Navy SBIR/STTR Success

Advanced Lighting System (ALS®)/Advanced Communication and Control System (ACCS®)

ALS®/ACCS® meets the demand for an integrated, re-configurable, flexible lighting control system for shipboard applications, and specifically for vessels performing both air operations and well deck operations.

Topic Number: N04-081

SBIR Investment:
$797,931

Phase III Revenue:
$8,115,000

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About the Technology:

The Advanced Lighting System (ALS®)/Advanced Communication and Control System (ACCS®) is a comprehensive ship wide integrated lighting control system, incorporating the required elements of a mature system. This includes the system architecture, network communications, multi-drop connections, control stations, protocol converters, and lighting device drivers. The ALS®/ACCS® provides an integrated software suite including closed loop device driver software and control panel Graphical User Interfaces (GUI). Initially designed to control lighting systems as the Advanced Lighting System, the capabilities of the software and hardware suite have been expanded to provide control of a wide variety of elements. The software suite includes device configuration tools, which are designed to provide the system designer the ability to customize and maintain shipboard control and lighting systems without the need to write new software. This includes the ability to create new controlled groups, such as lighting, actuators, and other attached devices; design and layout control groups; assign devices to specific super groups, groups, and sub-groups for efficiency in control; define control transfer methods, and configure individually controlled device capabilities.

Naval Benefit

C3I projected benefits of ALS®/ACCS® technology are that it results in significant construction and manpower savings in shipboard applications, while at the same time enabling U.S. Navy vessels to meet high tempo operations that employ rapidly re-configurable lighting technologies successfully and safely. In addition, it may significantly reduce high power cable quantities, reduce and simplify control cable requirements, reduce operational manpower requirements, reduce lighting maintenance, improve lighting system reliability and situational awareness, and dramatically improve lighting flexibility and capabilities. The system provides the ability to change lighting intensity and lighting frequencies, and provides ship wide configuration changes from a single control station.

Transition

The ALS®/ACCS® technology is currently supplied to the U.S. Navy for control of navigation lights, personnel safety barriers, flight deck visual landing aides including deck lighting, glide slope indicators, large screen displays, boat launch and recovery lighting, ship interior lighting and robotic firefighting systems. The system or subsets of the system are employed on the USS Sea Fighter (FSF-1), the Littoral Combat Ship Program, the DDG 1000 program, and the Eglin Air Force Base for the Joint Strike Fighter Flight Deck Training Field.

C3I, Inc.

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