



Miniature Day/Night Sight (MDNS) Development



MDNS Development



Presented to NDIA Small Arms Symposium





MDNS Agenda

- ➡ **Mission Statement**
- ➡ **MDNS Goals**
- ➡ **Acquisition Strategy**
- ➡ **Subsystems**
- ➡ **Integration**



MDNS Mission Statement



The SOPMOD Program Management Office will utilize the Miniature Day/Night Sight (MDNS) Development Program to focus on phased replacements to current SOPMOD Block I items and the acquisition of new Block II items to reflect the latest innovations in optical sighting technology. Items procured through the MDNS Development program will address shortcomings in currently fielded equipment and seek to field smaller, more rugged equipment suitable for a variety of weapons platforms.



Enhanced Combat Optical Sight - Carbine (ECOS-C)



Clip-on Night Vision Device - Thermal (CNVD-T)



Clip-on Night Vision Device - Image Intensification (CNVD-I²)

Advanced Target Pointer/Illuminator/Aiming Laser (ATPIAL)



Enhanced Combat Optical Sight - CQB (ECOS-CQB)



Backup Iron Sight II (BIS II)

Competition Sensitive

Visible Bright Light III (VBL III)

Competition Sensitive



Mini Night Vision Sight (PIP)



Rail Interface System II (RIS II)





MDNS Goals

- ➡ **Update Aging Technology on Current SOPMOD Items**
- ➡ **Address Possible Improvements in Current SOPMOD Kit Items**
- ➡ **Miniaturize and Ruggedize SOPMOD**
- ➡ **Integrated System Approach**
- ➡ **Encourage Innovation through Competition**
- ➡ **RDT&E + Modified NDI: Best of Both Worlds**
- ➡ **Meet Objective Fielding Requirements for SOPMOD Kits**



Acquisition Strategy



Acquisition Strategy

- ➡ **Phase I – Evaluation of Tech Proposal**
 - ➡ **Vendors That Meet KPP's Proceed to Phase II**

- ➡ **Phase II – Oral Presentation/Demonstration**
 - ➡ **OET, TET, & CMET Conduct Adjectival Ratings**
 - ➡ **IDIQ Contracts Awarded to One or More Vendors**

- ➡ **Phase III – Developmental Testing**
 - ➡ **Assure Technical Compliance to Specification**

- ➡ **Phase IV Operational Testing**
 - ➡ **User Assessment**
 - ➡ **Prelude to Future Production Delivery Orders**



Subsystems



Miniature Day/Night Sight (MDNS) Development SUBSYSTEMS



Enhanced Combat Optical Sight - Carbine (ECOS-C)



Clip-on Night Vision Device
- Thermal (CNVD-T)



Advanced Target Pointer/
Illuminator/Aiming Laser
(ATPIAL)



Clip-on Night Vision Device
- Image Intensification
(CNVD-I²)



Enhanced Combat Optical Sight - CQB (ECOS-CQB)



Backup Iron Sight II (BIS II)

Competition Sensitive



Visible Bright Light III (VBL III)

Competition Sensitive



Mini Night Vision Sight
(PIP)



Rail Interface System II (RIS II)



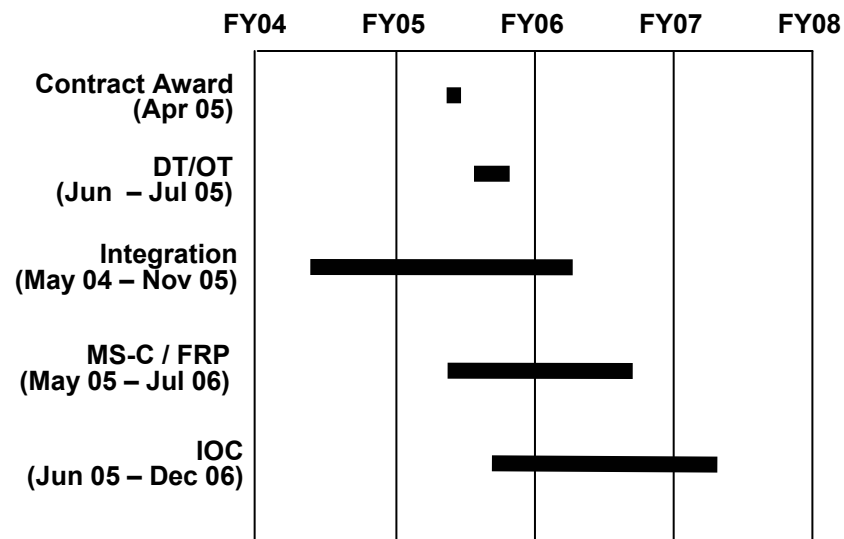
Rail Interface System II (RIS II) OVERVIEW

Description

- **Floating Rail Concept**
- **Floating Grenade Launcher Capability**
- **Improved Shooting Accuracy**
- **3 Contracts Awarded on 25 March 2005**
 - **N00164-05-D-4863 (A.R.M.S., \$16.7M)**
 - **N00164-05-D-4864 (Daniel Defense, \$16.7M)**
 - **N00164-05-D-4865 (Knight's Armament, \$16.7M)**
- **Final Down-Select Upon Completion of DT/OT**



Schedule





Backup Iron Sight II (BIS II) OVERVIEW

Description

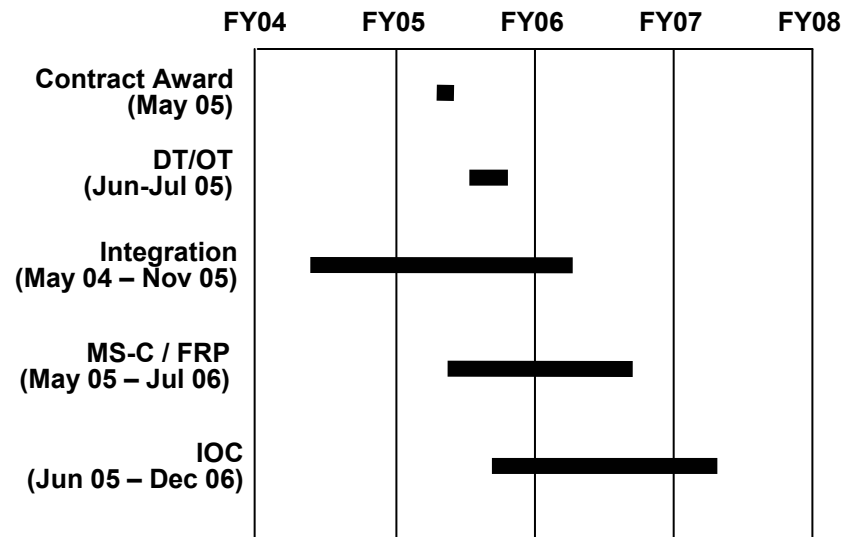
- **Program Status: GREEN**
- **Improved Aperture Flexibility**
- **Improved Set Position Features**
- **Source Selection In-Process**



CONCEPT IMAGE

NSN: TBD

Schedule

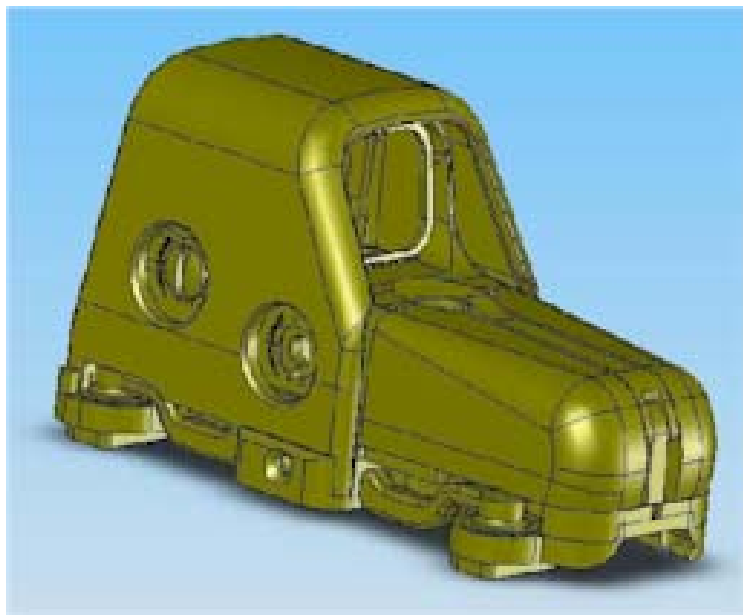




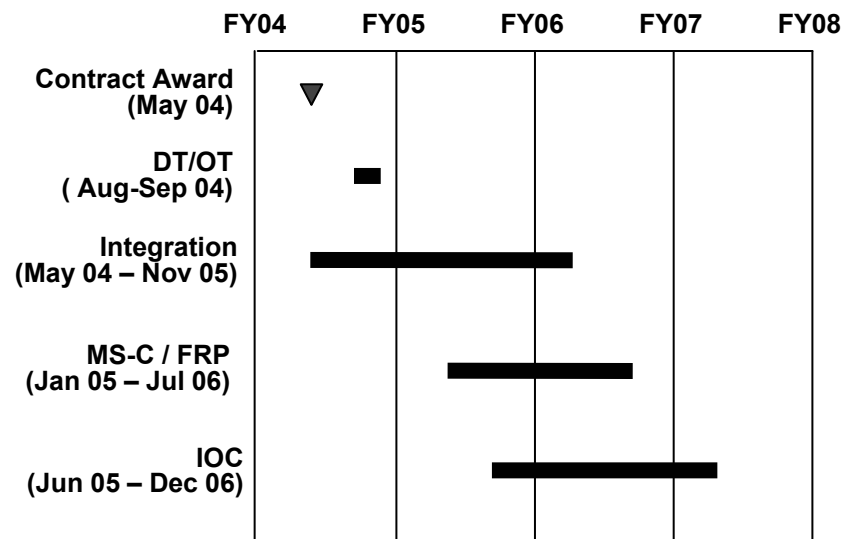
Close Quarter Battle Enhanced Combat Optical Sight (ECOS-CQB) OVERVIEW

Description

- **Night Vision Compatible**
- **Increased Optical Field of View**
- **Holographic Technology**
- **Contract N00164-04-D-4832 Awarded to EOTech (\$16.67M)**
- **ECP Approved by PMO to incorporate 13 Configuration Changes**



Schedule





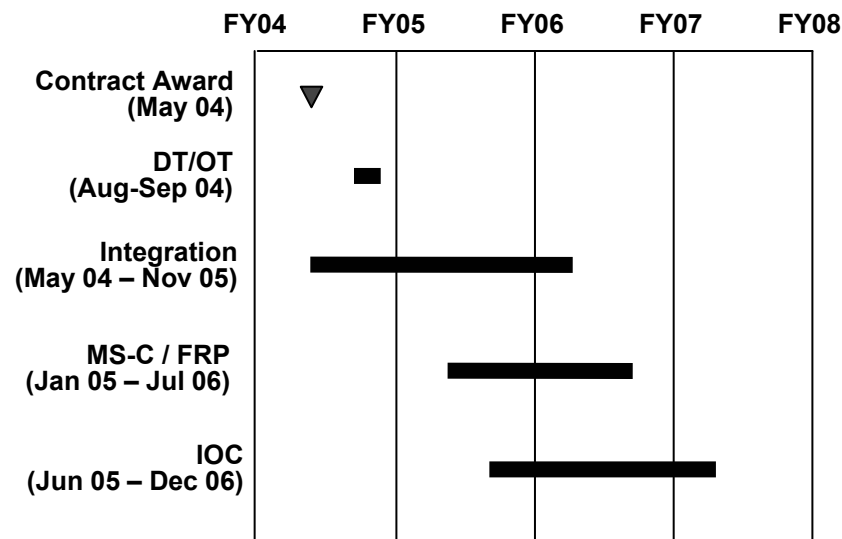
Enhanced Combat Optical Sight - Carbine (ECOS-C) Option #1 OVERVIEW

Description

- **4X Magnification**
- **Integral CQB Capability**
- **Improved Reticle Illumination**
- **Spiral Development Potential**
- **Contract N00164-04-D-4834 Awarded to Trijicon (\$16.67M)**
- **ECP In Process (7 Potential Configuration Changes)**



Schedule





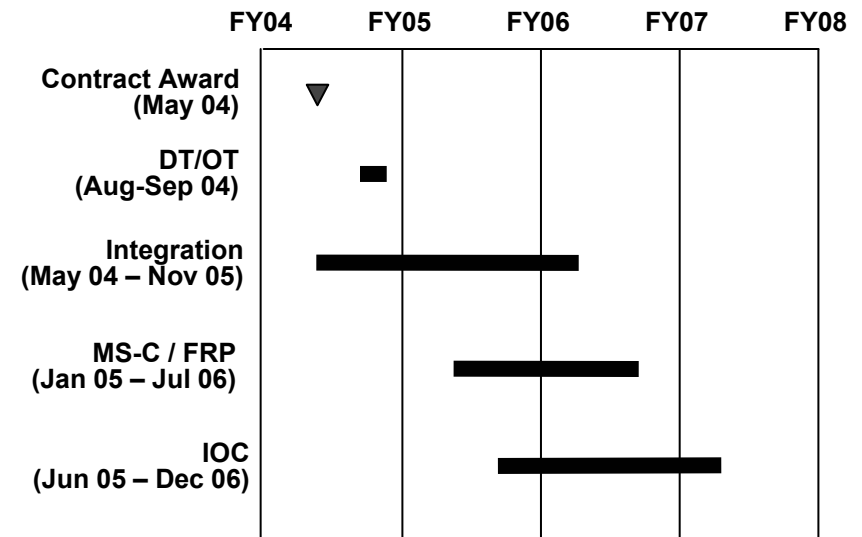
Enhanced Combat Optical Sight - Carbine (ECOS-C) Option #2 OVERVIEW

Description

- **1X - 4X Switchable Magnification**
- **Improved Reticle Illumination**
- **Spiral Development Potential**
- **Contract N00164-04-D-4833 Awarded to Elcan Optical Technologies (\$16.67M)**
- **ECP Approved by PMO (15 Configuration Changes)**



Schedule





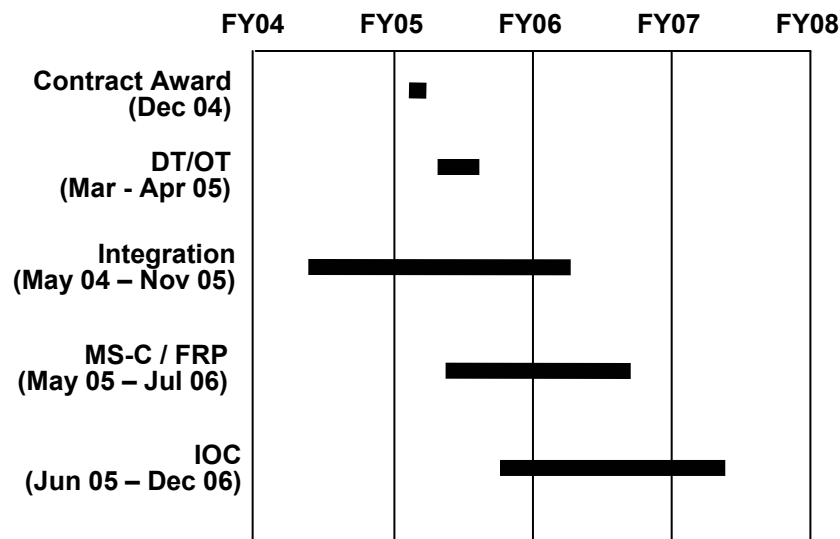
Advanced Target Pointer/Illuminator/Aiming Laser (ATPIAL) OVERVIEW

Description

- **Combined Visible/Infrared Pointing & Illuminating Lasers**
- **Size and Weight Reductions**
- **Enhanced Performance over SOPMOD Baseline**
- **Contract Awarded to Insight Technology (\$49.9M)**
- **ECP In Process (7 Potential Configuration Changes)**



Schedule





Visible Bright Light III (VBL III) OVERVIEW

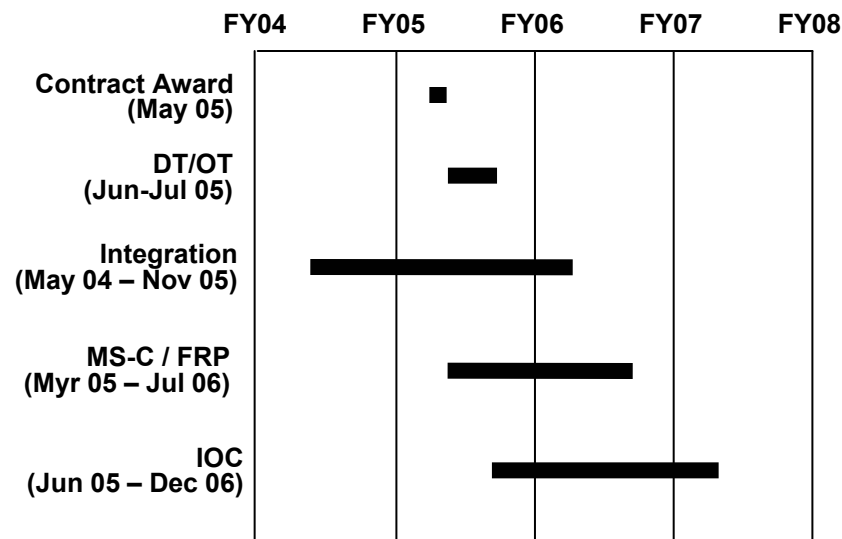


CONCEPT IMAGE
NSN: TBD

Description

- **Increased Luminosity**
- **Size and Weight Reduction**
- **Improved Durability**
- **Source Selection in Final Negotiation**

Schedule





Miniature Night Vision Sight II (MNVS II) OVERVIEW



Description

- **Gen III OMNI V Auto-Gated Filmless Image Tube**
- **2.25X Magnification**
- **Improved Daylight Operation**
- **Incorporate Miniature Red Dot Sight for CQB**
- **Ruggedized**
- **Incorporate Standard Quick Detach Throw Lever**
- **Contract N00164-04-D-4803 Awarded to Litton (\$49.9M)**

Schedule

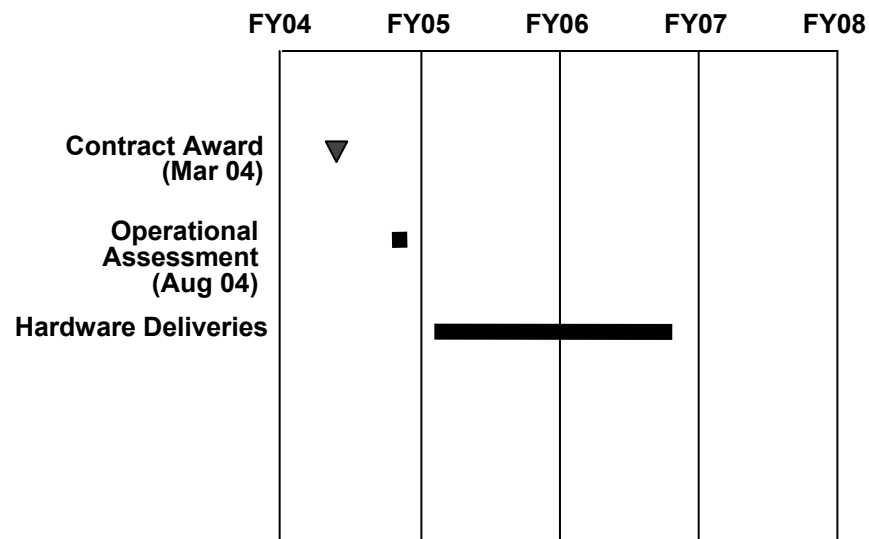
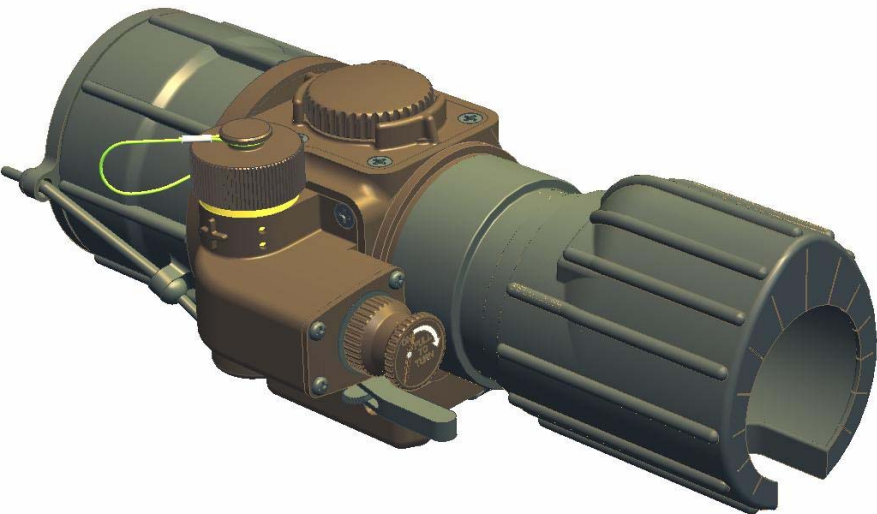




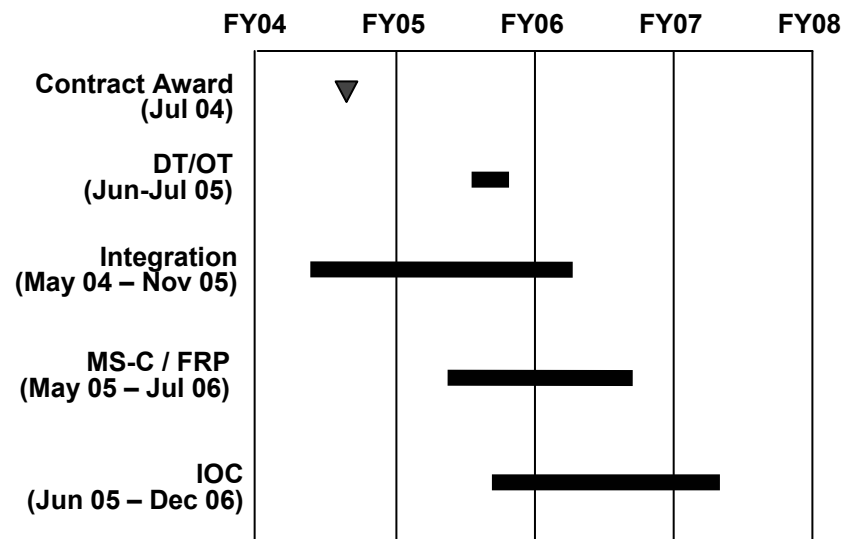
Image-Intensified Clip-On Night Vision Device (CNVD-I²) OVERVIEW

Description

- **Original ORD 5 Block II**
- **Gen III OMNI V Auto-Gated Image Tube**
- **Potential Sensor Fusion Spiral Development**
- **Lightweight**
- **Improved Zero Retention for Day Scopes**
- **Contract N00164-04-D-4839 Awarded to Litton (\$25M)**



Schedule





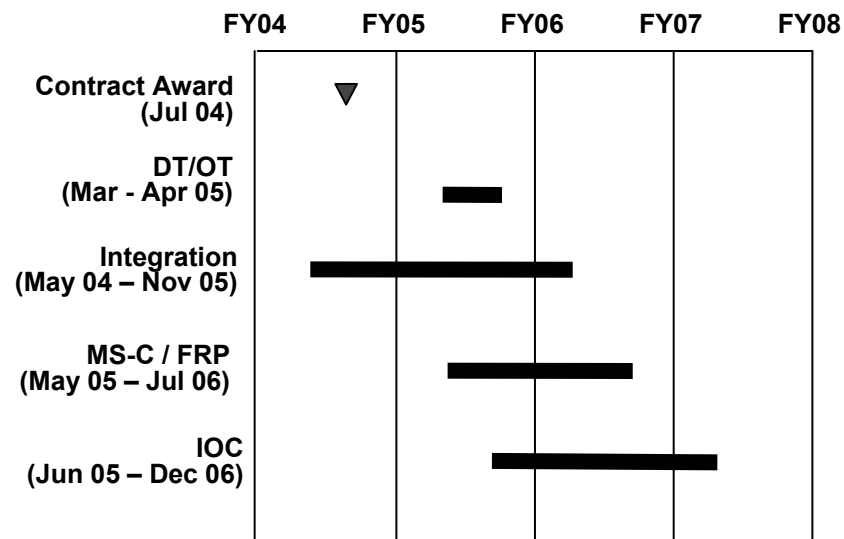
Clip-On Night Vision Device Thermal (CNVD-T) OVERVIEW

Description

- **New Capability**
- **Significant Size/Weight Reduction**
- **Improved Target Detection Capability**
- **For Use as CNVD or Stand-Alone**
- **Contract N00164-04-D-4840 Awarded to Insight Technology (\$25M)**
- **10 Possible ECP items Identified**



Schedule





Integration



Miniature Day/Night Sight (MDNS) Integration

Integration efforts to involve:

- ➡ **Interoperability of Components**
- ➡ **Standardization (Knobs, Switches, Reticles, Intermounts, Batteries, Height Above Comb, etc.)**
- ➡ **Emergency Sighting**
- ➡ **System Snag Hazard Reduction**
- ➡ **Engineering Change Proposals**
- ➡ **Contractor Cooperation/Coordination**

Integration Testing Scheduled for Nov 2005



NSWC Crane

“Harnessing the Power of Technology for the Warfighter”

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NSWC Crane

BACKUP SLIDE





Miniature Day/Night Sight (MDNS) OVERVIEW



Description

- **Capability / technology upgrade to all SOPMOD day / night sighting subsystems for phased-replacement**
- **Improved weight, ruggedness, and zero retention**

Schedule

