

SURFACE SHIP INTEGRATED COMBAT CONTROL SYSTEM

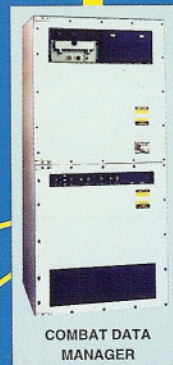
- Totally Integrated Combat System with Enhanced ASW/ASUW Capability
- High Reliability and Improved System Availability
- Reduced Manning: Improved coordination between Combat Information Center (CIC) & Sonar
- System Upgrades: Modifies existing FCS MK 114 Attack Console - Minor Ship Alt (Multi Function Work Station addition)



MULTIFUNCTION WORK STATIONS



COMMAND PLOT



COMBAT DATA
MANAGER



FIRE CONTROL RADAR



SURFACE SEARCH RADAR



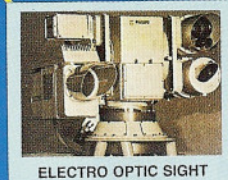
AIR SEARCH RADAR



GUN MOUNT



MISSILE LAUNCHER



ELECTRO OPTIC SIGHT

INTEGRATED COMBAT CONTROL SYSTEM COMPONENTS

INTEGRATED COMBAT CONTROL SYSTEM

- Provides an Integrated Tactical Scenario using Multiplatform, and Multisensor Data Fusion for ASW/ASUW Mission
- Common data bus allows integration of new equipment into command system

Features

- Automatic Contact Correlation - Target Motion Analysis (TMA)
- Geographical Situation (GEOSIT) Display - Map data bases, bottom topography, ocean environment
- Tactical Decision Aids:
 - Screen Planning
 - Maneuvering Tools
 - Missile/Strike Planning - Over the horizon targeting
 - Navigation Improvements
- Reduced Manning - Plotting team reduced from 6-2
- Improved Data Handling - Timeliness and Accuracy
- Enhanced Reliability
- Improved System Availability
- Cost Effective Life Extension Program
- Coordinated Combat Information Center with Sonar: Supports decision making process by automating exchange of tactical data and coordinating data with historical, real-time and projected contact information using geographic, tactical and other decision aid display formats.

Capabilities

Information Processing - Captures Sonar and Combat Control Contact Reports:

- Hull, Towed Arrays, Sonobuoys
- Off-Board Data Links (Tactical and Intell)

- Sonar Performance Predictions
- Correlation with Radar and ESM Contacts

Automatic Plotting - Maps, Contacts, Bearing/Frequency vs. Time.

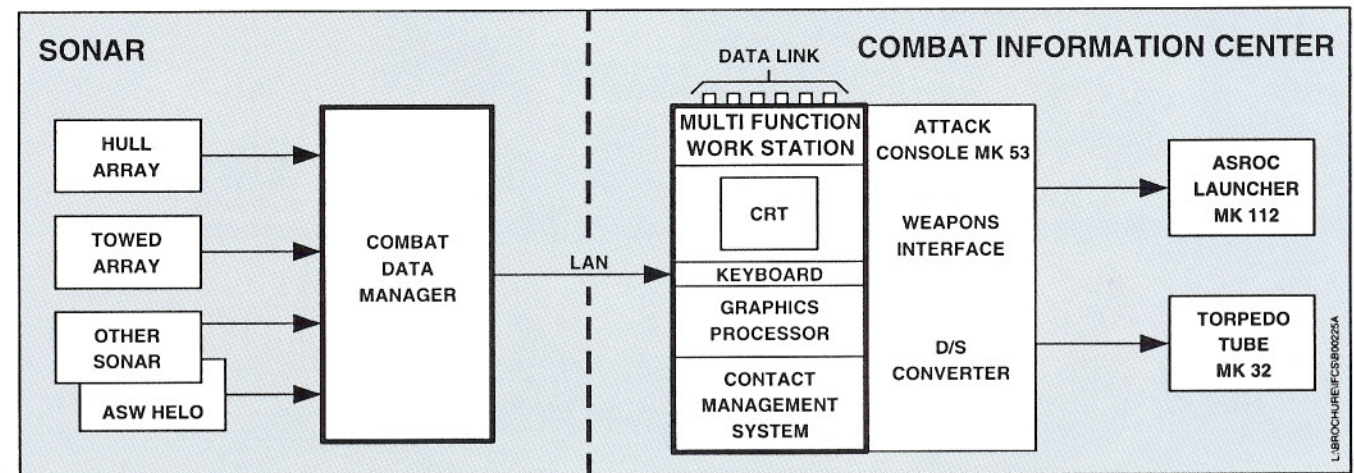
Data Analysis - Localization Algorithms, e.g. Maximum Likelihood Estimators (MLE), Ekelund, bearing/doppler and SPEISS.

Tactical Decision Aids - Torpedo danger areas, limiting lines of approach, closest point of approach.

Operations Coordination - Automated exchange of tactical data.

FIRE CONTROL SYSTEM UPGRADE

- Replaces obsolete Display and Analysis Section of Attack Console Mk 53 Mods 0 and 1 with Multi Function Work Station (See Figure).
- Provides Low Cost Service Life Extension with Improved Reliability and Logistic Support
- Provides state-of-the-art data processing and fusion to manage the underwater tactical picture
- Fully Qualified Hardware and Software:
 - Includes interface handlers for acoustic sensors and external data links
 - New Multi Function Work Station (MFWS) processes sonar data, determines target position and velocity, and sends data to right side console. ASROC or SVTT firing solutions are calculated, launcher(s) are controlled, weapons are preset and launched.
- Ship alteration required to accommodate one (1) cabinet. Lower power and weight requirements



TYPICAL FCS MK 114 UPGRADE FUNCTIONAL DIAGRAM

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