D914// if ship is home ported in  
Hawaii

SPAWARSSFAC PAC YOKOSUKA JA//D92// if ship is FDNF/home ported in Japan

SPAWARSSFAC PAC GU//D93// if ship is FDNF/home ported in Japan

SPAWARSSCEN CHARLESTON SC//0F1/0F2// only if the ship is in LANT; if so  
respective LANT Fleet CINC, TYCOM and Squadron PLA's apply

NAVSHIPYD PUGET SOUND WA//SECURITY/1214/1121.6// (as applicable)

NAVSHIPYD AND IMF PEARL HARBOR HI//SECURITY// (as applicable)

SUPSHIP SAN DIEGO CA//C-190// (as applicable)

NSSC PEARL HARBOR HI//N45/N45A// (as applicable)

CHET PEARL HARBOR HI//OIC// (as applicable)

AEGIS TRAREDCEN DET SAN DIEGO CA//N1// (as applicable)

AEGIS TRAREDCEN DET PEARL HARBOR HI//N1// (as applicable)

UNCLAS //N05521//

MSGID/GENADMIN/SPAWARSSCEN SD/D60F//

SUBJ/VISIT CLEARANCE REQUEST/C4ISR AIT INSTLN SUPPORT//

REF/A/GENADMIN/SPAWARSYSCEN SD/211545ZJUL00//

REF/B/DOC/SECNAVINST 5510.30A/10MAR99//

NARR/REF A IS ORIGINAL VISIT CLEARANCE REQUEST. REF B IS DEPT OF THE NAVY PERSONNEL SECURITY PROGRAM.//  
POC/FAHRENWALD, M./ETCM(SW)/SPAWARSYSCEN SD/-/TEL:DSN 524-3301 /TEL: (619) 524-3301//  
AKNLDG/YES/INST: REPLY ONLY IF NEGATIVE//

RMKS/1. THIS MSG SUPERCEDES REF A. IAW REF B, THE FOLLOWING SPAWAR SYSTEMS CENTER (SSC) SAN DIEGO PERSONNEL (UIC N66001) MAY HAVE OCCASION TO VISIT YOUR COMMAND INTERMITTENTLY 18 OCT 00 - 31 DEC 00 IN SUPPORT OF C4ISR AIT INSTALLATIONS. THESE INDIVIDUALS COMPRISE THE INTEGRATED INSTALLATION TEAM (IIT) AT SSC SAN DIEGO, SERVING IN THE CAPACITIES LISTED NEXT TO THEIR NAMES IN PLANNING AND OVERSEEING ALL SSC SAN DIEGO C4ISR AIT INSTALLATIONS. REQUEST RETENTION AS A STANDING VISIT CLEARANCE FROM SSC SAN DIEGO IIT.

A. SSC SAN DIEGO GOVT EMPLOYEES (ALL U.S. CITIZENS, LISTED ALPHABETICALLY):

1) LAST NAME, FIRST NAME, MIDDLE I; DP-IV (GS-14 EQUIV); SS#; BATTLE FORCE TEAM LEADER; DPOB 27 JUN 46, COVENTRY UK; CLRD SECRET.

2) LAST NAME, FIRST NAME; DP-III (GS-13 EQUIV); SS#; BATTLE FORCE SUPERVISOR; DPOB 24 JUL 43, SAN DIEGO CA; CLRD SECRET. CODE, PHONE #; CAGE CODE 3J843; FCL SECRET; WORKING UNDER CONTRACT NR N66001-97-D-0026 (US CIT):

B. EMPLOYEE OF AMSEC LLC; ADRESS; PHONE #; CAGE CODE, FCL SECRET; WORKING UNDER CONTRACT

1) LAST NAME, FIRST NAME, I; SS# ; SHIP SUPERINTENDENT; DPOB 22 JUL 59, LINCOLNSHIRE UK; CERTIFICATE OF NATURALIZATION NR 9027104; CLRD SECRET, EXP 7 MAR 02.

C. EMPLOYEE OF SAIC, STREET ADDRESS, CITY, STATE, ZIP CODE, PHONE #; CAGE CODE 52302; FCL SECRET; WORKING UNDER CONTRACT NR TADIL-N66001-97-D-0026 (US CIT):

1)LAST NAME, FIRST NAME, MIDDLE; SS#; SHIP SUPERINTENDENT; DPOB 8 APR 57, ROBINSON IL; CLRD INTERIM SECRET, EXP 31 DEC 00.

D. EMPLOYEE OF MILCOM SYSTEMS, STREET ADDRESS, CITY, STATE ZIP CODE, PHONE #; CAGE CODE 66257; FCL SECRET; WORKING UNDER CONTRACT NR N00244-96-D-5111 (US CIT):

1) LAST NAME, FIRST NAME, MIDDLE; SS#; SHIP SUPERINTENDENT; DPOB 12 APR 40, PAYNESVILLE MI; CLEARED INTERIM SECRET, EXP DATE.

2. ACCESS TO SECURE SPACES TO DEGREE HELD MAY BE REQ'D.//





***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX G  
AFLOAT FUNDING PROCEDURES**

# Appendix G

## Afloat Funding Procedures

All Installation funding is processed through the Fleet Implementation Service Center. All charges for installation efforts will charge to Service Center. All non-labor requisitions will be routed through the Service Center Manager for acceptance/approval prior to submission to the Procurement Department.

Via Customer Order Number (CON) and funding provided, and a combination of specific and apportioned costing, a given hull's different system installations are integrated or segregated to support reporting requirements. The intent is to capture costs by system per hull in ERP, as required by the sponsor and financial reporting guidelines.

The Installation Financial system operates on a principle of phases through the SIDE /CETracker and ERP. Phase 1 is tasking, estimating, and acceptance of estimate(s). This establishes the budget for expected execution result. If installation conditions evolve (scope of work changes) then an expeditious report of the evolution takes place via the Change Order Request Notification (CORN) process. If cost increase is significantly enough to warrant re-estimating, then the phase 1 process can be repeated including acceptance of the new estimate by the sponsor. Phase 2 involves receiving funding and "allocating" that funding to the plan in ERP. This phase is conducted entirely by the IMO and these results are visible in CETracker and ERP. The third phase involves the execution of this funding plan by the parties involved in the installation effort.

During phase 1 discussed above SPAWAR 04 provides tasking to SSC San Diego of specific system installations by entering them into the Installation Database (SIDE). These tasks are sent in a large group during the current Fiscal Year (FY) in preparation for starting the following FY installation work. These Work Items are imported into the SSC San Diego CeTracker system and sent to the branch head of the technical code with sufficient expertise to provide a stand-alone estimate for installing the tasked work IAW the Work Breakdown Structure provided in CETracker. For this purpose the technical code with sufficient expertise is determined by historical involvement in the particular installations in a given area and is determined by the IMO Manager 260F. The branch head then assigns this estimate through the CETracker to a given estimator within his code to provide a comprehensive estimate based on the known requirements of the installation at the given time. This may result in an accurate estimate of the class "C" type or only be of the value of a Reasonable Order of Magnitude (ROM). This estimate then is automatically processed through the approval cycle in CeTracker via the Branch Head, the BFS, the IMO Manager and finally the IMO Financial group. The CETracker routinely updates the SIDE with these estimates to SPAWAR 04 for acceptance. This can result in follow-on meetings to resolve scope and details of estimates that are higher than the expectation of the sponsor. These meetings will be arranged by the IMO for attendance by technical personnel from the estimating code, the IMO and technical and financial personnel from SPAWAR 04. Once the sponsor accepts the estimate and provides the required funding, then the work is formally tasked by the IMO. Once formally

accepted, a CORN for a bottom line increase in resource required can only change the estimate; the review cycle discussed above pertains.

Once funding is received by the IMO, the process of allocating the funding to the tasked and accepted Work Plan Items (WPI) begins. The IMO Manager has the final decision establishing funding priority. Once allocations are made to the jobs in CETracker, the IMO will establish the plan and Work Breakdown Structure (WBS) in ERP, and notify the IIT of the Service Center WBS and authorized plan amount of allocation via e-mail and established WBS plan in ERP.

The following details in this appendix describe the WBS structure and the charging requirements for labor, travel, material, and Purchase Requests and Purchase Orders in a variety of different circumstances. A key requirement is that all Purchase Requests (PRs)/Outgoing Funding Documents (OFDs) require approval by the Service Center Manager prior to submission to the Procurement Department. The route sheet required for this purpose is provided in this appendix.

1. All Afloat Funding will process through the IMO Service Center.

2. CON/JON Structure:

Service Center CON WBS Structure will consist of:

1 Service Center CON per Hull	4D60F7(X)A
1 Service Center WBS per System	4D60F7(X)A11

This will enable us to gather all costs by Hull by the CON and all costs per System by the WBS. No expenditure data calls are anticipated back to the tech codes and are not today getting any expenditure data calls.

3. FY01 Estimate/Plan/Allocation. All estimates will continue to be input into CeTracker/IFMS at the WIN level. When funding is received, a Service Center WBS will be input into BDI. The Plan Amount will be the allocation from CETracker/IFMS. The Allocation and Service Center WBS will be sent out by email to the following:

IIT Lead  
IIT Financial POC  
Strike Force Officer  
Strike Force Superintendent

To facilitate integrated install delivery orders, ALL Contractor Production Effort will be allocated to the Hull Contract WBS (see item 6. below).

4. Cost Control Responsibility. It will be the responsibility of the IIT Lead through the Ship Sup and NTR to keep all costs for the installation within the limits of the plan. Any increase in COV, SME or install contractor costs that increase the overall system install plan must be resolved through the IMO (and contracts if applicable) prior to execution of the scope increase. The Change Order Request Notification Process is to be followed after DO award.

5. Labor. BFO/BFS and Ship Sup will charge their time as follows:

SFO Military	– 4D60F11M01	Overtime	– 4D60F12M01
SFS Civilian	– 4D60F11J01	Overtime	– 4D60F12J01
Ship Superintendent	– Hull specific CON + “03”	Overtime	– Same WBS

NTR and other government labor will be charged to the Hull/System WBS supported that week.

6. Contracts/Material Purchases/Outgoing Funding Documents. For integrated install Purchase Requests or Outgoing Funding Documents (OFD), one WBS per PR/OFD will be used. On the multi-systems installations PR/OFD only, the tech code will itemize the estimate for each system on the same hull supported by the PR, which hull and systems this task will support, based on the contractor’s quote. If quote is not broken out by install task, a pro-ration based on the contractor estimate will be used. A cost transfer performed by the IMO will transfer costs back into the appropriate Hull/System WBS based on the itemization pro-ration provided. Generation of Work Order Numbers (WONs) is no longer required in CETracker/IFMS. To track obligations against the hull, the use of the generic Hull/System JON for each hull will be required – Contract’s WBS will end in 04, OFD’s WBS will end in 05. Each hull will require a separate PR/OFD – no multiple funding across hulls will be authorized.

Contracts for Subject Matter Expert (SME) will use one WBS (4D60F31A04) per DO. On the purchase request, tech code will itemize the estimate for which hull and systems this task will support based on the contractor’s quote. If quote is not broken out by install task, prorate based on NTR/SHIPSUP knowledge of tasking involved will be used. A cost transfer performed by the IMO will transfer costs back into the appropriate Hull/System WBS based on the itemization provided.

For bulk buys, one WBS (4D60F23X01) per purchase request will be used. On the purchase request, tech code will itemize the costs for each hull and system this material buy will be used to support. A cost transfer performed by the IMO will transfer costs back into the appropriate Hull/System WBS based on the itemization provided.

All other single tasks (one hull, one system) PRs and OFDs will use the hull-/system- specific WBS.

COPIES OF ALL MULTI-SYSTEM PURCHASE REQUESTS (PR’s and OFD’s) WILL BE PRESENTED TO THE IMO SERVICE CENTER MANAGER FOR REVIEW/APPROVAL BEFORE PRESENTATION TO THE PROCUREMENT DEPARTMENT FOR PROCUREMENT ACTION.

7. Accruals. Accruals will be prepared by the Tech Code and accompany the PR presented to the IMO Service Center Manager for review/approval. This must be done concurrently with submission of the contract package Purchase Request or Outgoing Funding Document.

8. Travel. If travel is in support of single task, use hull-/system-specific WBS. If travel is in support of multiple hull/multiple systems – use 4D60F42X01. Please send IMO Service Center Manager copy of travel request with annotation of prorated costs against hulls/systems travel will support. Local area mileage travel claims not associated with a particular install will be submitted against the generic travel WBS for each hull (will end in 06).

**ROUTE SHEET**

ENTER APPROPRIATE CLASSIFICATION

CLASSIFICATION

(DOWNGRADE TO UNCLASSIFIED WHEN MATERIAL IS DETACHED)

DATE RECEIVED \_\_\_\_\_

USE APPROPRIATE CLASSIFIED COVER SHEET

ORIGINATOR	FILE AND SERIAL NO.	DATE
------------	---------------------	------

SUBJECT/DOCUMENT DESCRIPTION

WARNING: DO NOT ENTER CLASSIFIED INFORMATION

**Route Sheet for Contracts using the Service Center JON (4DXXXXXXXX)**

CODE	INITIALED		ACTION	REMARKS <small>(PLEASE WRITE ON FIRST AVAILABLE LINE IN ORDER TO PROVIDE SPACE FOR ALL WHO MAY WISH TO COMMENT)</small>
	BY	ON DATE		
D6XX			I	NTR _____ Other DO/OFD required (not yet processed) _____ No other DO/OFD required to complete task
D6XX			I	Ship Sup \$_____ (approx) other DO/OFD required (not yet processed) _____ No other DO/OFD required to complete task
DXXX			I	
D6X			I	Admin Review – attach BDI screen and Financial Control Route Sheet
D60F			S	Service Center Manager
D60X			S	Team Lead
D60			S	Contracts over \$500K

SYMBOLS: A - ACTION      C - COMMENT      I - INFORMATION      P - PREPARE REPLY      R - RETAIN COPY      S- SIGNATURE

ENTER APPROPRIATE CLASSIFICATION

CLASSIFICATION

(DOWNGRADE TO UNCLASSIFIED WHEN MATERIAL IS DETACHED)

USE APPROPRIATE COVER SHEET WHEN ATTACHED MATERIAL IS CLASSIFIED





*SPAWAR  
Systems Center  
San Diego*

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX H  
STATEMENT OF WORK (SOW)**

## **Integrated Installations and utilization of the I2000 contract:**

**The I2000 contract, N66001-01-D-5020, is an installation vehicle to be used specifically for the integration of C4ISR and C5I installations. The following timeline is generated with reference to the present D-30 NAVSEA requirement referenced from the FMP and SPAWAR instructions, and the R-7 “Ready to Surge” timeline added October 2003.**

- a. The Strike Force Manager is responsible for the following:
  - (1) A-180: The PEO Letter is up-to-date with the planned Ship Alterations, thus ensuring the authorization of those system installations during this scheduled availability.
  - (2) A-150: In pre-planning for the WPIC, note final status information of SIDS, ILS Certification, Funding in-line, Work Plan/SPIDER reflective of installations to be done.
  
- b. The Ship Superintendent is responsible for the following:
  - (1) A-150 – A120: Teaming meeting with NTRs to establish requirements, issues, expectations, etc
  - (2) A-120: Initial draft of SOW released to COR, SIDs reviewed, and preliminary drawings now in final form.

(Note: POAM as part of weekly report requirement is noted on CDRL. Ship Superintendent will work initial draft of SOW in coordination with the NTR for quality assurance to ensure all items necessary are included (administrative, coordination tools, and specific technical requirements to be implemented within paragraph 3 of SOW). If Ship Superintendent is not assigned, responsibility becomes SFS/SFO.

- (3) A-90: Request for Quote (RFQ) from AITs/contractors.
- (4) A-90-85: Arrange and coordinate initial shipcheck for AITs/contractors, NTR, and SME. SHIPCHECK results reviewed. NTR and contractor to be in 100% agreement with contract requirements
- (5) A-80: Receive questions from AITs/contractors.
- (6) A-75: Bids from contractor to COR.
- (7) A-70: Bid review meeting (Gov’t only).
- (8) A-65: Contractor chosen; D.O. Awarded
- (9) A-50: Contractor, NTR, (PY, SY, SUPSHIP, etc) and ship superintendent meeting to coordinate, review drawings and expectations, and ensure correct Point Of Contacts, etc
- (10) A-50 Coordinate another shipcheck, as needed, with NTR’s, SME’s and AITs, to produce expected changes, to include LARS and CORNS.
- (11) A-30: NLT date for security clearance submissions/released, and third party indemnity, as required, for access to shipyards.

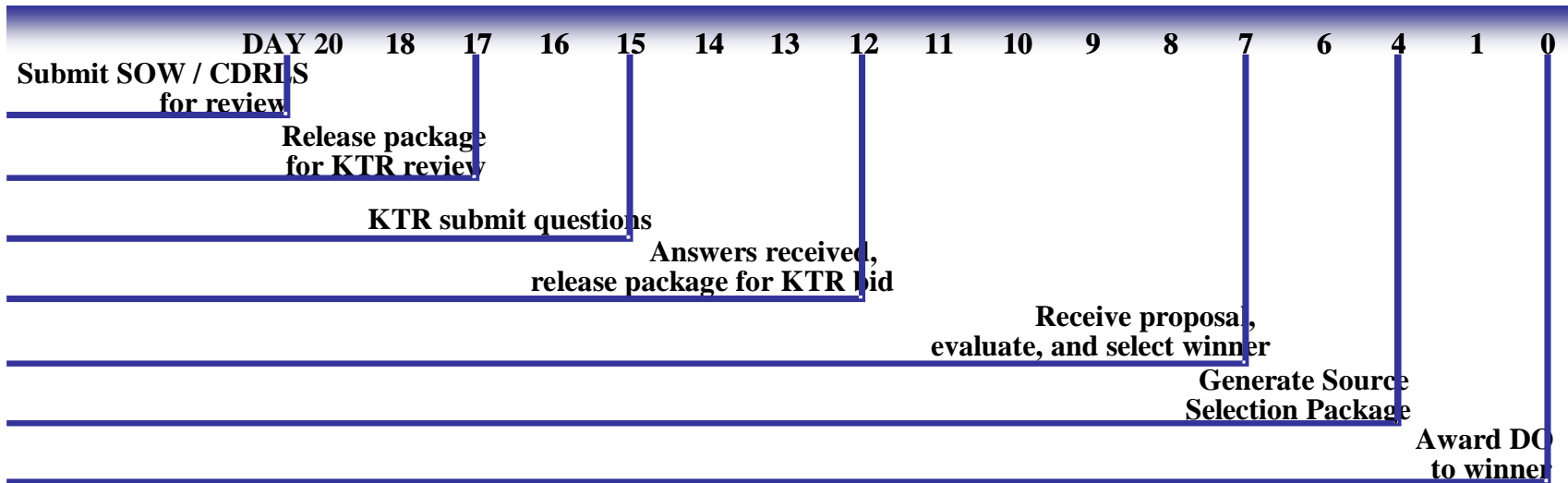


# I 2000 AWARD PROCESS

**OCCURS PRIOR  
TO DAY 20**

**Pre-Planning**

- Define systems to be installed
- Write SOW
- Define Source Selection Criteria
- Obtain
- Generate CDRLs
- Obtain cost te





***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX I  
AIT Universal Planning Document (UPD)  
(used to build an integrated planning  
document)**

# Appendix I

## AIT Universal Planning Document

- Scope
  - Notional Schedule (Key events)
  - Location of Work
  - Special Requirements (400 Hz, F/M, CH/W)
  - Special Testing requirements (Led paint, Asbestos, Hazmat, NDT)
- References
- Requirements
  - Services
  - Storage
  - Man-days
  - Facilities
  - Conditions/Climate Control
  - Testing (pre)
  - Testing (post)
- Additional Notes

## Universal Planning Document: Requirements per NSTS 9090-310 series

Required information from NTR: A-180 through A-135 for A-120 WPIC for CNO Availability.

***In accordance with the NSTS 9090-310series, paragraph 3.4.3, there is a requirement to give the NSA, that is SWRMC or the Port Engineer in a CNO Avail, the required "Pre-installation Coordination Requirements" supposed to be at A-180 and no later than A-135. WPIC is at A-120. The following is noted:***

- (a) Material delivery and stowage requirements (# of boxes/pallets, special handling, special stowage, etc.
- (b) Crane service requirements (capacity, on-load, offload, high reach, etc)
- (c) Rigger service requirements
- (d) Impacted areas and spaces, including required access to secure spaces
- (e) Inspection requirements (gas-free, SIGSEC, tempest, weight tests, NDT, etc)
- (f) Scope of PICO requirements
- (g) Scope of hot work requirements
- (h) Fire watches (# of welders working, # and length of shifts, etc)
- (i) Access cut requirements
- (j) Work control review of specific equipment, systems circuits, components, piping or valves which will require isolation, deactivation or removal to accomplish planned work, and any associated tag-out processing requirements.
- (k) Planned handling, use and disposal of identified hazardous materials (i.e. paint, welding rods, waste)
- (l) Ventilation/environmental requirements (air, cooling heating requirements,)
- (m) Ship systems service requirements (i.e. power, LP or hp air) needed to accomplish/support the install or cert of equip
- (n) Post-installation testing support requirements
- (o) System certifications (SIGSEC, TEMPEST, EMC, EMI, RADHAZ, etc)
- (p) Man-aloft requirements
- (q) Admin support requirements (i.e. dedicated telephone svc, desk space, etc)
- (r) Scaffolding/staging requirements



***SPAWAR***  
***Systems Center***  
***San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX J  
ROLES AND RESPONSIBILITIES**

# Appendix J

## Roles and Responsibilities

### Integrated Installation Team (IIT)

The IIT is chartered and tasked to manage installation of all Space and Naval Warfare Systems Command (SPAWAR)-sponsored Command, Control, Communications, Computer, Intelligence Surveillance and Reconnaissance (C4ISR) systems (hardware, software and networking) on ships of the U.S. Pacific fleet. IIT responsibility for C4ISR system installation management in Strike Group (SG) ships will commence at return from deployment in the IIT Strike Group inter-deployment cycle to coincide with Installation Drawing Shipcheck planning and continue until the next deployment. The IIT will ensure that all systems are installed in ships in an integrated manner, fully warranted, and logistically supported with documentation, parts, and state-of-the-art operator and maintenance training. The integrated installations on individual ships will be completed so the overall Strike Group Command, Control, and Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) continuity is achieved.

a. Installation Management Office (IMO), responsibilities. The IMO functions as the conduit by which SPAWAR Systems Center San Diego receives installation-related advance planning and execution tasking and funding. The IMO ensures product delivery within cost, schedule and performance, and does so via its operations and finance staff, and by way of process development and implementation. Specific tasks include:

- (1) Formulate installation-related policies, processes, (CONOPS, etc.)
- (2) Conduct Strike Group Superintendent/Officer (SGS/SGO) Lead oversight.
- (3) Acceptance signature authority for SPAWAR installation-related tasking.
- (4) Act as funding acceptance and allocation authority for tasking.
- (5) Ensure installation planning and execution strategies are formulated/communicated.
- (6) Interface directly with Echelon-2 managers and counterparts.
- (7) Brief over-arching issues as required.
- (8) Coordinate C4ISR Installation related IPTs, as required.
- (9) Maintain metrics pertaining to tasking and installation executions.
- (10) Establish, maintain and manage database and IT business-based tools.
- (11) Oversees management of installation processes.
- (12) Ensure task-related reporting is consistent and delivered as required.
- (13) Ensure task-related operations planning occurs in a timely manner.
- (14) Manage overarching contracts.
- (15) Establish required certification training for SGS/SGOs.
- (16) Oversee the commands Management System Plan, and implementation on ships afloat.
- (17) Coordinate processes with other IMOs and activities.
- (18) Ensure message access is afforded to SGS/SGOs (unclassified and classified).
- (19) Coordinate Reservist placement within IMO.
- (20) Conduct independent assessments as necessary.
- (21) Review and resolve with issuing activity, funding documents with discrepancies.
- (22) Develop and update installation-/task-related IT business tools.
- (23) Establish Work Breakdown Structure (WBS) numbers.
- (24) Notify SGS/SGOs via e-mail or IT tool auto reply of funding status.
- (25) Allocate funding based on funding allocation requirements of Budgeted Plan.

- (26) Prepare and submit Funding Document Acceptance to Funds Processing code.  
 (27) Manage the Change Order Request Notification (CORN) process.

b. IIT Strike Group Officer, responsibilities. Scheduling for Strike/ESG Group availabilities. Work ship scheduling conflicts and issues. Liaison with SPAWAR 04 and PEO C4ISR Space, PMW-750/760 installation managers. Responsible to SGS for Strike/ESG Group scheduling and availability and system readiness to install for all systems. Ensure timely submission of reports and other engineering documentation. Liaison with OPNAV, NAVSEA Ship Program Manager (SPM), Fleet Commands, TYCOMs, Strike/ESG Group /DESRON Commanders, and Commanding Officers to resolve Strike/ESG Group availability scheduling and Strike/ESG Group composition issues. Coordinate final authorization to install in Strike/ESG Group ships. Specific tasks include:

- (1) Provide a military presence to afloat groups and ships.
- (2) As necessary, represent SPAWAR at BGSIT.
- (3) Work in consonance with IIT Strike Group Superintendents.
- (4) Ensure unit installation POA&Ms are maintained.
- (5) Ensures planning & execution procedures are accomplished.
- (6) Provide status reports as required.
- (7) Review and compare IIT Ship Superintendent SITREPs.
- (8) Attend reviews and VTCs as required.
- (9) In the absence of respective IIT Strike Group Superintendent and IIT Ship Superintendent, respond to the PEO C4I Space, SPAWAR Strike Group Manager (04F) Work Plan tasking with timeline based Integrated Installation Plan(s), and resolve installation issues.
- (10) Maintain liaison relationships at all levels, and with SPAWAR 04 and PMW-750/760 managers related to Work Plan implementation.
- (11) Provide input weekly status reports, separate from that provided by Ship Superintendents.
- (12) In the absence of respective IIT Strike Group Superintendent, maintain group installation POA&Ms, review cost estimates, conduct oversight of IIT related contracts, delivery orders, statements of work, and funding allocations.
- (13) In the absence of respective IIT Strike Group Superintendent, assess Change Order Request Notifications (CORNs), and make recommendations to IIT/IMO.

c. IIT Strike/ESG Group Superintendent, responsibilities. Project Manager for Strike/ESG Group IIT installations. Scheduling for Strike/ESG Group availabilities. Work scheduling conflicts and issues. Liaison with SPAWAR 04F for SG scheduling issues. Responsible to IMO for Strike/ESG Group scheduling and availability and system readiness to install. Ensure timely submission of reports and other engineering documentation. Liaison with OPNAV, NAVSEA Ship Program Manager (SPM), Fleet Commands, TYCOMs, Strike Group Commanders, and Commanding Officers to resolve Strike/ESG Group availability scheduling and Strike/ESG Group composition issues. Coordinate final authorization to install in Strike/ESG Group ships. Specific tasks include:

- (1) Ensure all Naval correspondence for their IITs is accomplished.
- (2) Maintain group installation POA&Ms from inputs received from Ship Superintendents.
- (3) Ensure planning & execution procedures are accomplished.
- (4) Manage the execution of installation processes, contracts and funds.
- (5) Provide status reports as required.
- (6) Coordinate with Ship Superintendents to obtain IIT assets. (i.e., GFM/GFE), and ensure NTR and SME assets support IIT requirements
- (7) Review and compare IIT Ship Superintendent SITREPs.

- (8) Ensure daily message reviews (unclassified and classified) are conducted.
- (9) Signature approval authority of responses to customer SITREPs.
- (10) Act as counterpart to, and in consonance with respective IIT Strike/ESG Group Officer.
- (11) Maintain liaison relationship with SPAWAR 04 managers related to Work Plan implementation.
- (12) Attend reviews and VTCs, as required.
- (13) In the absence of IIT Ship Superintendents, respond to SPAWAR Work Plan tasking with a timeline-based Integrated Installation Plan(s).
- (14) Work with IIT Strike/ESG Group Officers to provide weekly status reports.
- (15) Conduct oversight of IIT related contracts, delivery orders, statements of work, funding.
- (16) Coordinate and monitor multiple and integrated C4ISR installations.
- (17) Coordinate responses to customer SITREPs.
- (18) Gather data on contract compliance, quality of work, and standards of conduct.
- (19) Review, evaluate and make recommendations pertaining to actual cost reports from contractors.
- (20) Ensure quality and timeliness of data updates in IT business tools.
- (21) Maintain collective group cost, performance, and schedule data.
- (22) Maintain records of contract compliance, quality of work, standards of conduct.
- (23) Ensure QA Plan, policy and procedures are executed
- (24) Resolve IIT specific installation planning and execution problems.
- (25) Attend WPIC in the absence of IIT Ship Superintendent.
- (26) Review cost estimates.
- (27) Assess Change Order Request Notifications (CORNs), and make recommendations to IMO.
- (28) Coordinate the Change Order Request Notification (CORN) process with the contractor and NTR, and recommends approval/disapproval of CORN.
- (29) Review and approve all installation plans, cost estimates, and statements of work.
- (30) Recommend planning and execution strategies.
- (31) Manage allocated funding via Ship Superintendents.
- (32) Conduct cost negotiations with NTR's and with contractors.
- (33) Draft readiness to start installation advisory messages.
- (34) Maintain individual ship cost, performance, inspection, and schedule data.

d. IIT Ship Superintendent, responsibilities. The Ship Superintendent is the single Point of Contact and designated person with overall responsibility for the conduct of the Integrated Installation Team onboard designated platforms. The Ship Superintendent represents the Commanding Officer, SSC Diego to the Ship and Submarine Commanding Officers. The Ship Superintendent provides a single Point of Contact between the ship and various community activities and coordinates installations with the Regional Maintenance Center, to include the Regional Modernization Maintenance Control Office (RMMCO) Gatekeeper. Specific tasks include:

- (1) Act as personal representative of SSC San Diego Commanding Officer to ship's/sub's Commanding Officer.
- (2) Meets frequently with Ship's Commanding Officer or his designated representative and reviews alteration progress and issues and receives Commanding Officer's personal feedback/concerns on the alteration's progress.
- (3) Responsible for resolving integrated installation issues and meeting requirements of NSTS 9090-310 series and shall be knowledgeable of and responsible for team adherence to all invoked requirements including safety and quality.



- (4) Provide information to the SGS to update CE Tracker with ship installation status, i.e., schedule and completion information
- (5) Verify funding status pertaining to ships' installations via CE Tracker.
- (6) Attend scheduling conferences and meetings, i.e., NSA, production and WPIC meetings.
- (7) Coordinate production efforts with NTR, Contractor Leads, Ship force and IPM.
- (8) Attend I-2000 bid reviews as required. Provide Ships CNO availability schedule.
- (9) Prepare Integrated Installation SOW, collect SIDs and associated work specs and provide packages to COR. Also coordinate, verify and validate SID deliveries to the NTR, SWRMC and AIT.
- (10) Review and coordinate with NTRs the contractor installation POA&Ms and documentation required WRT NSTS 9090-310 series for coordination issues and conflicts.
- (11) Exercise oversight over all onboard contracted SPAWAR installation teams.
- (12) Mitigate interfacing issues with non-SPAWAR system installation teams.
- (13) Provide support for SOVT's, and post installation C4ISR Checkout testing.
- (14) Report on, ILS and SOVT discrepancies, and document completions via SITREP.
- (15) Provide inputs to SGS "Ready to start" message as required.
- (16) Generate monthly, weekly, and periodic SITREP's as required.
- (17) Coordinate contractor ship checks, in-briefs and de-brief efforts.
- (18) Coordinate schedule and verify SOVTs and SPAWAR systems testing.
- (19) Coordinate follow-up visits as required.
- (20) Assure compliance with NSTS 9090-310 series and all applicable and pertaining instructions outlined and referenced in this document.
- (21) Maintain records of contract compliance, quality of work.
- (22) Ensure QA Plan, policy and procedures are followed and executed in accordance with SPAWAR 260 Technical Document 3121. Notify appropriate personnel as required.

e. Navy Technical Representatives (NTR)/Subject-Matter Experts (SME), responsibilities. Responsible for installation of individual C4ISR systems in Strike Group (SG) ships. Ensure system is funded, and approved Ship Alteration Record (SAR) and Government-Furnished Equipment (GFE) ready for installations. Writes Statement of Work (SOW), provides and reviews cost estimates for contractor support as required. Provide system engineering and technical direction during installation. Review Ship Installation work specifications prior to and during installation, and update and annotate drawings as required in order to develop final installation As-Built drawings. Conduct system Ship Operation Verification Testing (SOVT) and provide operator and maintenance training, deliver drawings, configuration change forms and other system Integrated Logistic Support (ILS) to ship's company as necessary. Update Ship Selected Record (SSR) as necessary. Report to SSC San Diego Technical Code for installation assignment, pay, travel, and other administrative matters. Report to Ship Superintendent for operational matters concerning individual system installations. Specific tasks include:

- (1) Coordinate equipment deliveries.
- (2) Coordinate and deliver ILS to customers.
- (3) Interface with customers on all technical systems matters.
- (4) Support the IITs, technically.
- (5) Keep the IITs apprised of PITCO schedules, testing status, and PICO results.
- (6) Identify LAR requirements during production efforts; produce and track LARs.
- (7) Conduct installation ship checks, in-briefs, production efforts, SOVTs, and de-briefs.
- (8) Review and verify contractor produced red-line (as-built) drawings.
- (9) Procure installation related Government Furnished Material.

- (10) Submit independent government cost estimates, and revisions thereto via the Cost Estimate Tracker of the Installation Financial Management System.
- (11) Provide subject matter expertise as required for SID reviews and during production efforts and SOVTs.
- (12) Signatory on Installation Completion Reports/ACR.
- (13) Schedule, coordinate and effect installation-related training.
- (14) Formulate/review SOVT documents, conduct SOVT's, and TEMPEST schedules, TEMPEST inspections.
- (15) Provide install-sequencing guidance to Contractor Lead and Ship Superintendent.
- (16) Provide government expertise during installations.
- (17) Ensure delivery of required ILS products (including OPNAV 4790/CKs) to ship.
- (18) Coordinate installation visits with RMMCO.
- (19) Signatory on NAVSEA 9090-310 series Installation Completion Reports.

g. IMO ILS Manager, responsibilities. Implements policies and procedures via IIT ILS Coordinators, and provides ILS guidance to the IMO, Ship Superintendents, NTRs and IIT's. Specific tasks include:

- (1) IMO Single point of contact for all installation related ILS issues.
- (2) Convey policy, and provide ILS guidance and recommendations for improvement.
- (3) Ensure ILS readiness and ILS delivery.
- (4) Lead of ILS assessments, as required.
- (5) Direct interface with respective codes and POCs within SPAWAR.
- (6) Report on ILS readiness and conflicts and problems affecting alteration installations, as required.
- (7) Ensure ILS issues referenced by Fleet customers are addressed/answered.
- (8) Liaison to Integrated Logistics Support Management Team (ILSMT) meetings.
- (9) Develop ILS delivery strategies.
- (10) Provide the IITs with ILS support in absence of IIT ILS Coordinator(s).
- (11) Maintain files, to include ACRs and lessons learned and other appropriate documentation.
- (12) Execute IMO fleet support policies and processes.
- (13) Coordinate ILS deliverable turnover to fleet customers.
- (14) Maintain ILS records, and an ILS Delivery Discrepancy Tickler System.
- (15) Ensure quality and timely updates of ILS data in IT business tools (CDMOA).
- (16) Resolve all ILS related problems.
- (17) Point of contact for logistics issues for Strike Group Officers, Strike Group Superintendents, Ship Superintendents, NTRs, In-Service Engineering Agents, Fleet customers, Naval Supervising Activities (NSA), Integrated Logistics Overhaul Teams, NAVSEA and PEO POC's, and SPAWAR Program Office representatives.

h. The IIT Quality Manager. The Quality Manager is responsible to the Head, Code 26001, for the development and implementation of procedures, and processes.

- (1) Developing a quality assurance policy, which includes developing and maintaining the Management System Manual.
- (2) Developing standardized procedures, criteria and methods for implementation throughout the Management System.
- (3) Assisting SSC San Diego Codes 230, 240, 260, 270, 280, 290, the IIT Strike Group Officer, Superintendents, IIT Ship Superintendents, NTRs, and executing the Management System program.

(4) Performing oversight to ensure compliance with this document and referenced requirements and reporting to SSC San Diego, Code 26001 using QP101, "Reviews".

i. In accordance with **NSTS 9090-310 series**, Paragraph (1.5) Roles and Responsibilities is paraphrased. The titled responsibilities are compared with the SPAWAR titles and responsibilities as to show where the responsibility lies, which is used on the waterfront with the NAVSEA, SUPSHIP and Shipyard entities:

### **1.5 Roles and Responsibilities**

**The general roles and responsibilities for the following activities are identified to provide guidance for AIT installations. These roles and responsibilities are further defined throughout this technical specification and can be refined, if required, in a Memorandum of Agreement.**

**NSA: Naval Supervising Activity** – *The single naval activity charged with the oversight responsibility of work being accomplished on U.S. Naval ships during any type of availability. The NSA has overall responsibility for integrating the planning and execution of work on Naval Ships by all involved activities. NSA's have the authority and responsibility to preclude and/or stop AITs from performing work when they are not in compliance with this or other invoked specifications.*

**AIT Sponsor** *is the government activity that tasks and funds the AIT Manager and AIT.*

**The AIT Manager** *is the government activity, In-Service Engineering Agent (ISEA), military person or government civilian tasked and funded by the AIT Sponsor to initiate, plan, coordinate, schedule, manage and oversee the successful accomplishment of the alteration in accordance with FMP policy and procedures. The AIT Manager is responsible for investigating significant problems, and preparing and submitting trouble reports in accordance with NAVSEA Instruction 4700.17. Additionally, the AIT Manager is responsible for implementing the corrective actions addressed in the trouble report. The ship involved, the contractor(s) involved, and the applicable NSA will be party to the investigation and will assist in the preparation of the trouble report.*

**The AIT** *is a unit (military, government activity or contractor) under the direction of an AIT Manager or designated agent (ISEA, military or government civilian) of the AIT Manager that is trained and equipped to accomplish specific alterations on specified ships. The AIT is responsible for the installation, performance and completion of the alteration.*

**The AIT On-site Installation Coordinator** *is the government or military employee designated by, and acting with the authority of, the AIT Manager. The AIT On-site installation coordinator will:*

*Be responsible for the conduct of the installation.*

*Act as the Point of Contact with the ship and NSA.*

*Ensure AIT adherence to safety, environmental, quality, and technical requirements.*

*Be responsible for the conduct of the AIT.*

**Resolve AIT issues, particularly those relating to a stop work order.**

*Maintain completed test reports during accomplishment of the alteration.*

*Attend NSA availability production and coordination meetings and Planning Board for Maintenance (PBM) meetings.*

*Provide and update installation progress.*

*Provide copy of a current, approved ILS Certification Form during In-brief to the NSA/RMMCO.*

*Ensure delivery of all documentation and ILS elements.  
Provide on-site installation oversight and management for respective installs.  
Resolve quality discrepancies as directed by the AIT manager.*

**In accordance with NAVSEA 0925-062-0010, Revision C, Submarine Safety (SUBSAFE) Requirements Manual, ensure that AIT work responsibilities that involve SUBSAFE work is performed only by a NAVSEA Note 5000 activity.**

***The Regional Maintenance and Modernization Coordination Office (RMMCO) is a Regional Maintenance Center-aligned, Fleet-chartered organization that serves as the primary point of entry for all waterfront related alteration and maintenance activities.***



***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX K  
CHANGE ORDER REQUEST NOTIFICATION  
(CORN)**

# Appendix K

## Change Order Request Notification (CORN)

The Change Order Request Notification (CORN) process is in place to ensure expeditious notification by the installing contractor of issues and situations that are different than the work that was bid and awarded. Primarily it provides early notification of a Significant Cost Growth or Change in Work Scope that would require an increase in cost. Additionally, it provides early "Red Line" identification, drawing inaccuracies, while providing the best possible technical solution. The CORN process helps to formalize the process of timely submission of "LARs".

Executed properly it will bring Quality Control to the installations and allow for determination of actual costs and limit after-the-fact modifications. A key element of this process is that no additional work or change in scope will be authorized without prior approval of a subject "CORN" form.

Please note that only 220 Contracts Department personnel authorize approval of additional work or change in scope. NTRs/SMEs and Ship Sups "DO NOT" have the authority to authorize any additional work where a significant cost is involved.

The process is encapsulated on the form on the following page. The first part of Form SSC San Diego 4720/REV 4 is to be filled out by the Contractor to include basic information taken from the DO, system affected, problem or condition, ROM in man hours. It should then be discussed with the NTR and Ship Sup to obtain concurrence that there is indeed a requirement (work beyond the scope of the DO) for the CORN. Once all are in agreement, they should initial and date; if they are not available, note on the form that all are aware and concur. At that point, the CORN is routed internal to the Contractor to his Contracting group. They develop a Class A ROM based on their specific Labor categories. They then sign and date the CORN and this becomes the Certificate of Discovery and the clock begins to tick at that point. The Contractor faxes the CORN to the SSC San Diego IMO CORN POC, for login and verification from the NTR. If not already signed, the NTR can sign at that time with the forwarding recommendation, i.e. Accept/Issue Mod or Reject. If rejected, they must state why in the associated block Nr. #25. The IMO CORN POC forwards it for review and approval to the IMO Financial Manager, BFO/BFS, Ship Superintendent, IIT QA Manager, and IMO Waterfront Production Manager, who forward it to further parties as necessary (i.e. NTR, COR). The purpose of forwarding all listed personnel is for a parallel review in order to expedite the process. The IMO Financial Manager identifies the resource dollars and signs the form. The IMO Waterfront Production Manager signs off in the close out block and passes the CORN to the IMO CORN POC who forwards a copy of the completed and signed form to 220 and informs them that work beyond the scope of the DO has been determined to be required and funding identified. Code 220 then authorizes the contractor to proceed with the work.

The Change Order Request Notification is used to change cost estimates, allocations, written individual jobs, and to record changes, which permanently effect cost as it pertains to schedule and

<b>SHIP NAME</b>		<b>HULL NO.</b>	<b>LOCATION</b>		<b>IMO (SSC-SD) SERIAL NO.</b>	
<b>SYSTEM INVOLVED</b>		<b>ERP/WBS NO.</b>			<b>SUBHEAD</b>	<b>WPI-FISCAL YEAR</b>
<b>DELIVERY ORDER NO.</b>		<b>CONTRACT NO.</b>			<b>COR</b>	
<b>CONTRACTOR (COMPANY NAME)</b>		<b>CONTRACTOR CONTACT (MANAGER NAME)</b>			<b>MANAGER PHONE NO.</b>	
<b>ORIGINATOR/ CONTRACTOR NAME</b>		<b>ORIGINATOR/ CONTRACTOR PHONE NO.</b>			<b>DATE AND TIME OF DISCOVERY</b>	
ILLEGIBLE OR MISSING PRINT		GFM		CONFLICTING PRINT		
PRINTS DO NOT REFLECT EXISTING CONDITIONS		INCORRECT SPECIFICATIONS COMPARTMENT NO.				
<b>PRINT NO.</b>						
PROBLEM OR CONDITION (PLEASE EXPLAIN IN DETAIL):						
<b>CORN COST: \$</b>					<b>ROM WORK HOURS:</b>	
<b>QUALITY ASSURANCE</b>						
ADDITIONAL QUALITY REQUIREMENTS?		YES	NO	N/A		
IF YES, LIST REQUIREMENTS						
<b>NTR CERTIFICATION</b>						
DISCOVERY AND COMMENTS:						
<b>NTR (PRINT AND SIGN NAME)</b>					<b>DATE/TIME</b>	
<b>260 IMO FINDINGS, RECOMMENDATIONS AND GENERAL COMMENTS</b>						
RECOMMENDED ACTION:		ACCEPT CORN		REJECT CORN		
MODIFICATION INVOLVED:		YES	NO	PLANNING YARD:		
<b>CORN METRICS (NUMBER IN ORDER OF PREDOMINANT CAUSE, UP TO 2 METRICS)</b>						
<b>IF DM/DS IS SELECTED, SPECIFY LAR SUBMITTAL DATE:</b>				<b>LAR NUMBER:</b>		
<b>DM</b> (Design Material; material in SIDs listed inaccurate or missing)	<b>DS</b> (Design in SIDs; inaccurate design; SID design causes scope increase Lack of Cable Plan)		<b>SD</b> (SID Delivery)		<b>ISD</b> (Industrial Site Delays and Disruptions (CNO, pier side availability))	
<b>SF</b> (Ship's Force; a ship induced condition/delay/disruption in schedule)	<b>SS</b> (Ship's schedule)		<b>MD</b> (Delay GFE/GFM Material; failure to get material to KTR in timely fashion)		<b>US</b> (Underestimated scope of work)	
<b>KTR</b> (Contractor rework)	<b>AS</b> (Additional Work Scope)		<b>RC</b> (Revised Cost Estimate)			
COMMENTS						
<b>RESOURCES AUTHORIZED (FINANCE SIGNATURE)</b>			<b>DATE/TIME</b>	<b>CLOSE OUT (IMO SIGNATURE)</b>		<b>DATE/TIME</b>
ADDITIONAL COMMENTS	If net cost is 0 check appropriate source of funds					<b>NET COST \$</b>
	Reallocation from GOVT to KTR		Available allocation			
	Reallocation from KTR to GOVT					







***SPAWAR  
Systems Center  
San Diego***

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX L  
Liaison Action Record  
(LAR)  
and  
Reverse Liaison Action Record  
(RLAR)**

# Appendix L

## Liaison Action Record (LAR) and Reverse LAR

The primary document to be used in the system is the Liaison Action Record (LAR). The LAR process is the only recognized means to document issues/concerns/discrepancies with approved drawings. It is the vehicle used to document changes that will impact future installations (either on that ship, across a class, or even across classes). Planning Yards review all LARs for applicability across all platforms they are responsible for.

However, it is not the intent of this specification to require the use of LARs where other mechanisms exist such as the direct liaison between the overhauling activity and the Planning Yard (PY) On Site Representative (OSR).

- LAR Governing instruction: NAVSEA Tech Specification 9090–100
- General guidance for the intent and method of LAR preparation is contained in Section 4 of SL720-AA-MAN-010 Fleet Modernization Program Management and Operation Manual.

In accordance with (IAW) this document, LARS are used to request clarification of information provided on a the Ship Alteration Record (SAR), Ship Change Document (SCD), SHIPALT Installation Drawing (SID), Test Requirement, specification, etc., and to request modification, interpretation and/or deviation to existing installation design requirements.

- The originator of the LAR can be anyone who knows about the system, issue, or problem under consideration. This would include the Contractor (KTR), Naval Technical Representative (NTR), In-Service Engineering Agent (ISEA), Ship Superintendent (SHIPSUP), PY, etc.

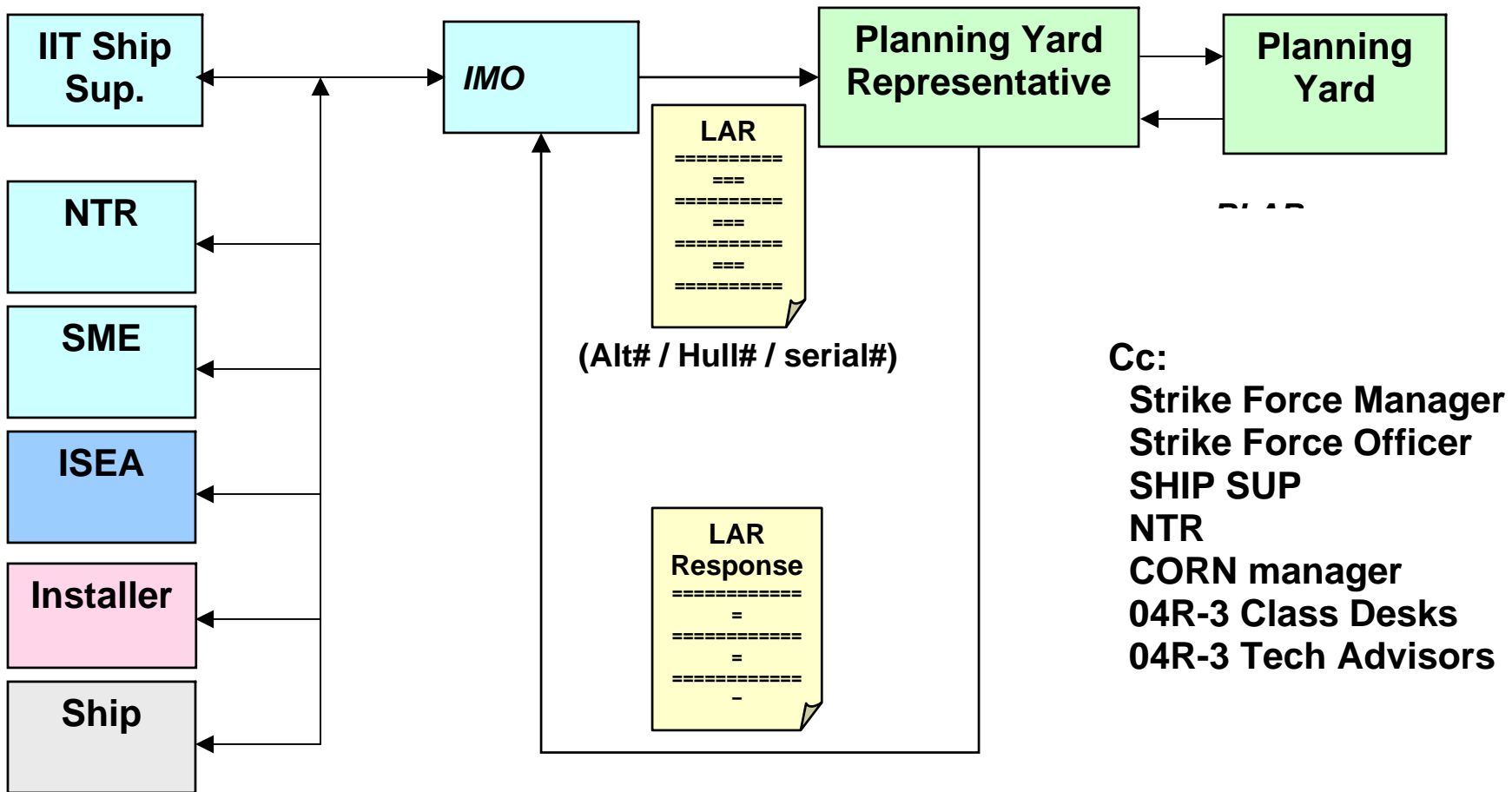
Paragraph 3.2.1e of FMP Manual

- a. [The LAR should include] A specific date when the reply is required. The originator should normally allow the following reply times depending on the priority of the LAR:
 

a. Immediate	3 Working Days
b. Urgent	5 Working Days
c. Routine	10 Working Days
d. Review	60 Working Days (See Tech Spec 9090-310 (Series))
- A Reverse Liaison Action Report (RLAR) is initiated only at the Planning Yard. It is initiated or in response to a submitted LAR or when the PY discovers a discrepancy with an approved design package.
  - NAVSEA TECH SPEC 9090–100 directs that there is a single Point of Contact (POC) for submitting LARs. The Installation Management Office (IMO) will be the single POC and be responsible for routing the LAR within the SPAWAR 04 Design Center. The originator will ensure that the LAR is routed through IMO for recording purposes.
  - Change Order Request Notifications (CORNs) involving design changes must reference and have attached the LAR that documents this change. The IMO shall be responsible for routing the LAR's to the CORN manager.

- Planning yards on-site reps are available in the design war room to help with the LAR process.
  
- The Design & Plans Lead is responsible for tracking LARs and associated CORNs.
  
- The Planning Yards are working on standardizing a set of LAR categories that would describe the root cause of the LAR. The current Top 10 Top-Tier Categories are as follows:
  1. Planning Yard Design/Engineer
  2. Planning Yard Shipcheck
  3. Planning Yard Integration
  4. Planning Yard Fabrication
  5. Sponsor/Other – New Work Added
  6. Sponsor/Other – Guidance Change
  7. Sponsor/Other – Executing Activity Request
  8. Planning Yard Third Party Drawing Review
  9. Unavoidable
  10. Informational/Other

# LAR & RLAR Process





*SPAWAR  
Systems Center  
San Diego*

**INTEGRATED INSTALLATION TEAM  
STANDARD PROCESS MANUAL  
Revision 2**

**APPENDIX M**

**SPAWAR PEO INTEGRATED DATA  
ENVIRONMENT AND RESPOSITORY  
and  
COST ESTIMATE DATABASE (CEDB) or COST  
ESTIMATE TRACKER (CETracker)**

# Appendix M

## CEDB (CETracker)

### **Cost Estimate Database (CEDB) or Cost Estimate Tracker (CETracker) Overview:**

CETracker is a secure, World Wide Web (WWW)-hosted, role-based, Business Operation Support System (BOSS) that supports the Budget and Planning of the IMO. It codifies the Cost Estimating, Funding Allocation, Task Assignment, and Install Management functions of the IMO. CETracker uses standard Web programming techniques to transition a physical business rule-set into a dynamic, process driven version of those same business rules. Used in this context, CETracker gives total visibility of all Afloat Sponsor-tasked installations.

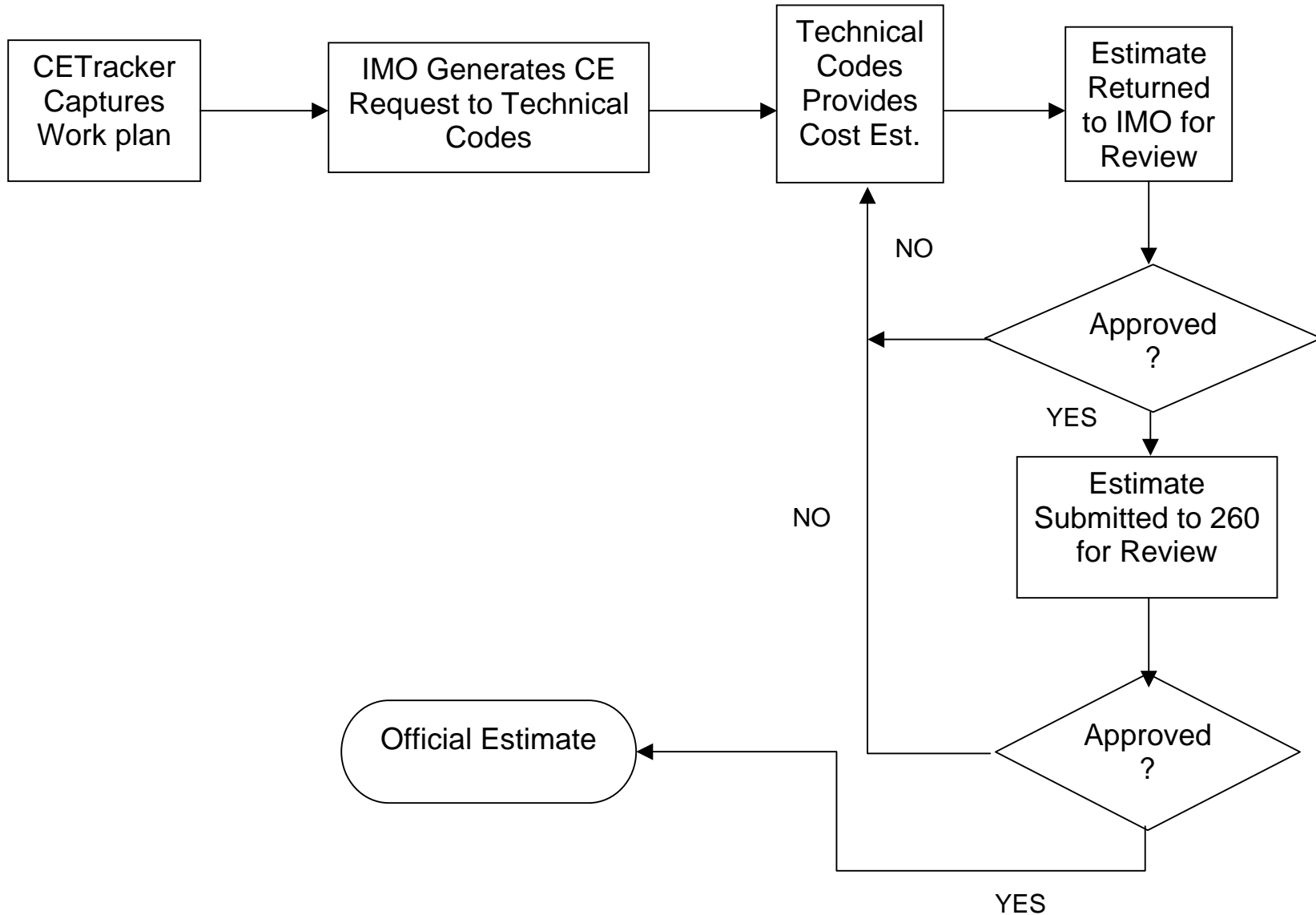
### **High Level Description**

The Work plan is received by the IMO and identifies the system being installed on a particular Unit Identification Code (UIC). This Work Plan also specifies tasking details in the form of a Work Breakdown Structure (WBS). CETracker captures this information. Each Work Plan Item (WPI) is then routed to the Technical Code responsible for estimating the respective system. The Technical Code submits an estimate, based on the WBS, to accomplish the installation. This Quote goes through the internal approval cycle before being returned to the IMO. The IMO reviews the estimate for technical feasibility and financial viability. If the estimate is rejected, it is returned to the Technical Code for reevaluation. If the estimate is accepted by the IMO, it is sent to Code 260 for final approval. Again, if Code 260 reject the estimate, it is returned to the Technical Code for resubmission. If Code 260 accept the estimate, it becomes an excepted estimate awaiting funding.

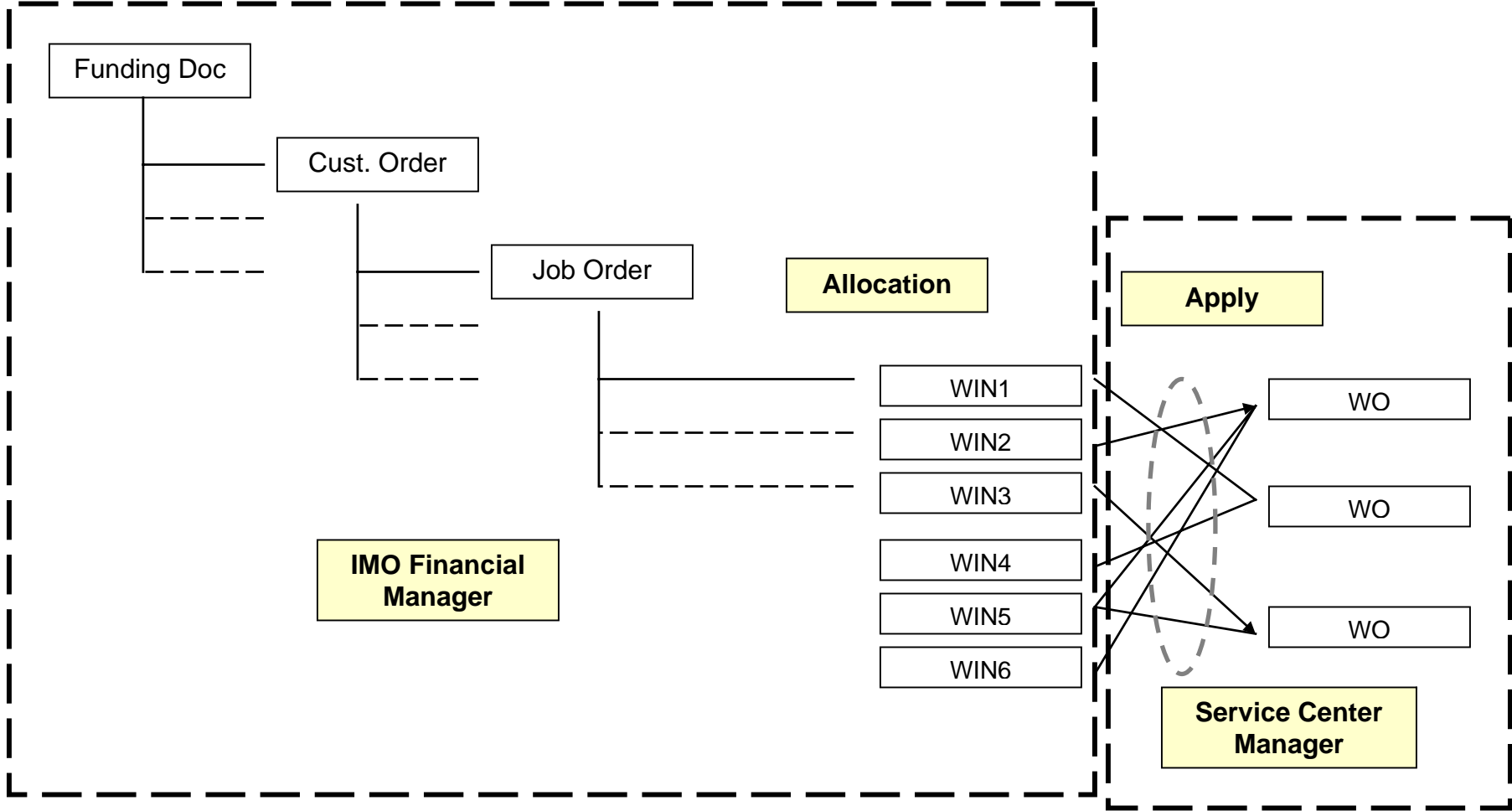
When funding is received, the IMO Financial Group inputs the relevant data into CETracker. Service Center Customer Order (CO) and Job Order (JO) Numbers are created. The Work Item Number (WIN) associated with the Work Plan Item (WPI) automatically assigns a Service Center Job Order (SCJO) Number. An allocation is then made to the WPI WIN. WINs are a further breakout of the WBS. This breakout is designed to facilitate the assignment of the lowest level of tasking to either Contractor or Government personnel. Once funds have been allocated for a WPI, CETracker can then track the entire functional and financial history of that WPI.

CETracker is also used by the BFO/BFS/Ship Superintendents to manage their respective installations. Thru the CETracker interface they are able to provide Timeline Summary inputs as well as to track the progress of their respective installations.

# Task-and-Response, Cost Estimate Process

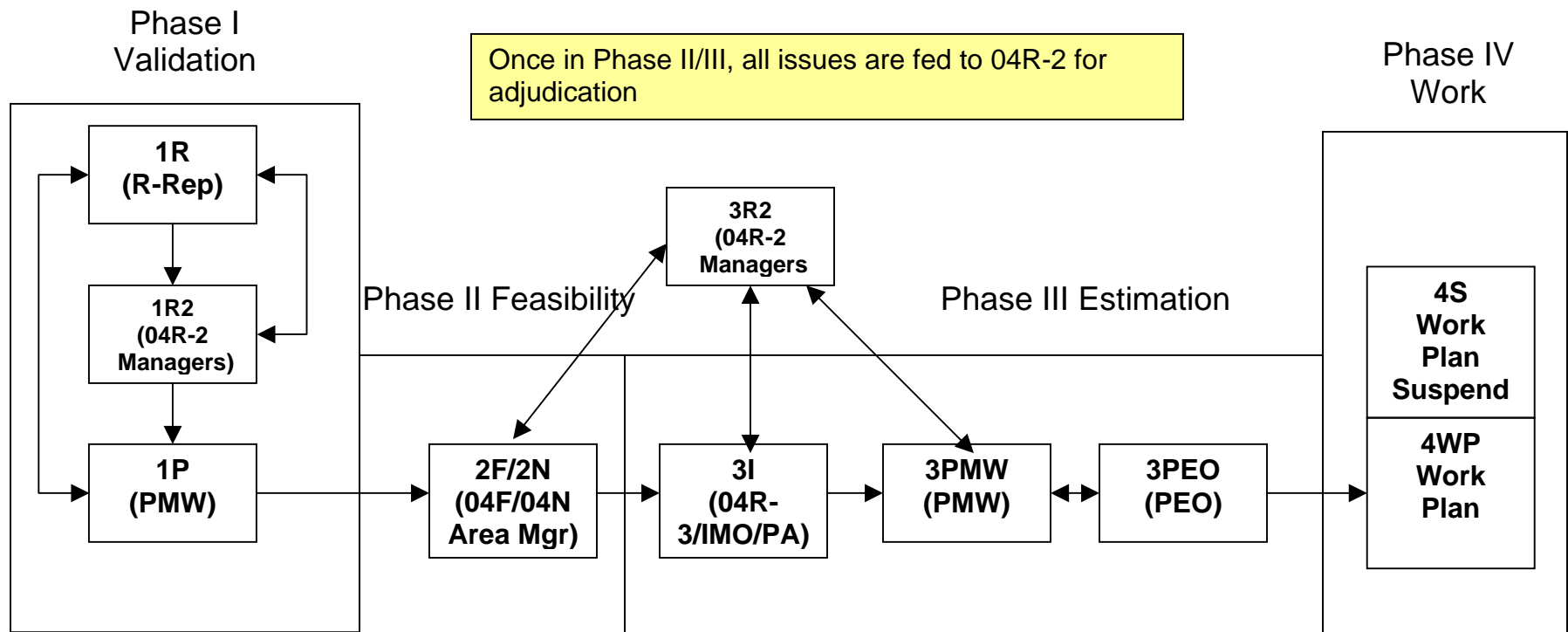


# When Funding is Receive



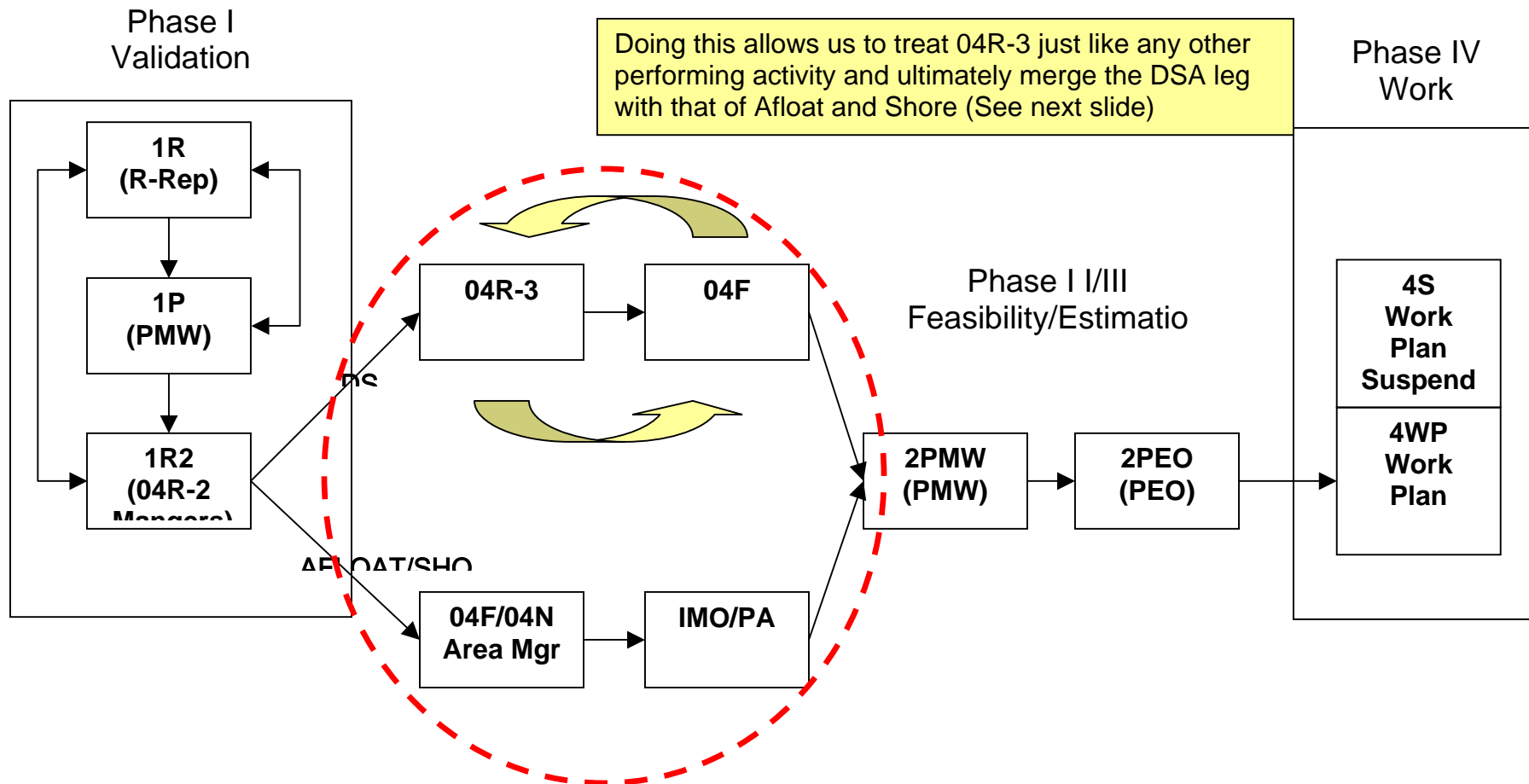


# Unified Process Flow to Work



# Combined Process Flow

**DSA:** The 04R-3 submission is a cost and schedule estimate. This is a fairly involved process that could take several days (or weeks) to complete. For Afloat tasking that involve DSA and Install, 04F will see the Install task requirements immediately and could wait several days (or weeks) to see the corresponding DSA requirement. Moving 04F before the 04R-3 submission would allow them to see and review both task simultaneously, thus giving them the ability to be proactive to potential problems as opposed to constantly reacting to scheduling conflicts. 04F has indicated they would not be impacted reviewing the proposed tasking prior to the 04R-3-review/estimate submission.





***SPAWAR***  
***Systems Center***  
***San Diego***

**INTEGRATED INSTALLATION TEAM**  
**STANDARD PROCESS MANUAL**  
**Revision 2**

**APPENDIX N**  
**GLOSSARY**

# Appendix N

## GLOSSARY

3M	Maintenance and Material Management. System used at Military Facilities
A-x	This indicates the 'x' number of <i>days</i> prior to Availability start (which is equivalent to installation start but not always)
AEL	Allowance Equipage List
AER	Alteration Equivalent to Repair
AIT	Alteration Installation Team
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CCB	Configuration Control Board
CDMD-OA	Configuration Data Manager Database-Open Architecture (ILS report)
CETracker	Cost Estimate Tracker – Web-based database for information related to the tasked installations, including all aspects of resources required and their status, schedule planned and executed. Fed by SPIDER.
CHENG	Chief Engineer
CHET	Combatant Homeport Engineering Team
CINCLANTFLT	Commander-in-Chief U.S. Atlantic Fleet
CINCPACFLT	Commander-in-Chief U.S. Pacific Fleet
CIWS	Close In Weapons System
CNO	Chief of Naval Operations
CO	Commanding Officer
CON	Customer Order Number – First part of a charge number in DIFMS.
COR	Contract Officer Representative – Technical point of contact for a specific contract through whom all delivery orders are prepared.
CORN	Change Order Request Notification – Document provided by a contractor to identify any cost growth or circumstances that are different than those identified in the Delivery Order.
CSOSS	Combat Systems Operational Sequencing System
D-y	This indicates the 'y' number of <i>months</i> prior to the ship's deployment.
DO	Delivery Order – A contractual document drawn up against an existing contract ordering the services defined in the contract under the specific case specified in the Delivery Order.
DPMA	Docking Phased Maintenance Availability
DRMO	Defense Re-utilization and Marketing Office
DSRA	Docking Selected Restricted Availability
EDD	Estimated Delivery Date
EMI	Electromagnetic Interference
EMP	Electromagnetic Pulse
EOSS	Engineering Operational Sequencing System
EW	Electronic Warfare
FAA	Federal Aviation Administration

FC	Field Change
FLTCINC	Fleet Commander-in-Chief
FLTILOTEAM	Fleet Integrated Logistics Overhaul Team
FMP	Fleet Modernization Program
FMS	Fleet Military Sales
FTSCPAC	Fleet Technical Support Center Pacific
GFE	Government-Furnished Equipment
GFM	Government-Furnished Material
GPETE	General-Purpose Electronic Test Equipment
HAZMAT	Hazardous/Toxic Material
HME&O	Hull, Mechanical, Electrical, and Ordnance (equipment)
IBFT	Integrated Battle Force Training
IC	Interior Communications
IDTC	Inter-Deployment Training Cycle – The time period for USN ships between deployments marked by periods of ship maintenance, off ship training and operations and training leading up to deployment.
IFF	Identification Friend or Foe
IFMS	Installation Financial Management System – The over-arching system as described under CETracker including future upgrades and links to other databases.
IIT	Integrated Installation Team – The entire team from SSC San Diego and contractors who are involved in a ship’s installation design, planning, engineering and execution.
ILO	Integrated Logistics Overhaul
ILS	Integrated Logistic Support – The sum total of the logistic support that is associated with a system SHIPALT (i.e. Spare parts, technical documentation, training documentation, training courses, operational documentation, maintenance documentation, configuration documentation...)
IMA	Intermediate Maintenance Activity
IMO	Installation Management Office – The Installation Program Manager and his specific staff overseeing all technical and financial aspects of the installation program and its policies.
IPM	Industrial Program Manager -
IPT	Integrated Product Team
ISEA	In-Service Engineering Agent – A field activity technical code identified by a specific system Program Manager as the final technical authority for the specific system.
IUPD	Integrated Universal Planning Document
LAN	Local Area Network
LAR	Liaison Action Request
MAM	Maintenance Assistance Manual
MIL-SPEC	Military Specification
MILSTRIP	Military Standard Requisitioning and Issue Procedures
MIP	Maintenance Index Page
MOA	Memorandum of Agreement
MRC	Maintenance Requirement Card
MSDS	Maintenance Safety Data Sheet
MSR	Master Ship Repair

MSRA	Master Ship Repair Agreement
NATO	North Atlantic Treaty Organization
NAVAIR	Naval Air Systems Command
NAVOSH	Naval Occupational Safety and Health
NAVSEA	Naval Sea Systems Command
NDE-NM	NAVY Data Environment-Navy Modernization
NDI	Non-developmental Item
NDT	Non-Destructive Testing
NLT	No Later Than
NSA	Naval Supervising Activity – The Navy organization responsible for the success of all aspects of CNO availability. Usually the Supervisor of Shipbuilding or a Naval Shipyard.
NSN	National Stock Number
NSRF	Naval Ship Repair Facility
NSTS	NAVSEA Technical Specification
NTCSS	Naval Tactical Command Support System
NTR	Naval Technical Representative – A government representative, usually from a technical code, who is the senior technical representative associated for a given system install on a specific ship.
NUCALT	Nuclear Alteration
OBRP	On Board Repair Part
OFD	Outgoing Funding Document – A document that passes part of SSC San Diego obligating authority to another Navy activity.
OPNAV	Operations Navy
ORDALT	Ordnance or Fire Control System Alteration
OSHA	Occupational Safety and Health Administration
OSR	On-Site Representative
PARM	Participating Manager
PCA	Physical Configuration Audit
PCB	Poly Chlorinated Biphenyl
PCMS	Passive Counter Measure System
PEO	Program Executive Officer
PIA	Planned Incremental Availability
PICO	Pre-Installation Checkout
PMA	Phased Maintenance Availability
PMS	Planned Maintenance System
P/N	Part Number
POA&M	Plan of Actions and Milestones
PPE	Personal Protective Equipment
PPL	Provisioning Parts List
PY	Planning Yard
QA	Quality Assurance
QDR	Quality Deficiency Report
QTY	Quantity
RADHAZ	Radiation Hazard
RAV	Restricted Availability
RCOH	Refueling Complex Overhaul
RDD	Required Delivery Date
RDT&E	Research, Development; Test, and Evaluation

RF	Radio Frequency
RFI	Radio Frequency Interference
RLAR	Reverse Liaison Action Request (Used before execution of SIDs)
RMAIS	Regional Maintenance Automated Information System
RMC	Regional Maintenance Center – Command responsible for the brokering of all maintenance and establishment of centers of excellence for maintenance within a geographic region. The local RMC is Southwest RMC.
RMMCO	Regional Maintenance and Modernization Coordination Office. The organization responsible for ensuring all alterations occurring by Alteration Installation Team (AIT) aboard fleet ships have all proper approvals and are compliant with all governing instructions. Our local RMMCO is SW-RMMCO headed by the RMC deputy.
ROH	Refueling Overhaul
SAR	Ship Alteration Record – Base document of an authorized SHIPALT specifying the system components and interfaces. Approved by the SPM.
SCL	Standard Components List
SCN	Shipbuilding and Conversion, Navy
SCN	Specification Change Notice
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SF	Ships Force
SGO	Strike Group Officer – Military Officer single Point of Contact responsible for the installations on all ships in the Battle Group and associated Amphibious Readiness Group (ARG) and Middle East Force (MEF) Deployers.
SGS	Strike Group Superintendent – Civilian counterpart to the BFO responsible for the installations on all ships in the Battle Group and associated Expeditionary Strike Group (ESG) and Middle East Force (MEF) Deployers.
SHF	Ship History File
SHF	Satellite Communications High-Frequency System AN/WSC-8
SHIPALT	Ship Alteration – The formalized documentation for configuration control and system plans that describe in intermediate detail the architecture and requirements for the specific system on a specific ship class. It does not provide the detail to install the system on any ship.
Ship Superintendent	Ship Superintendent – The IIT single Point of Contact and person with overall responsibility for the installations on a particular ship.
SID	Ship Installation Drawing – A set of drawings developed from a SHIPALT that provide the specific requirements to install a system on a specific ship.
SOVT	System Operation Verification Test
SOW	Statement of Work – The portion of a delivery order where the task requirements are specified.
SPM	Ship Program Manager – The NAVSEA organization with overall responsibility for all aspects of a ship class, including maintenance requirements, configuration control, modernization program.
SRF	Ship Repair Facility
STO	System Test Officer

SUBSAFE	Submarine Safety
SUPSHIP	Supervisor of Shipbuilding, Conversion, and Repair (Now dissolved and blended as part of SWRMC organization)
SWT	Standard Work Template
SWRMC	Southwest Regional Maintenance Center– The NAVSEA field organization responsible for new ship construction and modernization contracting. In San Diego, SWRMC contracts with the entire private shipyards for ship maintenance and repair.
TCD	Target Completion Date
TEMPALT	Temporary SHIPALT – An under development SHIPALT identified in a category that allows for less of the support required of formal SHIPALTS. A TEMPALT installation must be removed within one year and replaced with the formal alteration or the ship reconfigured.
TM	Technical Manual
TP	Test Plan
TYCOM	Type Commander – The Naval Commander of a ship type (i.e., surface ships, Submarines, Aircraft Carriers), responsible for training and readiness of all assigned ships.
UPD	Universal Planning Document. Information used as draft input for SOW.
WAF	Work Authorization Form
WIN	Work Item Number – A CETracker number that identifies a specific Government or Contractor cost element at the Work Breakdown Structure (WBS) level of a specific system estimate.
WPIC	Work Package Integration Conference – Conference hosted by the RMC Port Engineer to determine the sequencing of all the work and identify and resolve conflicting requirements.
WON	Work Order Number – A CETracker number that identifies a specific system or group of systems installation DOs.