NAVAL SURFACE WARFARE CENTER PHILADELPHIA DIVISION

Cybersecure Machinery Control Systems and Networks Department Overview
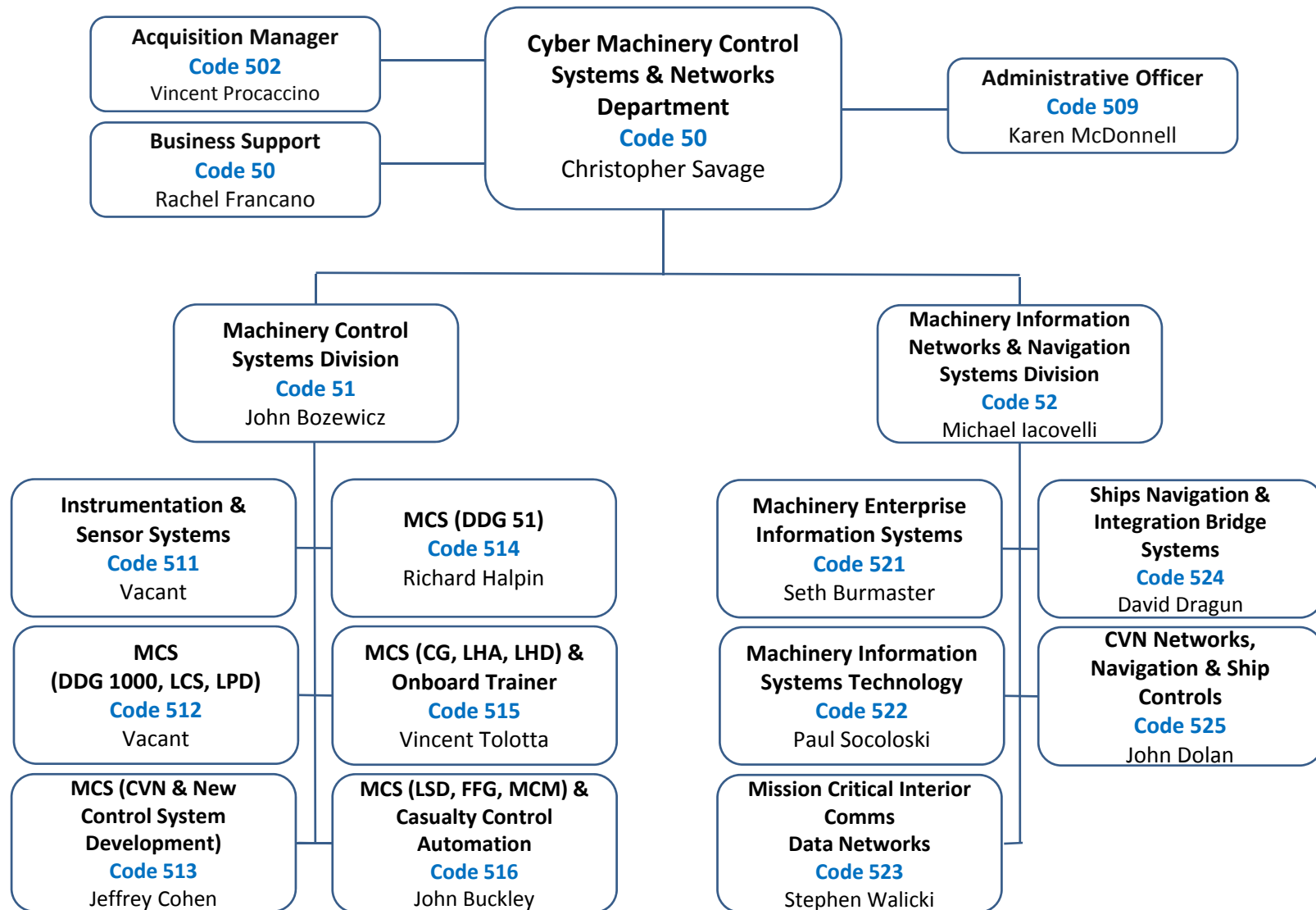
11 May 2016

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

NAVSEA WARFARE CENTERS Philadelphia

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

Machinery Information Networks & Navigation Systems Division
Code 52
Michael Iacovelli

Instrumentation & Sensor Systems
Code 511
Vacant

MCS (DDG 51)
Code 514
Richard Halpin

Machinery Enterprise Information Systems
Code 521
Seth Burmaster

Ships Navigation & Integration Bridge Systems
Code 524
David Dragun

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

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

Machinery Information Systems Technology
Code 522
Paul Socoloski

CVN Networks, Navigation & Ship Controls
Code 525
John Dolan

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

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

Mission Critical Interior Comms Data Networks
Code 523
Stephen Walicki

Machinery Control Systems Division Code 51

NAVSEA WARFARE CENTERS Philadelphia

Machinery Control Systems Division
Code 51
John Bozewicz

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 (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
TLIs Wireless Sensors Environmental Testing – Shock, Vibration, EMI/EMC Thermal Imaging Flow, Temperature, and Pressure Sensors Arc Fault Salinity Indication Systems Automated Heat Stress	Systems Engineering and Systems Integration Software Development, Maintenance and Certification CMMI-based Standard Software-based-system Process LPD 17 SSA Lab SETA MCS Lab Development MHC 51 Class M/SCS SSA Lab New Ship Design Support	All Phases of Carrier Control System Support Machinery Control Sys Design and Development Systems Engineering and Systems Integration System Architecture Design Software Design and Development CMMI-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 05Z 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, Flt IIA MCS DDG Modernization/ Backfit CMMI 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 CMMI-based Standard Software Based System Process CMMI 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 CMMI-Based Standard Software Based System Process

Machinery Information, Networks and Navigation Division Code 52

Machinery Information Networks & Navigation Systems Division
Code 52
Michael Iacovelli

Machinery Enterprise Information Systems **Code 521** Seth Burmaster	**Machinery Information Systems Technology** **Code 522** Paul Socoloski	**Mission Critical Interior Comms Data Networks** **Code 523** Stephen Walicki	**Ships Navigation & Integration Bridge Systems** **Code 524** David Dragun	**CVN Networks, Navigation & Ship Controls** **Code 525** John Dolan
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-STS	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)
  - Navigation Distribution Systems (NDS) – (Code 524)

Code 50 Competitive Contract Requirements

Brief Description	ROM	Anticipated Announcement Date (FY/QTR)	Requiring Technical Code
Hardware and software for HM&E MCS Programs	$45M	FY17/Q1	NSWCPD
Engineering, Program, and Technical support for MCS Programs	$45M	FY17/Q2	51
Engineering, Program and Technical Support for DDG 51 MCS	$40M	FY17/Q2	514

FY17 Anticipated Announcements

Code 50 Competitive Contract Requirements

Brief Description	ROM	Anticipated Announcement Date (FY/QTR)	Requiring Technical Code
Data Acquisition and Information Systems Support	$25M	FY17/Q3	522
Information Technology, Engineering and Testing Support	$25M	FY17/Q3	522
Engineering services for Integrate Bridge Controls and Ship Control Systems	$35M	FY17/Q4	524

FY17 Anticipated Announcements

THANK YOU!