XM307 Advanced Crew Served Weapon

*Increased Lethality Capability for the Stryker Vehicles*

2006 Gun and Missile Systems Conference & Exhibition
National Defense Industrial Association
March 30, 2006

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Stryker Program Overview

- 7 Brigades funded by the U.S. Army
- Nearly 1000 vehicles built and delivered
- Over 300 vehicles deployed to Iraq
- Exceeding contract requirement for Operational Readiness Rate
  - Contractual ORR = 90%
  - Performance for 30 months deployed averages at 95.5%

- Mobile Gun System (MGS)
- Reconnaissance (RSV)
- Anti-Tank Guided Missile (ATGM)
- Infantry Carrier (ICV)
- Engineer Squad (ESV)
- NBC Reconnaissance (NBCRV)
- Medical Evacuation (MEV)
- Fire Support (FSV)
- Mortar Carrier (MCV)

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Stryker Vehicle Overview

**Mobility**
- 350 HP Caterpillar 3126 Diesel Engine
- 8 Wheel, Run-Flat / Central Tire Inflation System
- 62.5 mph Top Speed (Governed)
- 78 Inch Trench Crossing
- 23 Inch Vertical Climb, 60% Grade
- 330 Mile Cruising Range
- 53 Gallon Fuel Capacity

**Survivability**
- 14.5 AP Protection
- Kevlar Spall Liner
- Ballistic High Hard Steel Structure
- MEXAS Ceramic Layer
- RPG-7 Add-On Armor

**Supportability**
- IETMs on Video Display Terminal
- Embedded IETMs Block Improvement
- Diagnostics Linked to VDT
- BIT / BITE Power Pack Display
RWS Evolution: M151E2

- **Customer**
  - U.S. Army PM-SBCT

- **Block 1 Program Accomplishments**
  - New IR Sensor, Improved Range
  - Laser Range Finder
  - New Control Grip
  - Color Day Sensor
  - Prepared for Stabilization
  - Automatic Focusing
  - Larger Ammunition Box
  - Upgraded FCU with Improved Processing Capability
  - Period of Performance
    - MAY 04 to JUL 05

- **Block 2 Program Accomplishments**
  - Integrate 2-axis vector Stabilization.
  - Increase the Slew Rate (AZ & EL)
  - Period of Performance
    - APR 05 to JUN 06
RWS Evolution: *Increased Lethality*

**Stryker**
Up-Armored Platform

**Remote Weapon Station**

**XM307 ACSW**

Block 3 Candidate for Increased Lethality

XM307 Advanced Crew Served Weapon (ACSW)

- 25mm HEAB & AP Ammunition
- Low Recoil
- Light Weight
- Converts to .50 Caliber (XM312)

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XM307 / XM312 Weapon System

- HEAB and AP ammunitions provide *Increased Lethality* against defilade and light-armor targets
- Low recoil results in lightweight design and stable system, enhancing accuracy & dispersion
- Low weight minimizes loads to vehicle mount and allows easy dismount and portability
- Operator level change from 25mm to .50 caliber with four sub-assemblies parts and no special tools
**XM307 / XM312 Mobility**

*Portability for Dismounted Operations*

<table>
<thead>
<tr>
<th>System</th>
<th>40mm Mk-19 Mod3</th>
<th>Cal .50 M2HB</th>
<th>7.62mm M240</th>
<th>25mm XM307</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weapon Weight (lb)</td>
<td>75.6</td>
<td>84.0</td>
<td>24.2</td>
<td>30.0</td>
</tr>
<tr>
<td>Tripod Weight (lb)</td>
<td>65.4</td>
<td>46.1</td>
<td>19.2</td>
<td>18.8*</td>
</tr>
<tr>
<td>Fire Control (lb)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6.5</td>
</tr>
<tr>
<td>Unloaded System Weight</td>
<td>141.0</td>
<td>130.1</td>
<td>43.4</td>
<td>55.3</td>
</tr>
<tr>
<td>(lb)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Recoil (lbs)</td>
<td>800</td>
<td>1000</td>
<td>80</td>
<td>250</td>
</tr>
</tbody>
</table>

* includes Pintle/T&E

- Quickly dismounts from vehicle
  - Portable over rough terrain
  - Supports Close Combat Fight
- Light & compact
  - 80-90 lb weight savings for most platforms

**Enhances Close Combat Employment Flexibility**

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XM307 / RWS / Stryker

Phase 1 & 2 Integration Accomplishments

- Phase 1
  - Accomplished 4Q04
  - XM312, .50cal, integrated onto Kongsberg Block 1 RWS
  - Successful Integration, Operation, Targeting, & Firing

- Phase 2
  - Accomplished 3Q05
  - XM307, 25mm, Integrated onto Kongsberg Block 2 RWS
  - Successful Integration, Operation, Targeting, Firing, and Air-Bursting of 25mm rounds
  - Dispersion 70% of XM307 SDD Exit Criteria

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**Phase 3 Integration**

- Phase 3 underway
- Joint Industry / Government initiative
- Planning, design, engineering, and fabrication activity - **Complete**
- Three week integration, testing, and Demo prep starting at RTTC 3Apr06
  - 25mm TP & TP-S rounds
    - Static Vehicle live fire
    - Moving Vehicle live fire
  - .50cal Ball & Tracer rounds
    - Static Vehicle live fire
    - Moving Vehicle live fire
    - Moving Vehicle / Moving Target Live Fire
- May 11, 2006 Demonstration
RWS Block 2 / XM307 ACSW

*Increased Lethality for Stryker*

- RWS Block 2 provides the latest capability for the Stryker to engage targets with operational weapons
- XM307 provides low weight, low recoil and high lethality
- Combined, the RWS Block 2 and XM307 will provide the Stryker vehicles with increased lethality capability:
  - Fire on the move
  - 25mm HEAB rounds
  - 25mm AP rounds
  - Flexibility to convert to .50cal
CONTACT INFORMATION

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Backup Slides
RWS Evolution *M151E2*

- Cocking Actuator
- Soft Mount
- Right Side Support (Main Elev. Axis)
- Applied Weapon (M2 shown)
- CCD Day Camera (VIM)
- Laser Range Finder (STORM)
- IR Thermal Night Camera (TIM)
- Fire Control Unit (FCU)
- Control Grip
- Slip Ring
- Ammunition Box
- Smoke Grenade Dischangers (M6 Shown)
- Main Frame Assy (Main Az. axis)
- Sight Servo Assy (Sight Az. And El. Axis)
XM307 ACSW System

**Weapon**
- Light Weight, 28 lbs.
- 25mm, 250 spm
- Impulse Averaging
- Gas Operation

**Ammunition**
- High Explosive Air Burst
- Target Practice – Spotter
- Target Practice
- Armor Piercing

**Muzzle Device**
- Flash Suppression
- Muzzle Velocity Correction

**Fuze Setter**
- Contact type fuze interface

**Tripod**
- Lightweight, 12 lbs.
- Stable without ballast
- Height adjustable

**Target Acquisition / Fire Control System (TA/FCS)**
- Direct View Optics (DVO)
- Range Finder/CIDDS/MILES/Pointing Lasers
- CCD Video/FLIR/Tracker module
- Full Solution Ballistic Calculation/Reticle Aimpoint
- Fuze Programming/Powers and sets Fuze
- Digital Compass/Environmental Sensors

**TAFCS Controls**
- Grip mounted switches
- FCS Rear Panel switches
- Lase & Menu select
- Increment/Decrement

**T&E Controls**
- Rapid Acquisition
- 1 mil fine adjust

**Land Warrior Interface**
- Lanyard style “breakaway” connector
- Power, data and video over interface
- Compliant to LW requirements

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