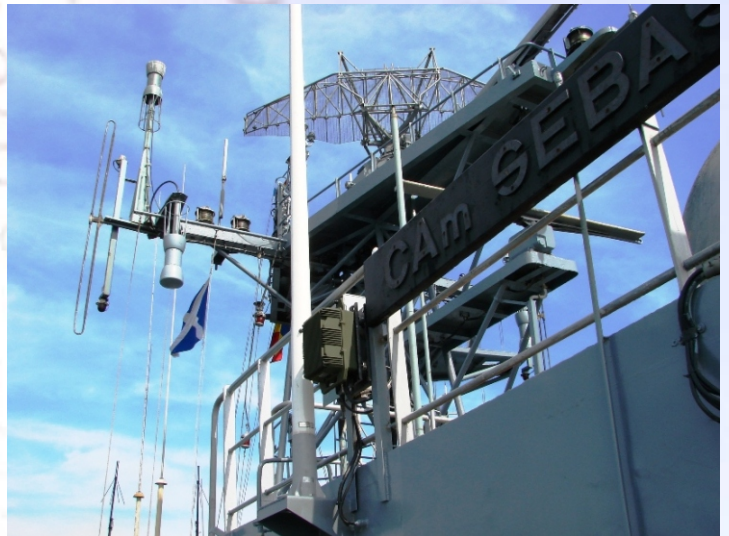# *Naval Integrated Communications and Information Systems Program*

System Type: Naval External/Internal Integrated Communications System (APCOS 4000)

Customer: AEROMARITIME GmbH

End User: Romanian Naval Forces

Interactive Role: Subcontractor

Project timeframe: 2005 to 2008

This project represents the second step in the modernization process of communications for Romanian Naval Forces for Corvettes, Mine dredgers and Rocket Bearers.

APCOS 4000 (**A**dvanced **P**latform **CO**mmunications System **4000**) is a state-of-the-art Integrated Communications Systems, designed for shipboard applications which provide all necessary and vital internal and external communications links for the specified vessels.

The management and control of the APCOS 4000 is performed by **COSYMA** (**CO**mmunications **SY**stem **MA**nagement). Specific network equipment is provided for COSYMA functionality. This includes a server with **RAID** (**R**edundant **A**rray of **I**nexpensive **D**isks), as operator (supervisor) console and **CMT** (**C**ommunication **M**anagement **T**erminal) which provide overall system and network management and ACP 127 **SAMMS** (**S**ecure **A**utomatic **M**ilitary **M**essaging **S**ystem) and two SAMMS laptop workstations. .

Internal administrative and safety communications are achieved by the VCTs (**V**oice and **C**ontrol **T**erminals) of APCOS, the interfaces to the existing Inductive Loop Subsystem, Portable UHF Subsystem, Telephony Subsystem (PABX) and Public Address and Alarms Subsystem.

COSYMA includes remote control of all tactical radio equipment. The tactical voice and control terminals include the capability to access the remote control facilities of COSYMA, thus combining tactical voice communications with remote control functions.

Interactive SBC performed the system design & engineering, system installation and customer training as well as after sales support.
The system design and engineering effort consisted of:

➢ Site Survey
➢ Communications Matrixes for each vessel according to the operational needs of the crews
➢ Project Definition Document
➢ Definition of system interfaces
➢ Sub-systems design
➢ Vessels integration support
➢ Radio, Data terminals, Internal Communications and Power distribution electrical design.
➢ Radio, Data terminals, Internal Communications and Power distribution mechanical design.
➢ Cables definition and layout design.

The program consists of 4 systems installed onboard of 6 vessels, 2 NPRs, two Corvettes and two Mine Dredger.

APCOS 4000 Training Solution
Interactive SBC provided a four week training solution structured to achieve the required training objectives. Each module of training is self-contained and displays module/lesson objectives, instructional events, interim assessment, summary, final assessment and where required, remedial action.
The training provides explanation of the equipment (e.g. Radios, network equipment) plus integrated system, including data applications.
Data and Voice Communication Scenarios are being used to deliver Training Exercises involving interaction between trainees.
The installed systems are being used to deliver a Real Environment in the classes for Levels of Training, operators and maintainers.

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