Advanced Communications Project

Shipboard Communications Center Current Capabilities and Workflow Analysis

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CURRENT CAPABILITIES AND WORK FLOW ANALYSIS REPORT

FOR THE

UNITED STATES COAST GUARD CUTTER COMMUNICATIONS CENTER MODERNIZATION

TOTAL QUALITY MANAGEMENT PROJECT

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PURPOSE

The purpose of the Current Capabilities and Work Flow Analysis Report is twofold: to document the current communications resources aboard three classes of Coast Guard cutter, and to document the processes and procedures associated with sending and receiving voice and data communications aboard these vessels. This document will serve as a reference in understanding the current capabilities of the communications centers on-board cutters as well as familiarize the reader with the procedures performed by the Telecommunications Specialists (TC). By documenting these current capabilities and processes, we can better understand associated requirement and deficiencies and better derive a comprehensive set of recommendations. This document will serve as the baseline for developing recommendations later in this study.

SCOPE

The Current Capabilities and Work Flow Analysis document is intended to outline current resources and processes within the communications centers of three classes of Coast Guard cutter. For scoping purposes, research was limited to one or two select ships for each size of Cutter. These cutters will represent the entire class of cutter for purposes of this study.

This document is divided into 4 sections and 4 appendices. The first section outlines the major communications resources. This includes system specifications for all significant communications equipment. The remaining 3 sections represent the three cutter sizes studied. Each section includes an enclosure layout (space layout), equipment rack elevation diagrams, typical communications plan and process descriptions for the primary processes performed by the TC that relate to voice and data communications. For ease of reading, we have listed all applicable steps. Because these steps are not necessarily interrelated to other activities, it was felt that listing processes, rather than modeling them, would be easier to understand and would be less cumbersome.

Appendix A is a list of all Coast Guard cutters that are included as part of the study.

Appendix B includes a description of the Joint Electronic Type Designation System (JETDS) equipment identification naming standard.

Appendix C provides a list of acronyms and abbreviations.

Appendix D provides system block diagrams for major systems. These are references throughout the document.

INTRODUCTION

This report is the result of a comprehensive study of United States Coast Guard afloat communications capabilities. Two basic vessel types were studied, the high endurance (WHEC) and medium endurance (WMEC) cutters. The WHEC and WMEC cutters under study consist of three lengths in four classes. This study groups the cutters as follows: the 210’ Reliance class, the 270’ Famous class, and the 378’ cutters in the Secretary and Hero classes. Both voice and data traffic were targeted for study.

In order to obtain the necessary data, technical staff from the Coast Guard Research and Development (CG R&D) Center, Volpe National Transportation Systems Center and contracting organizations visited each class of cutter, both in port and underway. Data was gathered through observation, interviews, and applicable documentation review.

The resultant document provides an equipment and process baseline. This baseline will then be the frame of reference for recommendations to improve cutter communications.