Cybersecure
Machinery Control Systems and Networks Department Overview

11 May 2016

Distribution Statement A: Approved for Public Release; distribution is unlimited.
MISSION:
The Cybersecure Machinery Controls Systems & Networks Department is the principal provider of life cycle management (LCM) and full spectrum engineering support for cybersecure surface ship machinery information, sensors and control systems; mission-critical networks; steering and integrated bridge/navigation systems.

VISION:
We are the Navy's leader for integrated cybersecure surface ship machinery information, sensors and control systems; mission-critical networks; steering and integrated bridge/navigation systems.
Cybersecure Machinery Control Systems & Networks Department Code 50

Acquisition Manager
Code 502
Vincent Procaccino

Business Support
Code 50
Rachel Francano

Cyber Machinery Control Systems & Networks Department
Code 50
Christopher Savage

Administrative Officer
Code 509
Karen McDonnell

Machinery Control Systems Division
Code 51
John Bozewicz

Instrumentation & Sensor Systems
Code 511
Vacant

MCS (DDG 51)
Code 514
Richard Halpin

MCS (CG, LHA, LHD) & Onboard Trainer
Code 515
Vincent Tolotta

Machinery Enterprise Information Systems
Code 521
Seth Burmaster

Machinery Information Systems Technology
Code 522
Paul Socoloski

Mission Critical Interior Comms
Data Networks
Code 523
John Buckley

Ships Navigation & Integration Bridge Systems
Code 524
David Dragun

CVN Networks, Navigation & Ship Controls
Code 525
John Dolan

Machinery Information Networks & Navigation Systems Division
Code 52
Michael Iacovelli

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CVN Networks, Navigation & Ship Controls
Code 525
John Dolan

Instrumentation & Sensor Systems
Code 511
Vacant

MCS (DDG 1000, LCS, LPD)
Code 512
Vacant

MCS (CVN & New Control System Development)
Code 513
Jeffrey Cohen

MCS (LD, FFG, MCM) & Casualty Control Automation
Code 516
John Buckley

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<table>
<thead>
<tr>
<th>Instrumentation &amp; Sensor Systems</th>
<th>MCS (DDG 1000, LCS, LD)</th>
<th>MCS (CVN &amp; New Control System Development)</th>
<th>MCS (DDG 51) &amp; Onboard Trainer</th>
<th>MCS (CG, LHA, LHD)</th>
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</thead>
<tbody>
<tr>
<td>Vacant</td>
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<td>Jeffrey Cohen</td>
<td>Richard Halpin</td>
<td>Vincent Tolotta</td>
</tr>
</tbody>
</table>

- **TLIs**
- **Wireless Sensors**
- **Environmental Testing** – Shock, Vibration, EMI/EMC
- **Thermal Imaging**
- **Flow, Temperature, and Pressure Sensors**
- **Arc Fault**
- **Salinity Indication Systems**
- **Automated Heat Stress**

**Machinery Control Systems Division**

**Code 51**

**John Bozewicz**

- **Machinery Control Systems Division**
- **Code 51**

**Code 511**
- **Vacant**

**MCS (DDG 1000, LCS, LD)**
- **Code 512**
- **Vacant**

**MCS (CVN & New Control System Development)**
- **Code 513**
- **Jeffrey Cohen**

**MCS (DDG 51)**
- **Code 514**
- **Richard Halpin**

**MCS (CG, LHA, LHD) & Onboard Trainer**
- **Code 515**
- **Vincent Tolotta**

**MCS (LSD, FFG, MCM) & Casualty Control Automation**
- **Code 516**
- **John Buckley**

- **Machinery Control Systems Division**
- **Code 51**

**John Bozewicz**

- **All Phases of Carrier Control System Support**
- **Machinery Control Sys Design and Development**
- **System Engineering and Systems Integration**
- **Software Architecture Design**
- **Software Design and Development**
- **CMII-Based Standard**
- **Software Based System Process**
- **Hardware Design & Development**
- **System Integration and Test**
- **Software-Based Machinery Plant Trainers**
- **Software/Hardware Maintenance and Certification**
- **CVN Integration Lab**
- **Overall MCS Life Cycle Mgmt**
- **TWH Support Software Certification and Safety**
- **Support SEA 052 on NVR**
- **Obsolescence Management and ILS Processes**

- **Propulsion Controls, Supervisory Electric Plant Controls & Data**
- **Logging for entire DDG Class**
- **Systems Engineering and Systems Integration**
- **Software Development, Maintenance and Certification**
- **OEM Software/ Hardware Testing**
- **DDG 51 LBES Configurable to Flt I/Ii, Fit IIa**
- **MCS**
- **DDG Modernization/ Backfit**
- **CMII Based Standard Software Based System Process**

- **CG 47 Integrated Ship Control MCS**
- **LHD 8 MCS SSA**
- **LHA 6 Acquisition Support**
- **Systems Engineering and Systems Integration**
- **Software Development, Maintenance and Certification**
- **Software-Based Machinery Plant Trainers**
- **Machinery Simulations**
- **CMII-Based Standard Software Based System Process**
- **CMII Process Management**
- **Software-based-system QA**
- **MCS Commonality Initiatives**

**Damage Control Automation**
- **Programmable Logic Controller Programming**
- **Systems Engineering and Systems Integration**
- **Software Development, Maintenance and Certification**
- **Software-Based Machinery Plant Trainers**
- **Machinery Simulations**
- **CMII-Based Standard Software Based System Process**
# Machinery Information, Networks and Navigation Division Code 52

**Machinery Information Networks & Navigation Systems Division**  
**Code 52**  
**Michael Iacovelli**

<table>
<thead>
<tr>
<th>Division</th>
<th>Code</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery Enterprise Information Systems</td>
<td>521</td>
<td>Seth Burmaster</td>
</tr>
<tr>
<td>Machinery Information Systems Technology</td>
<td>522</td>
<td>Paul Socoloski</td>
</tr>
<tr>
<td>Mission Critical Interior Comms Data Networks</td>
<td>523</td>
<td>Stephen Walicki</td>
</tr>
<tr>
<td>Ships Navigation &amp; Integration Bridge Systems</td>
<td>524</td>
<td>David Dragun</td>
</tr>
<tr>
<td>CVN Networks, Navigation &amp; Ship Controls</td>
<td>525</td>
<td>John Dolan</td>
</tr>
</tbody>
</table>

**Condition Assessment & Monitoring Systems**  
**Intelligent Video Monitoring**  
**Mission Readiness Systems**  
**Maintenance Monitoring & Decision Support Systems**  
**Automated Diagnostic & Prognostic System Development & Integration**

**DAS Engineering**  
- Full Scale Trials  
- Measurement & Analysis Sys  
- Web Based Fleet Maintenance/Logistics Info Systems  
- Electric Power Data Measurements & Analysis Techniques  
- Shock and Finite Element Analysis (FEA)

**Shipboard HM&E**  
- Network LCM/ISEA  
- Network Design/Specs/ABS-NVR  
- Network User System Integration  
- Network Mgmt and Monitoring  
- Network Testing & Troubleshooting  
- Network Security/Firewall/Certification & Accreditation  
- Fiber Optic Specs & Standards  
- LBTS Support: LBES, CSEDS, Wallops Island, GLNTC, LM-STTS

**Navigation Systems**  
- LCM/ISEA  
- Integrated Bridge Controls LCM/ISEA  
- Ship Control Display Systems  
- Steering Control Systems Integrated & Scalable Bridge Systems  
- Nav Crit Distribution Systems  
- Navigation Display Systems  
- Electronic Charting Display Information System – Navy Situational Awareness Bridge Display System

**CVN Integrated Bridge Systems and Ship Controls**  
**ISEA, SSA and Modernization**  
**Navigation Distribution and Displays**  
**Navigation and Time Converters**  
**Control System (PLC) and HMI Development Support**  
**CVN HM&E Networks for Navigation, Critical Data and Ship/Machinery Controls**  
**CVN Network Monitoring and IA**  
**Norfolk Fleet, Training and Modernization Support Office**
• Overall Department 50 Responsibilities:
  – Life Cycle Manager (LCM) responsibilities
    • Surface Machinery Control Systems - (Code 51)
    • Monitoring & Condition Assessment Systems - (Code 521)
    • HM&E Sensors & Instrumentation - (Code 511)
    • Digital Video Surveillance Systems (DVSS) - (Code 522)
    • HM&E/IC Data Networks/Networks Infrastructure – (Code 523)
    • Steering Control System & Digital Ship Control System (SCS) – (Code 525)
    • Integrated Bridge Controls – (Code 524)
• Overall Department 50 Responsibilities (cont’d):
  – Cybersecurity for HM&E control systems – (Code 51)
  – HM&E Control Systems Certification Support – (Code 51)
  – Damage Control Automation – (Code 516)
  – NSWCPD Systems Engineering Process (SEP) Program – (Code 515)
    • Capability Maturity Model Integration (CMMi) for Software Based Systems
  – Environmental Qualification – (Code 511)
  – Onboard Trainers – (Code 515)
    • On-Board Training (OBT)
    • SIM/STIM Trainers
  – High Speed Data Acquisition and analysis of Shipboard and Land Based Electrical Systems – (Code 522)
  – Electronic Charting Display Information System (ECDIS) – (Code 525)
## Code 50 Competitive Contract Requirements

<table>
<thead>
<tr>
<th>Brief Description</th>
<th>ROM</th>
<th>Anticipated Announcement Date (FY/QTR)</th>
<th>Requiring Technical Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware and software for HM&amp;E MCS Programs</td>
<td>$45M</td>
<td>FY17/Q1</td>
<td>NSWCPD</td>
</tr>
<tr>
<td>Engineering, Program, and Technical support for MCS Programs</td>
<td>$45M</td>
<td>FY17/Q2</td>
<td>51</td>
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<tr>
<td>Engineering, Program and Technical Support for DDG 51 MCS</td>
<td>$40M</td>
<td>FY17/Q2</td>
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**FY17 Anticipated Announcements**

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<th>Requiring Technical Code</th>
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</thead>
<tbody>
<tr>
<td>Data Acquisition and Information Systems Support</td>
<td>$25M</td>
<td>FY17/Q3</td>
<td>522</td>
</tr>
<tr>
<td>Information Technology, Engineering and Testing Support</td>
<td>$25M</td>
<td>FY17/Q3</td>
<td>522</td>
</tr>
<tr>
<td>Engineering services for Integrate Bridge Controls and Ship Control Systems</td>
<td>$35M</td>
<td>FY17/Q4</td>
<td>524</td>
</tr>
</tbody>
</table>

**FY17 Anticipated Announcements**

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THANK YOU!