**Title and Subtitle**  
SOPMOD Program Overview

**Author(s)**  
Taylor, Gus

**Performing Organization Name(s) and Address(es)**  
SOPMOD Program Management Office at NSWC  
Crane, IN,

**Sponsoring/Monitoring Agency Name(s) and Address(es)**  
NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061

**Distribution/Availability Statement**  
Approved for public release, distribution unlimited

**Supplementary Notes**  
Proceedings from the 2001 Joint Services Small Arms Symposium, Exhibition & Firing Demonstration  
13-16 August 2001 Sponsored by NDIA, The original document contains color images.

**Abstract**

**Subject Terms**

**Report Classification**  
unclassified

**Classification of Abstract**  
unclassified

**Number of Pages**  
14
The SOPMOD Program Management Office at NSWC Crane, IN, will provide standardized, versatile weapons accessories to meet needs across SOF mission scenarios. These accessories will increase operator survivability and lethality by enhanced weapon performance, target acquisition, signature suppression, and fire control. SOPMOD PMO will provide these accessories when they are operationally suitable, affordable, sustainable, and funded.
HISTORIC BACKGROUND

• 1970-1990, Duct tape and hose clamps for carbine and rifle accessories. Multitude of non-standard optical sights, flashlights, etc.
• SOST Modular Close Combat Carbine Project, funded Sept 1989
• SOPMOD MNS, 15 May 1992
• BOIP’s were originally low, since component commands were cautious about buy-in to a new joint program
• Original ORD, validated 15 September 1993
• As commands accepted SOPMOD, demand for capabilities and quantities of items increased, funding did not. ORD was amended 4 times between 1994 and 1998
• May 99, USCINCSOC/PEO-SP Directive to SOPMOD PMO to study and improve the M4A1 Carbine. Extraction Parts Set #1 fielded to Navy and Air Force in July 1999

• ORD Amendment 5, 29 October 1999, added MNVS, SPR, UPM, Soft and Hard Cases, and increased BOIP from 1961 kits to 2972 kits

• September 2000, Congressional Plus-up, $5M in general procurement and $0.9M earmarked for Grenade Launcher research.
SOPMOD M4 Accessory Kit

Capabilities Required:
- Standardized versatile weapons accessories
- Modular - meets needs across SOF mission scenarios
- Increased operator survivability and lethality by weapon improvements, enhanced target acquisition, signature suppression, and fire control
- Evolutionary Acquisition Block Upgrades
  - Block I
  - Block II
  - Block III and IV

PPBES: FY02 BES ($M)

<table>
<thead>
<tr>
<th></th>
<th>PRIOR</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTE</td>
<td>1.24</td>
<td>1.50</td>
<td>0.00</td>
<td>0.25</td>
<td>0.00</td>
<td>0.25</td>
<td>0.00</td>
<td>0.25</td>
<td>3.49</td>
</tr>
<tr>
<td>PROC</td>
<td>30.43</td>
<td>8.14</td>
<td>1.78</td>
<td>2.21</td>
<td>1.97</td>
<td>9.61</td>
<td>10.77</td>
<td>11.02</td>
<td>75.93</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>3.35</td>
<td>0.88</td>
<td>1.21</td>
<td>1.58</td>
<td>1.67</td>
<td>1.73</td>
<td>1.77</td>
<td>1.80</td>
<td>14.10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35.02</td>
<td>10.53</td>
<td>3.09</td>
<td>4.05</td>
<td>3.64</td>
<td>11.59</td>
<td>12.54</td>
<td>13.08</td>
<td>93.52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Each</td>
<td>$17.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (Obj)</td>
<td>2,972</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (Thr)</td>
<td>1962+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (O)</td>
<td>Army 1874</td>
<td>Navy 553</td>
<td>AF 209</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (T)</td>
<td>Army 1874</td>
<td>Navy 553</td>
<td>AF 209</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (O)</td>
<td>JOS 163</td>
<td>SFS 173</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc (T)</td>
<td>JOS 163</td>
<td>SFS 173</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

POC: Gus Taylor
Commercial Phone: (812) 854-5665
Commercial Fax: (812) 854-1044

E-Mail: taylor_gus@crane.navy.mil
SOPMOD Block I

**Capabilities Provided:**

- Modular active and passive day and night target acquisition, identification, and aiming for the M4A1 Carbine to 600 meters.
- M203, day passive aiming only, to 250 meters.
- Noise and flash signature reduction by 30 decibels
- Ergonomic accessories for CQB
- Mobility items

**One Kit per 4 Carbines**

**PPBES: FY02 BES ($M)**

<table>
<thead>
<tr>
<th>SM</th>
<th>PRIOR</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTE</td>
<td>0.82</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.82</td>
</tr>
<tr>
<td>PROC</td>
<td>29.66</td>
<td>1.71</td>
<td>0.85</td>
<td>1.87</td>
<td>0.17</td>
<td>0.17</td>
<td>0.14</td>
<td>0.06</td>
<td>34.62</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>3.32</td>
<td>0.79</td>
<td>0.84</td>
<td>1.09</td>
<td>1.17</td>
<td>1.21</td>
<td>1.23</td>
<td>1.25</td>
<td>10.91</td>
</tr>
<tr>
<td>TOTAL</td>
<td>33.80</td>
<td>2.50</td>
<td>1.69</td>
<td>2.96</td>
<td>1.34</td>
<td>1.38</td>
<td>1.37</td>
<td>1.31</td>
<td>46.35</td>
</tr>
</tbody>
</table>

Cost Each $17.3

| Proc (Obj) | 2,972 |
| Proc (Thr) | 1962+ |

**IOC**

**SCHEDULE**

- Resource-constrained fielding quantities
- $19.1 M Procurement shortfall to reach Full Operational Capability
BLOCK II PLAN

FY 01  FY 02  FY 03  FY 04  FY 05  FY 06  FY 07

Grenade Launcher Day-Night Sight Mount (GLDNSM)
Enhanced Combat Optical Sight (ECOS)
Clip-On Night Vision Device (CNVD)
Family of Muzzle Brake/Suppressors (FMBS)

M4A1 Extraction Parts Set
M4A1 Improved Magazine
M4A1 Improved Bolt

CQB Receiver (CQBR)
Special Purpose Receiver (SPR)

Enhanced Grenade Launcher Module (EGLM)

Many Block I Legacy Systems Remain In Service
SOPMOD Block II

**BLOCK II PLAN**

<table>
<thead>
<tr>
<th>FY 01</th>
<th>FY 02</th>
<th>FY 03</th>
<th>FY 04</th>
<th>FY 05</th>
<th>FY 06</th>
<th>FY 07</th>
</tr>
</thead>
</table>

**Capabilities Provided:**

- Modular active and passive day and night target acquisition, identification, and aiming for the M4A1 Carbine to 800 meters. Integrated and combined systems to replace obsolete systems.
- Enhanced Grenade Launcher day and night passive and active aiming to 400 meters, with first round hit capability.
- Specialized upper receivers for long range and CQB with matching optics and noise and flash signature reduction.
- Fixes the M4A1 Carbine within budget constraints and system limitations.

**PPBES: FY02 BES ($M)**

<table>
<thead>
<tr>
<th>SM</th>
<th>PRIOR</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTE</td>
<td>0.35</td>
<td>1.45</td>
<td>0.00</td>
<td>0.25</td>
<td>0.00</td>
<td>0.25</td>
<td>0.00</td>
<td>0.25</td>
<td>2.55</td>
</tr>
<tr>
<td>PROC</td>
<td>0.68</td>
<td>6.43</td>
<td>0.92</td>
<td>0.35</td>
<td>1.80</td>
<td>9.43</td>
<td>10.63</td>
<td>10.97</td>
<td>41.21</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>0.01</td>
<td>0.09</td>
<td>0.48</td>
<td>0.49</td>
<td>0.51</td>
<td>0.52</td>
<td>0.54</td>
<td>0.55</td>
<td>3.18</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1.04</strong></td>
<td><strong>7.97</strong></td>
<td><strong>1.40</strong></td>
<td><strong>1.09</strong></td>
<td><strong>2.31</strong></td>
<td><strong>10.20</strong></td>
<td><strong>11.16</strong></td>
<td><strong>11.77</strong></td>
<td><strong>46.94</strong></td>
</tr>
</tbody>
</table>

**SCHEDULE**

<table>
<thead>
<tr>
<th>M4 Fixes</th>
<th>GLDNSM</th>
<th>FMBS</th>
<th>CQBR</th>
<th>SPR</th>
<th>ECOS</th>
<th>CNVD</th>
<th>ELGM</th>
</tr>
</thead>
</table>

**IOC**

- FY01
- FY02
- FY03
- FY04
- FY05
- FY06
- FY07
- FY08

POC: Gus Taylor
Commercial Phone: (812) 854-5645
Commercial Fax: (812) 854-1044
Enhanced Carbine (EC)

Capabilities Provided:

- **Enhanced Carbine, Light Sniper, CQB, and Automatic Rifle System**, possibly with integrated laser and white-light systems
- **Integrated range finding/ballistic solution** (Objective)
- **Over-The Beach Capable with standard ammunition**

**PPBES: FY02 BES ($M)**

<table>
<thead>
<tr>
<th>SM</th>
<th>PRIOR</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTE</td>
<td>0.08</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.13</td>
</tr>
<tr>
<td>PROC</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.09</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>0.00</td>
<td>320*</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.17</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Cost Each: By Item
Proc (Obj): By Item
Proc (Thr):

**SCHEDULE**

<table>
<thead>
<tr>
<th>FY01</th>
<th>Oct 01</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
</tr>
</thead>
</table>

- AoA Task
- AoA funded
- AoA Conduct
- CMD Brief
- CINC/DCINC Sub
- POM 04 Sub
- MS B

*SOOP-RV Funded

POC: Gus Taylor
Email: taylor_gus@crane.navy.mil
Commercial Phone: (812) 854-5645
Commercial Fax: (812) 854-1044
EC/ISAR Alternatives:

- Incremental Fixes to M4A1
- Block Upgrade M4A1
  - Incidental to EGLM/SPR/CQBR
  - ARDEC Study Upgrade
- Re-compete the basic Carbine requirement
- Develop/compete requirement for electro-optic integrated carbine

Blue= currently funded or partially funded by SOPMOD or ARDEC
Standard CQB Variant

Light Sniper / Automatic Rifle Variant
VISION
EVOLUTIONARY ACQUISITION TOP MAP
-Fielding Years
FY 94-04
FY 99-04
FY 00-07
FY 05-11

Block 1 Sub-Systems
M4A1 Carbine (Army System)
Backup Iron Sight
Rail Interface System
Forward Handgrip
QD Suppressor
AN/PEQ-5
AN/PEQ-2 (Upgrade)
Visible Bright Light (VBL I & 2)
Dayscope
Reflex Sight
M203 Grenade Launcher Mount/Sight
9" 203 Barrel
Universal Pocketscope Mount (UPM)
Mini Night Vision Sight (MNVS)
16 Gun Hard Case
4 Gun Hard Case