



Objective Individual Combat Weapon (OICW)

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Parsippany, NJ
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“No Place To Hide”

Steve Mango
U.S. Army TACOM-ARDEC
Joint Service Small Arms Program
Attn: AMSTA-AR-CCJ; Bldg. 65
Picatinny Arsenal, NJ 07806-5000
(973) 724-7944
<smango@pica.army.mil>

Sharon Boone
Alliant Techsystems (ATK)
MN11-1403
600 Second Street NE
Hopkins, MN 55343-8384
(612) 931-6652
<sharon_boone@atk.com>



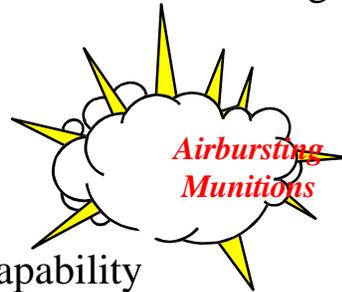
Objective Individual Combat Weapon

Advanced Technology Demonstration

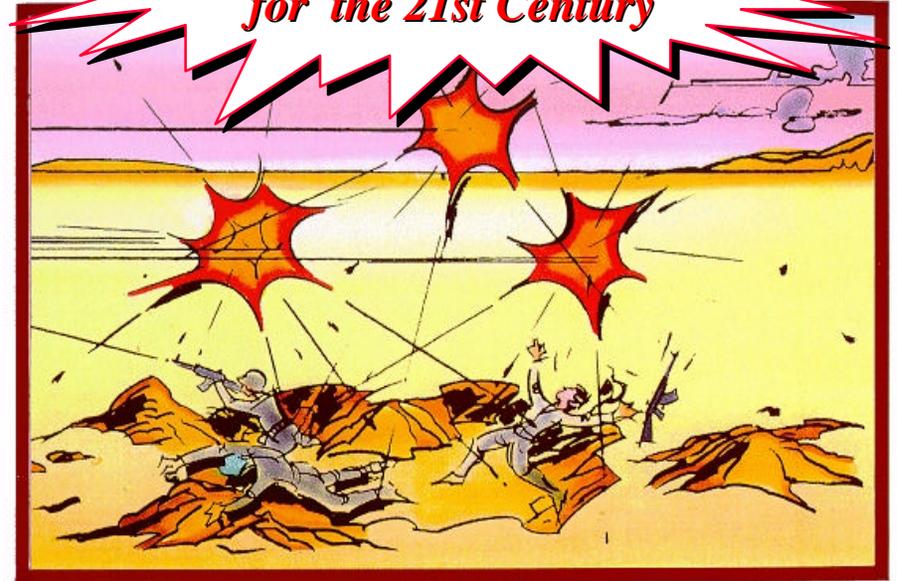


Land Warrior with OICW

- Next Generation Individual Weapon
- Dual Munition System:
 - 20mm Air-Bursting Munitions
 - 5.56mm Kinetic Energy Projectiles
- Full Solution Fire Control System
- 1,000 Meter Range
- Defeats Defilade Targets



***Revolutionary Lethality
for the 21st Century***



- Day/Night All Weather Capability
- Lethality Upgrade to Land Warrior
- ATD Troop Demonstration FY99
- Transition to PM Small Arms FY00
- First Unit Equipped in FY07

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Objective Individual Combat Weapon

Method of Operation

1. Operator places aimpoint on the target and activates the laser rangefinder.

2. The fire control system computes the distance to burst and provides an adjusted aimpoint based upon target range information, the ballistic characteristics of the ammunition and environmental conditions...*transparent to the User.*

3. The operator places the adjusted aimpoint on the target and pulls the trigger. Upon firing, the fuze is inductively set in the weapon where it will fly along a predictable path and air-burst at the target area defeating it and any other targets and/or equipment that may be in the vicinity of the lethal footprint.



2

1

3



LASE... AIM... FIRE...

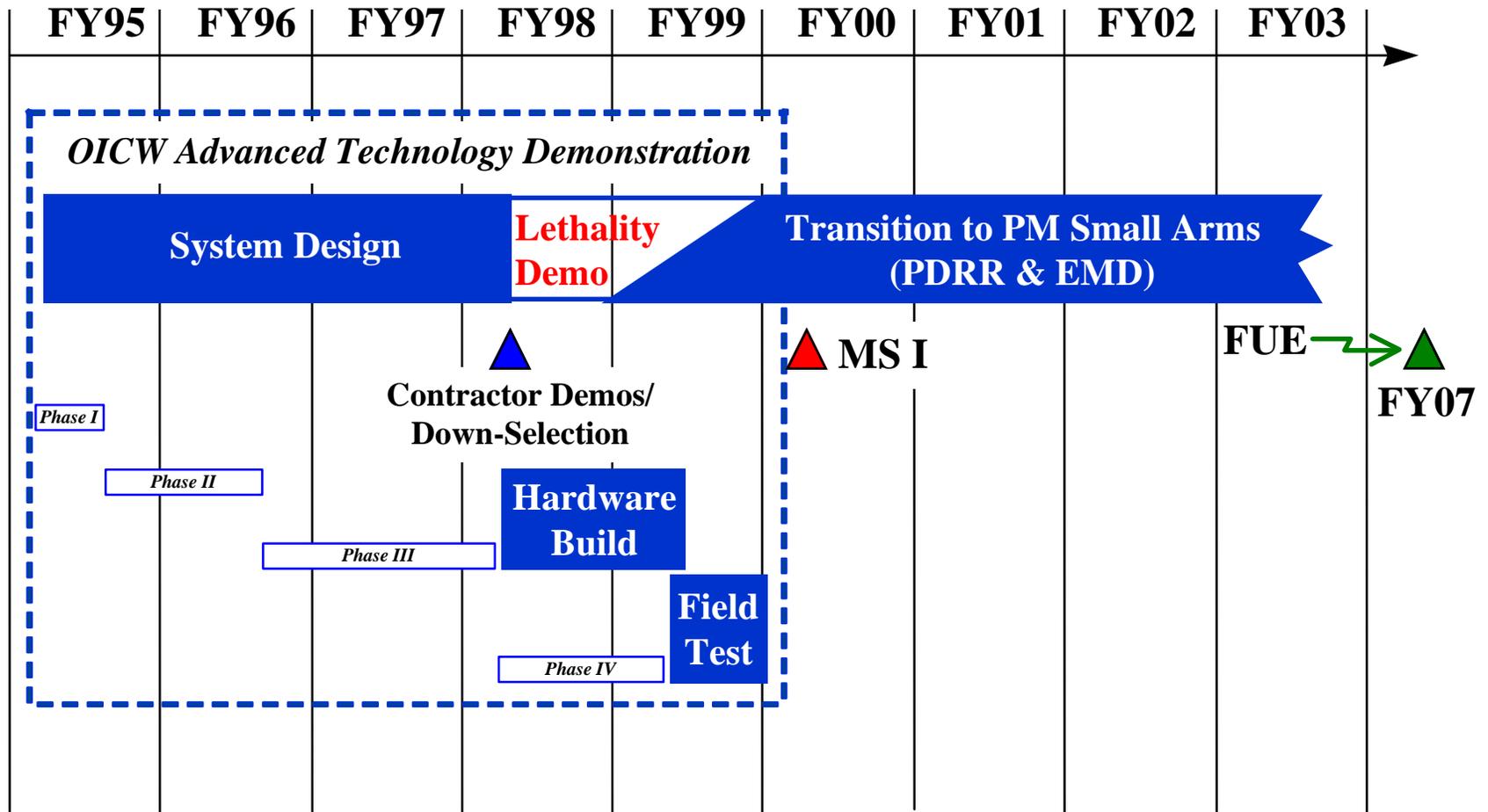
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Objective Individual Combat Weapon *Acquisition Roadmap*



Bursting Munitions Program
FY90-93



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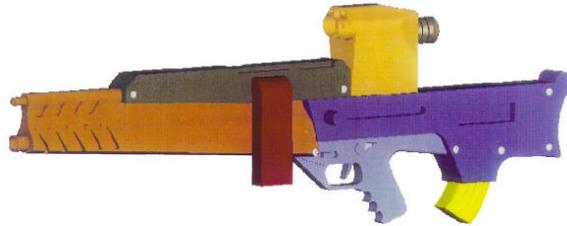


Objective Individual Combat Weapon

Revolution Through Evolution



Jun 94



Aug 96

Mar 95



Jan 98

Sep 95



Jun 99

Dec 95



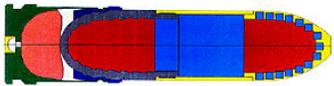
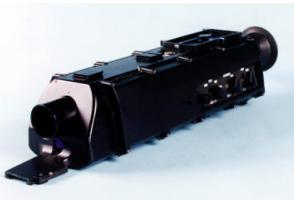
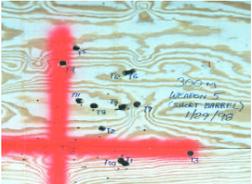
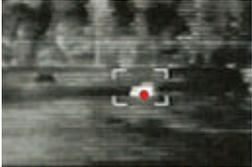
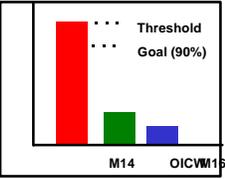
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Objective Individual Combat Weapon *Technology Innovations*



Ammunition/Fuze	Fire Control	Weapon									
 <p><i>20mm Airbursting Munition</i></p>  <p><i>20mm TurnsCount Fuze</i></p>  <p><i>Effective Fragmentation</i></p>	 <p><i>Fire Control System</i></p>  <p><i>Thermal Module</i></p>  <p><i>Precise Laser Ranging</i></p>  <p><i>UIR Thermal Sensor</i></p>	 <p><i>HE Only Configuration</i></p>  <p><i>Separable HE/KE Weapon Design</i></p>  <p><i>KE Only Configuration</i></p>  <p><i>Simple Field Stripping</i></p>									
 <p><i>Air-Bursting Munition</i></p>  <p><i>Excellent 20mm Dispersion (300m example)</i></p>	 <p><i>Land Warrior Interface</i></p>  <p><i>Target Tracker</i></p>	 <p><i>Effective Recoil Mitigation</i></p>  <p><i>20mm Recoil Level</i></p> <table border="1"> <caption>20mm Recoil Level Comparison</caption> <thead> <tr> <th>Weapon</th> <th>Recoil Level (Relative)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>M14</td> <td>High</td> <td>Exceeds Threshold</td> </tr> <tr> <td>OICW/M16</td> <td>Low</td> <td>Meets Goal (90%)</td> </tr> </tbody> </table>	Weapon	Recoil Level (Relative)	Notes	M14	High	Exceeds Threshold	OICW/M16	Low	Meets Goal (90%)
Weapon	Recoil Level (Relative)	Notes									
M14	High	Exceeds Threshold									
OICW/M16	Low	Meets Goal (90%)									

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Objective Individual Combat Weapon

“World-Class” Development Team



JSSAP: Government Technical and Joint Service User Community



Alliant Techsystems (Hopkins, MN): Prime Contractor, System Integration, Ammunition and Fuze



Heckler & Koch (Oberndorf, Germany): Weapon



Contraves-Brashear Systems (Pittsburgh, PA): Fire Control



Octec (Bracknell, England): Target Tracker



Dynamit Nobel (Troisdorf, Germany): Propulsion Consultant

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INSERT ATK SLIDES

Contraves-Brashear Systems Heckler & Koch Dynamit Nobel Octec



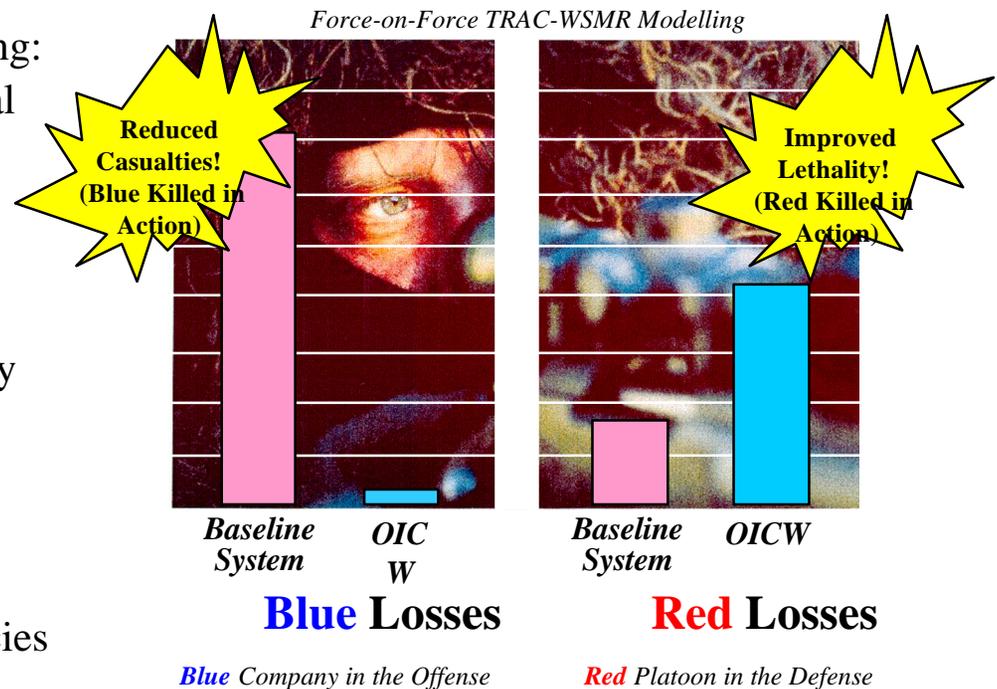


Objective Individual Combat Weapon

Constructive Simulation: Modeling

- Updated Pi Estimates for Draft ORD Assessment
 - AMSAA CASRED & FBAR Models
- Updated TRAC-WSMR Force-on-Force Modeling:
 - Varied Performance Levels to Identify Critical Trade-Off Areas:
 - > Pi Levels: <ATD up to Draft ORD
 - > Max Effective Range: 500 to 1,000 meters
 - > Basis of Issue: 2 to 9 per squad
 - > Weapon Configuration: HE/KE & HE Only
 - >
- TACOM-ARDEC Soldier Lethality Modeling & Simulation Conference; 15-16 Apr 99
 - Over 100 Attendees
 - Contractors, Academia & Government Agencies

- Increased Lethality
- Increased Survivability
- Cost Effective Solution



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Objective Individual Combat Weapon

Virtual Simulation: Small Arms Simulator

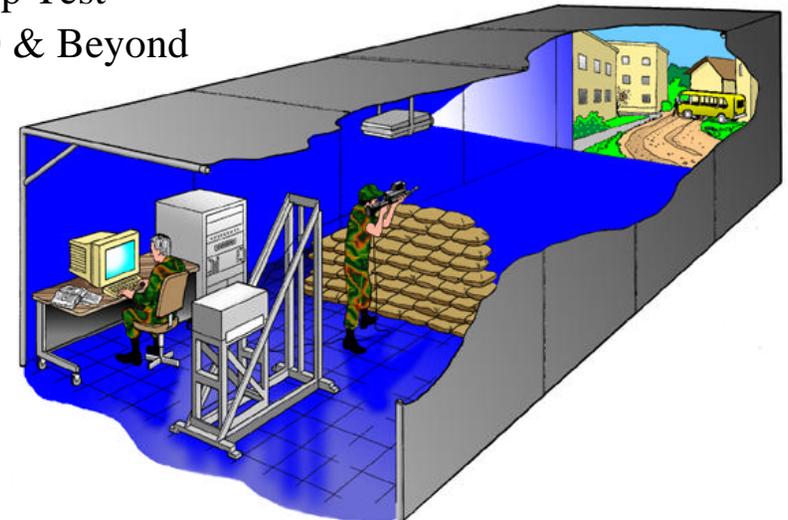
- Computer Controlled Man-in-the-Loop Simulator
- Developed by NAWC-TSD (Orlando) & ARL (APG)
- Validated with M16 & M203 Performance Data
- ATK OICW Weapon Integrated with Fire Control Mockup
 - Recoil Data & Advanced Features Incorporated
 - Software Flexibility for System Trade-Offs
- Initial Test Conducted Week of 16 Nov 98 with Troops
- Completed and Delivered to APG in Jun 99
 - Utilized as Primary Training Device for ATD Troop Test
- Engineering Tool Available for PM During PDRR/EMD & Beyond



Computer Controlled



Computer Generated Graphics & Imagery



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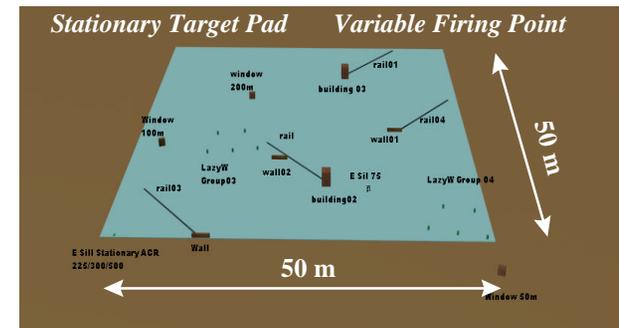


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Live Simulation: ATD Troop Testing



- Previously Conducted Laser Ranging Studies for Error Budget Analysis
- Safety, Technical and Troop Testing to be Conducted at Aberdeen Proving Grounds (APG), Aberdeen, MD
 - 6 Weapons
 - 3 Fire Control Systems
 - 569 HE Rounds
 - 2,807 TP Rounds
- Troops from the 25th Infantry Division, Ft. Lewis, WA
- Additional User Demos Will be Conducted after ATD Troop Test



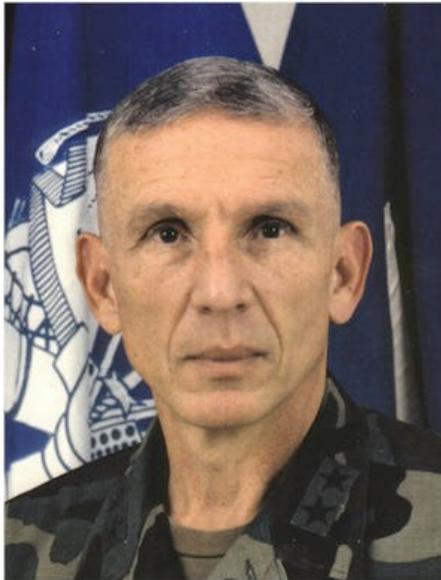
Romney Creek Test Range, ATC, APG

- 50m x 50m Target Impact Area:
 - Stationary & Moving Pop-Up Targets
 - Groups/Area Targets
 - Defilade Targets
 - Instrumentation



Objective Individual Combat Weapon

General's Perspective



The OICW represents a paradigm shift in the history of Infantry weapons....

“Single most revolutionary thing we’ve done for the Infantry...”

MG Carl F. Ernst, Commander, USAIC, Ft. Benning, GA



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Objective Individual Combat Weapon

Summary



- *OICW*...Utilizes State-of-the-Art Technology Advancements
- *OICW*...Provides Quantum Leap Over Existing Family of Weapons
- *OICW*...Dramatically Improves Survivability & Increases Lethality
- *OICW*...Provides Dominant Overmatch Capability Leaving the Enemy...



***“...NO
PLACE
TO
HIDE!”***

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