OPNAV INSTRUCTION 3090.1A

From: Chief of Naval Operations

Subj: COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, AND INTELLIGENCE CAPABILITY REQUIREMENTS DEFINITION FOR NEW CONSTRUCTION AND CONVERSION SHIPS

Ref: (a) SECNAVINST 5000.2E
(b) SECNAVINST 5400.15C
(c) OPNAVINST 1500.76C
(d) CJCSI 3170.01I
(e) CJCSI 5123.01G
(f) OPNAVINST 5430.48E
(g) Navy Modernization Program Management and Operations Manual (NMP-MOM) of 19 Jan 2018

1. Purpose. To refine the processes for planning and programming for command, control, communications, computers, and intelligence systems that support ship operational and support requirements; improve interoperability and performance; integrate into the Navy modernization plan; and reduce total ownership cost for command, control, communications, computers, and intelligence systems. Additionally, to provide direction for the Office of the Chief of Naval Operations (OPNAV) staff in defining command, control, communications, computers, and intelligence systems requirements for new construction ships and ship conversions funded by Shipbuilding and Conversion, Navy and National Defense Sealift Fund. This instruction is being reissued with a new date, updated version and signature authority to meet Chief of Naval Operations’ (CNO) age requirement for OPNAV instructions.

2. Cancellation. OPNAVINST 3090.1.

3. Scope and Applicability. This instruction defines the responsibilities of Deputy Chief of Naval Operations, Manpower, Personnel, Training, and Education (CNO (N1)); Deputy Chief of Naval Operations Information Warfare (CNO (N2N6)); Deputy Chief of Naval Operations, Operations, Plans, and Strategy (CNO (N3N5)); Deputy Chief of Naval Operations, Fleet Readiness and Logistics (CNO (N4)); Deputy Chief of Naval Operations, Integration of Capabilities and Resources (CNO (N8)); Deputy Chief of Naval Operations, Warfare Systems (CNO (N9)); Director, Integrated Warfare (OPNAV (N9I)); Director, Expeditionary Warfare (OPNAV (N95)); Director, Surface Warfare (OPNAV (N96)); Director, Submarine Warfare (OPNAV (N97)); and Director, Air Warfare (OPNAV (N98)) in defining and resourcing command, control, communications, computers, and intelligence capability requirements and
systems for new construction ships, including submarines and aircraft carriers, and ships undergoing conversion during Shipbuilding and Conversion, Navy and National Defense Sealift Fund funded availabilities.

a. The provisions of this instruction apply to the requirements for and selection of ship systems which will compose the command, control, communications, computers, and intelligence suite in response to future ship operational capability requirements.

b. The processes of this instruction are directed for ship construction programs that have passed Gate 5 as defined in reference (a) prior to the effective date of this instruction.

c. The ship command, control, communications, computers, and intelligence suite consists of exterior communication systems; command and control (C2) systems; intelligence and information processing and dissemination systems (e.g., tactical data information links, Global Command and Control System-Maritime, and Distributed Common Ground Station-Navy); information assurance products and services; and associated ship local area networks (LAN) that support the exchange of information between C2 and intelligence systems, and connect those components to the ship’s combat systems and tactical support systems (e.g., navigation, ship control, machinery control). The command, control, communications, computers, and intelligence LANs support tactical data and information distribution. The command, control, communications, computers, and intelligence LANs do not replace the combat system connectivity or networks. Command, control, communications, computers, and intelligence LANs may transport non-tactical data and information as appropriate to the size and scale of the network.

4. Background. Shipbuilding programs are a complex integration effort that require the collaboration of all OPNAV directorates, Office of the Assistant Secretary of the Navy (Research, Development and Acquisition), systems commands, and designated program executive offices (PEO) to produce an affordable, mission-capable ship that can be supported and sustained by the training and logistics infrastructure from commissioning to disposal. The platform sponsors along with the ship resource sponsors are responsible for the total ship mission capability requirements. CNO (N1), CNO (N2N6), CNO (N3N5), CNO (N4), CNO (N8), and CNO (N9) have responsibilities for command, control, communications, computers, and intelligence requirements development, sustainment (including training), and interoperability (reference (a)), and support CNO (N9) and CNO (N2N6) ship resource sponsors in the development of ship capability documents. To the maximum extent possible, command, control, communications, computers, and intelligence systems selected must be common with those in development and procurement. Multiple command, control, communications, computers, and intelligence system baselines, unique to particular ship classes, complicate interoperability and supportability, and increase costs across the lifecycle of a ship and support systems. A ship, staff, or system loses its military effectiveness if it is not interoperable in the joint and coalition operational environment. References (a) through (e) provide direction for the development of operational capability requirements.
5. **Objective**

   a. Deliver new construction ships at ship custody transfer with command, control, communications, computers, and intelligence suite of systems that are the same or nearly the same as those being implemented by the Navy modernization plan; and,

   b. Prevent the introduction of unique systems, which do not follow an established command, control, communications, computers, and intelligence roadmap.

6. **Policy**

   a. Shipbuilding programs must align with the Navy modernization plan to optimize the:

      (1) investment in the development and procurement of command, control, communications, computers, and intelligence systems and supporting infrastructure;

      (2) use of existing and programmed training, logistics, and materiel support; and,

      (3) fleet operational integration and interoperability with other naval, joint, and coalition forces.

   b. The shipboard command, control, communications, computers, and intelligence suites for new construction and major conversion of in-service ships must be composed of systems that are:

      (1) Navy, Marine Corps, or joint programs supported by existing training, materiel, and in-service engineering infrastructure; or

      (2) funded, in development, and aligned with the shipbuilding or conversion schedule.

7. **Action.** References (a) through (c) establish the policies and responsibilities of the CNO to identify, validate, prioritize, and program funds for Navy operational capability requirements.

   a. The platform sponsors along with the ship resource sponsors for a given ship or ship class bear the responsibility to define the overall requirements, including command, control, communications, computers, and intelligence, for the new construction or conversion ship, to include interfaces. The ship program sponsor must be supported by all Navy requirements and resource sponsors (CNO (N1), CNO (N2N6), CNO (N4), CNO (N8), and CNO (N9)) and advised by Headquarters, U.S. Marine Corps for areas under their cognizance, in the development of the ship class operational requirements.

      (1) The shipbuilding capability documents, system design specification, and acquisition strategy must recognize that the ship is a "system-of-systems".
(2) Responsibility for funding procurement, integration, installation, associated logistics support, and initial training costs of all ship's systems resides with the respective ship platform sponsor, to include all command, control, communications, computers, and intelligence systems. The cost of the command, control, communications, computers, and intelligence systems must be identified in the ship "end cost." Post-delivery funding is not used for purchasing command, control, communications, computers, and intelligence systems.

b. CNO (N2N6) is responsible for the development of command, control, communications, computers, and intelligence systems in response to Department of the Navy (DON) and joint requirements.

(1) As the lead requirements sponsor for the command, control, communications, computers, and intelligence architecture and systems for new construction ships, CNO (N2N6) will program research, development, test and evaluation, Navy funding for common systems development to meet the command, control, communications, computers, and intelligence capability requirements and those that are supported by the OPNAV command, control, communications, computers, and intelligence programs roadmap.

(2) CNO (N9) and CNO (N2N6), supported by Commander, Space and Naval Warfare Systems Command (COMSPAWARSYSCOM), and Commander, Naval Information Forces (NAVIFOR), and in coordination with the cognizant PEOs (e.g., PEO Command, Control, Communications, Computers, and Intelligence; PEO Ships; PEO Integrated Warfare Systems), will develop, publish, and biennially update:

(a) command, control, communications, computers, and intelligence systems baseline by ship type and class, (reference (f));

(b) command, control, communications, computers, and intelligence systems program roadmap to align Navy command, control, communications, computers, and intelligence systems with shipbuilding and the Navy modernization plan; and

(c) strategic command, control, communications, computers, and intelligence capabilities plan to articulate new construction ship and in-service modernization needs beyond the Future Years Defense Plan period.

(3) CNO (N2N6) will ensure command, control, communications, computers, and intelligence baseline, program roadmap, and capabilities plan support the program objective memorandum development.

c. CNO (N2N6) will ensure the interoperability of the new construction ship C2 and communication systems with the national, joint, and defense agencies; and that the development,
implementation, and maintenance of necessary command, control, communications, computers, and intelligence architecture products and associated standards are consistent with Department of Defense (DoD), DON, and Federal architectures.

d. The resource sponsor for the applicable platform receives the analysis of alternatives from Naval Sea Systems Command. The analysis of alternatives will use the baseline capabilities and command, control, communications, computers, and intelligence suite of the existing like-ship types published in reference (f), as informed by the command, control, communications, computers, and intelligence program roadmap and strategic capabilities plan. These documents will inform the system design specification and planning for the new construction design. The analysis of alternatives report will include a section that identifies to CNO (N2N6) the capability shortfalls not addressed by the command, control, communications, computers, and intelligence systems program roadmaps or strategic command, control, communications, computers, and intelligence plan.

e. The ship resource sponsor must route the system design specification for comment, adjudication, and concurrence to the OPNAV directorates to support the ship program gate review or milestone decision.

f. CNO (N1), per reference (a), must identify the infrastructure required for command, control, communications, computers, and intelligence suite operator and maintainer training, and maintenance and logistics support such that proper planning and budgeting may occur to ensure that this infrastructure is in place for the systems as the ship enters service in the fleet.

g. The ship command, control, communications, computers, and intelligence suite of systems will be developed per paragraph 5, using the products of the command, control, communications, computers, and intelligence program plans and roadmaps, to employ common command, control, communications, computers, and intelligence systems, address the ship requirements, and support the ship acquisition strategy.

(1) The ship program manager will propose the command, control, communications, computers, and intelligence suite developed from the command, control, communications, computers, and intelligence systems roadmap. Unique ship requirements (e.g., advanced mission capability; and space, weight, or manning limitations) may require a new or modification to an existing command, control, communications, computers, and intelligence system.

(2) The OPNAV requirements and resource sponsors will coordinate with the appropriate PEOs, the ship program manager, and participating command, control, communications, computers, and intelligence program managers to review the proposed command, control, communications, computers, and intelligence systems selections and associated trades-offs for operational performance, commonality, and total ownership cost affordability. Recommendations to deviate from the policy in paragraph 6 will only be presented to an
executive-level decision meeting, per reference (g) (e.g., a gate review) if an existing command, control, communications, computers, and intelligence product will not be available to satisfy the ship requirements.

(3) The ship design will accommodate space, weight, physical arrangement, and ship services for the projected command, control, communications, computers, and intelligence systems internal to the hull and topside, and supporting systems. The ship design must be based upon programmed systems and planned to be in service at the time specified by the shipbuilding contract.

(4) The decision to approve a non-program of record system or the development of a new system will identify the responsible requirements and resource sponsors, and materiel support program office.

h. Gate reviews are the principal executive level decision forum. CNO (N1), CNO (N2N6), CNO (N3N5), CNO (N4), CNO (N8), and CNO (N9) are Navy principal members for all gate reviews as defined in reference (a). They must be represented at each shipbuilding program gate review. Gate reviews, particularly gates 4, 5 and 6, will be the forum at which the program manager and requirements officer present recommendations to change the ship or command, control, communications, computers, and intelligence system or program requirements, or waive the policy of paragraph 6.

i. The sponsor of a new construction or conversion ship will inform other applicable resource sponsors of changes in funding, schedule, cost, or risk that affect existing plans or decisions related to command, control, communications, computers, and intelligence and information operation system requirements. Conversely, it is critical that divisions and directorates, including command, control, communications, computers, and intelligence program sponsors, communicate their program requirements and limitations, program risks, and reprioritization of programs that use new construction ship key performance parameters, key system attributes, and contract milestones. Timely notification of issues, such as program objective memorandum decisions, that impact the common vision of new construction ship mission systems will be reported to the gate review principal members. Resolution of any issues related to organizational responsibilities and resources will be resolved, if necessary, at a gate review or Requirements and Resources Review Board, as appropriate.

j. Changes which affect the funding plans for new construction ships or conversions require the concurrence of CNO (N9) as the appropriation sponsor.

8. Records Management

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned for the standard subject identification codes (SSIC) 1000 through 13000 series per the records disposition schedules located on the Department of the
b. For questions concerning the management of records related to this instruction or the records disposition schedules, please contact the local records manager or the DON/AA DRMD program office.

9. Review and Effective Date. Per OPNAVINST 5215.17A, CNO (N2N6) will review this instruction annually on the anniversary of its issuance date to ensure applicability, currency, and consistency with Federal, Department of Defense, SECNAV, and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will be in effect for 5 years, unless revised or cancelled in the interim, and will be reissued by the 5-year anniversary date if it is still required, unless it meets one of the exceptions in OPNAVINST 5215.17A, paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for cancellation as soon as the cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.

MATTHEW J. KOHLER
Deputy Chief of Naval Operations
for Information Warfare

Distribution:
This instruction is cleared for public release and is available electronically only via Department of the Navy Issuances Web site, http://doni.documentservices.dla.mil