

GENERAL DYNAMICS

Armament and Technical Products

Mini-Typhoon Remote Operated Small
Arms Mount (ROSAM)

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Mount Heritage

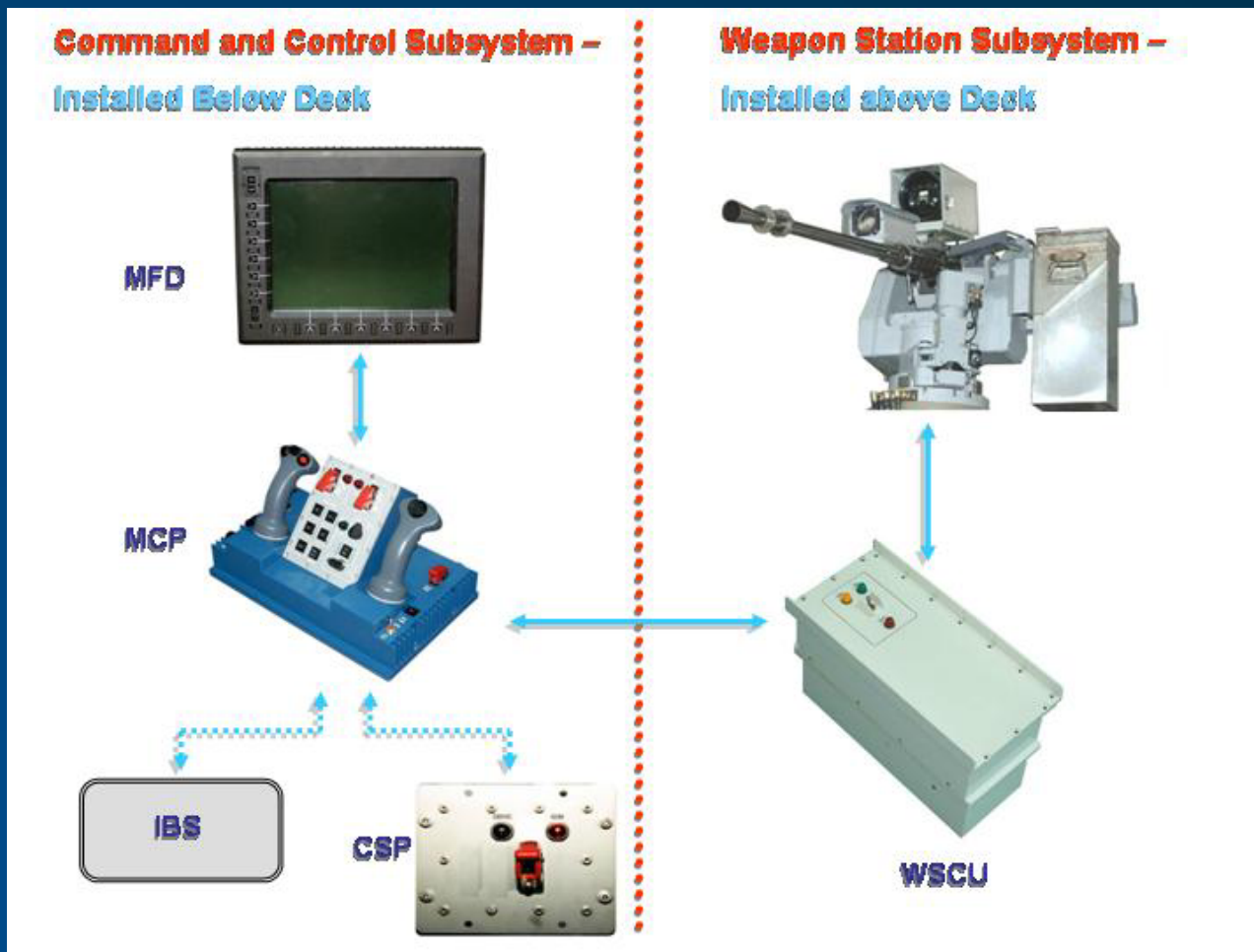
- GR Dynamics marketing Mini-Typhoon in the U.S.
 - RAFAEL Development Ltd, Israel
 - General Dynamics Armament & Technical Products, U.S.A.
- Mini-Typhoon remote stabilized gun mount for naval applications
 - Derivative of the Typhoon medium caliber gun mount
 - Developed by RAFAEL in Israel
 - Delivered to multiple foreign navies
- Mini-Typhoon selected as the stabilized mount of choice for U.S. Navy based on performance and price

Current U.S. Application

- U.S. Special Operations Command (USSOCOM)
 - 7 & 11 meter Rigid Hull Inflatable Boat (RHIB)
 - MK V Patrol Boat



System Architecture



System Attributes

- Stabilized, 2-axis mount, n x 360 degree traverse, -20 to +60 degree elevation range
- Lightweight: less than 250 lbs
- Marinized and ruggedized for demanding USSOCOM applications
- Crew serviceable in case of electrical failure
- Integrated fire control computer
- Sophisticated auto tracking capability
- Navy standard power, mounting, and communications interfaces

Performance

- MK III Patrol Boat (20m) fire testing at Pax River
 - Multiple closing, fading, and crossing scenarios
 - Target range 400 meters to 1200 meters
 - Sea State 2-3
 - Probability of hit for crew served M2: 2%
 - Probability of hit for ROSAM with M2: 35%
- Large ship (6000 tons) sea trials for Australian Navy
 - Multiple closing, fading, and crossing scenarios
 - Target range 500 meters to 1200 meters
 - Probability of hit for ROSAM with M2: **40-70%**

Flexibility – Detection & Lethality

- Current Sighting System
 - CCD Camera with continuous 10x zoom
 - Fixed field of view uncooled microbolometer infrared camera
- Current weapon selection
 - M2HB 0.50 caliber machine gun
 - MK 19 40mm automatic grenade launcher
 - GAU-17 7.62mm minigun
 - M240 7.62mm machine gun
- Future sighting possibilities
 - Daytime camera with greater detection range
 - Continuous zoom extended range Forward Looking IR camera
- Future weapon possibilities
 - MK 47 40mm automatic lightweight grenade launcher
 - GAU-19 0.50 caliber gatling gun
 - Missiles

Flexibility – Command and Control

- Integrated Bridge System
 - All mount functionality passed to user developed interface
 - Auto tracking and ballistic calculations retained by ROSAM
 - Standard communication protocol (RS-422)
- Advantages
 - Integrator defined control station
 - ROSAM can be slaved to an Electro Optical Director
 - Local control always available



Program Status

- USSOCOM has a 100 mount IDIQ contract through NSWC Crane
 - 14 mounts delivered
 - Mounts undergoing environmental qualification
 - WSESRB approval expected May 2005
 - User evaluations scheduled for June 2005
- Demonstrations using Integrated Bridge System interface
 - SPARTAN unmanned boat April 2005
 - Army Theater Support Vessel May 2005

Shipboard Protection System (SPS)

- Mini-Typhoon the lethality solution for SPS
 - Supports force protection and anti-terrorism efforts for destroyers in port
 - Level of integration dependent on SPS winner
 - RFP down select May 2005
 - Minimum of two units per ship



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Questions?