

Evolving Affordable Training Systems for OICW and Related Factors - Individual & Crew-Served Systems

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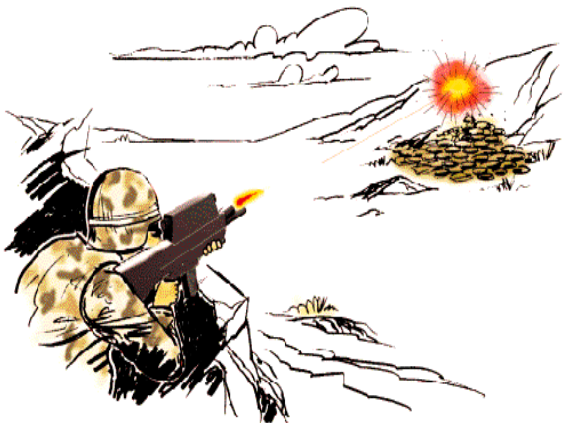
Objective Individual Combat Weapon (OICW)

**Revolutionizing The Infantry
Weapon - Enhancing the
Capabilities of the 21st Century
Infantryman**

Users Vision



- **Soldier's Individual Combat Weapon – well into 21st century!**



- **Bursting Munition Concept**

- Provides revolutionary capability
- Offsets aim error associated with iron sights
- Provides more efficient lethal mechanism

- **Dual Munition System**

- 20mm High Explosive
- 5.56mm Bullets

- **Increases range/lethality**

- **Target Acquisition/Fire Control System**

- Laser Range Finder
- Ballistic Computer
- Fuze Setter
- Electronic Aim Point



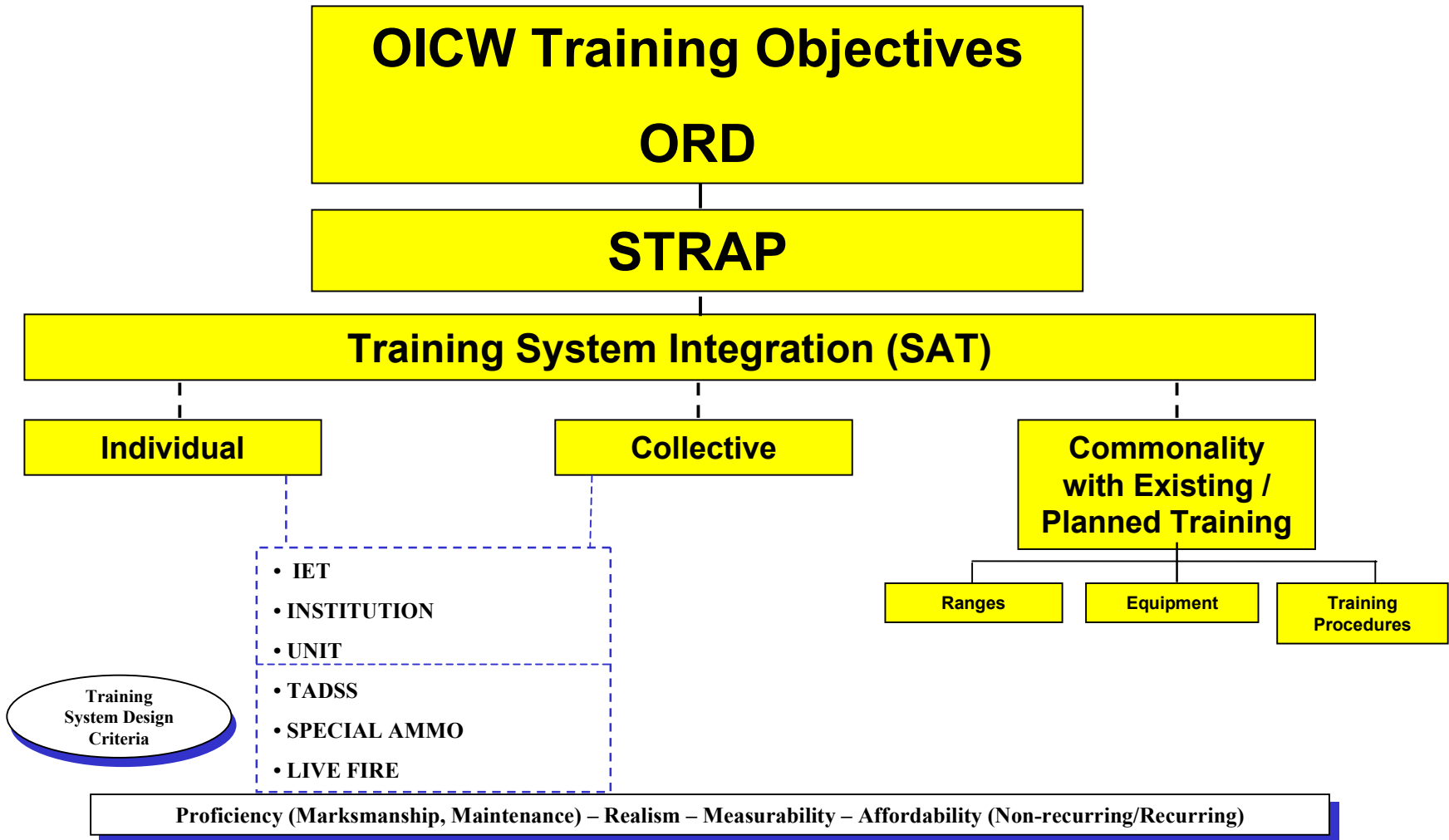
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Training Concept Approach



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- ★ Develop and Implement the most effective and efficient Training Strategy for the SOLDIER using the OICW.
- ★ Use live, virtual, and constructive simulations linked to MANPRINT and weapon design to make it easy to train.
- ★ Leverage existing simulations and training ranges (including Land Warrior upgrades) to the fullest extent.
- ★ Crawl, Walk, Run to meet the Training Objectives.



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■ OICW Training Concept Guidelines

- OICW training development goals shall be to: Maximize the Soldier/systems required proficiency/capability, and:
 - ▶ Minimize training resource increases
 - ▶ Accomplish OICW individual and collective training requirements with an emphasis on simulation
 - ▶ Leverage legacy weapons training systems
 - ▶ Minimize level of dependence on OICW live fire
 - ▶ Maximum use of existing ranges
 - ▶ Minimize new special targetry procurement programs



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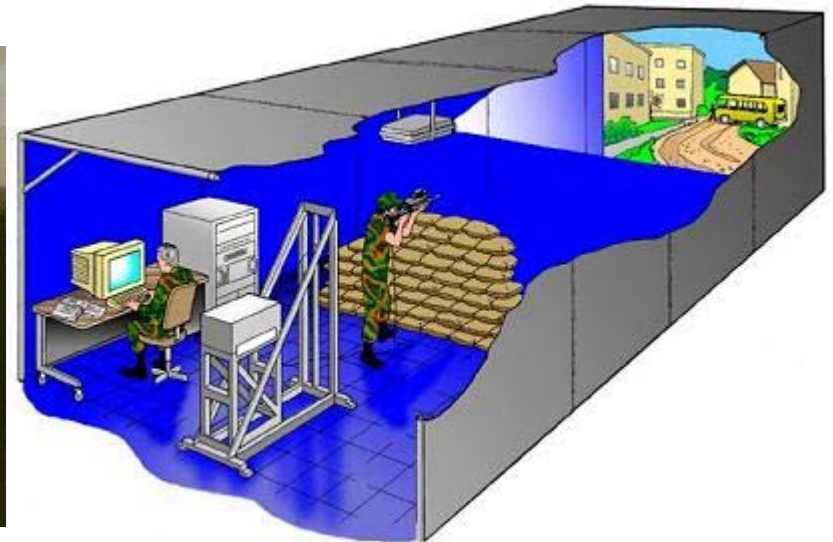
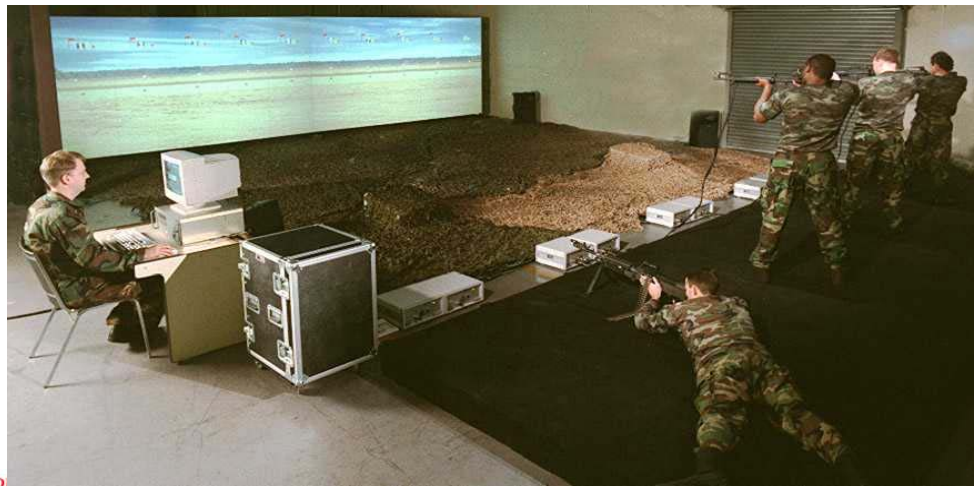


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Training Concept Considerations



- Make maximum use of existing ranges
- Minimize new special targetry procurement programs
- Use simulations to decrease service and training ammunition cost and allocations
- Identify follow-on training device/virtual and live simulation requirements
- Minimize institutional and unit training time without sacrificing Soldier proficiency



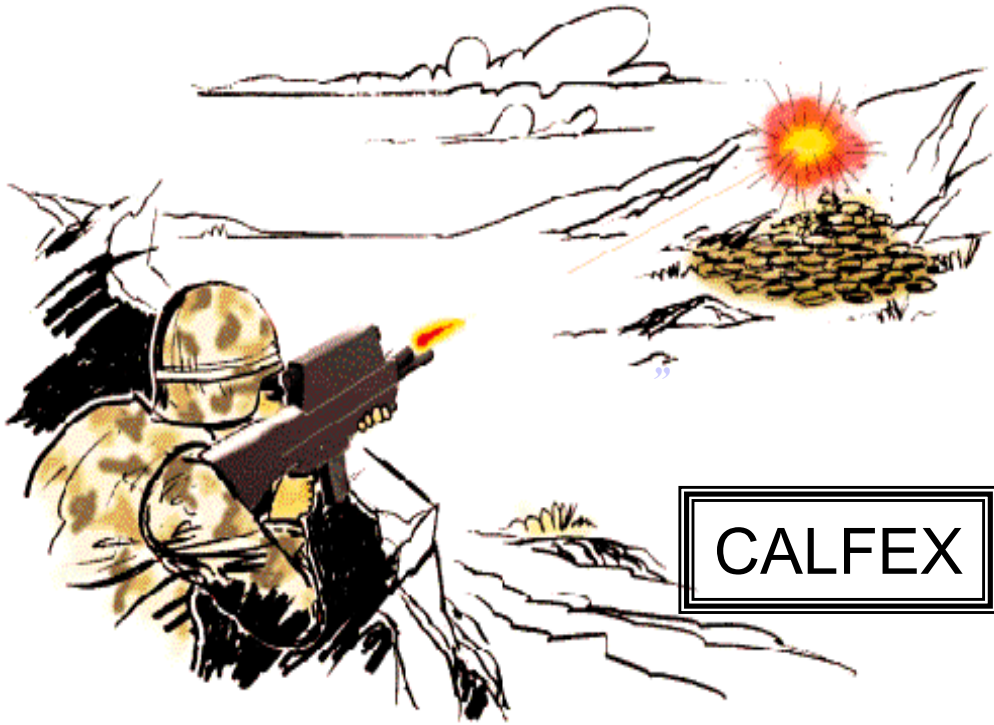
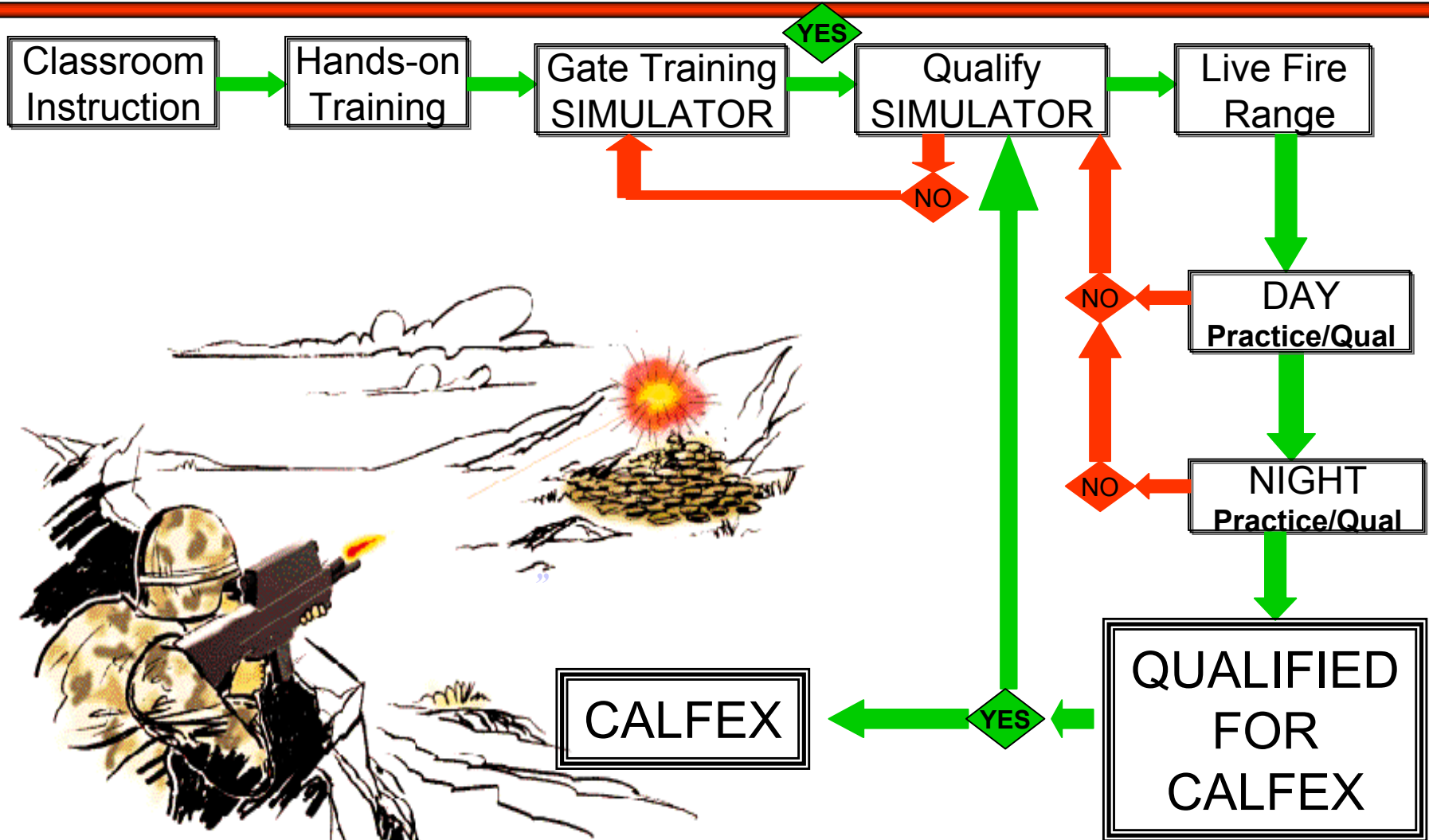
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Unit Gunnery Strategy



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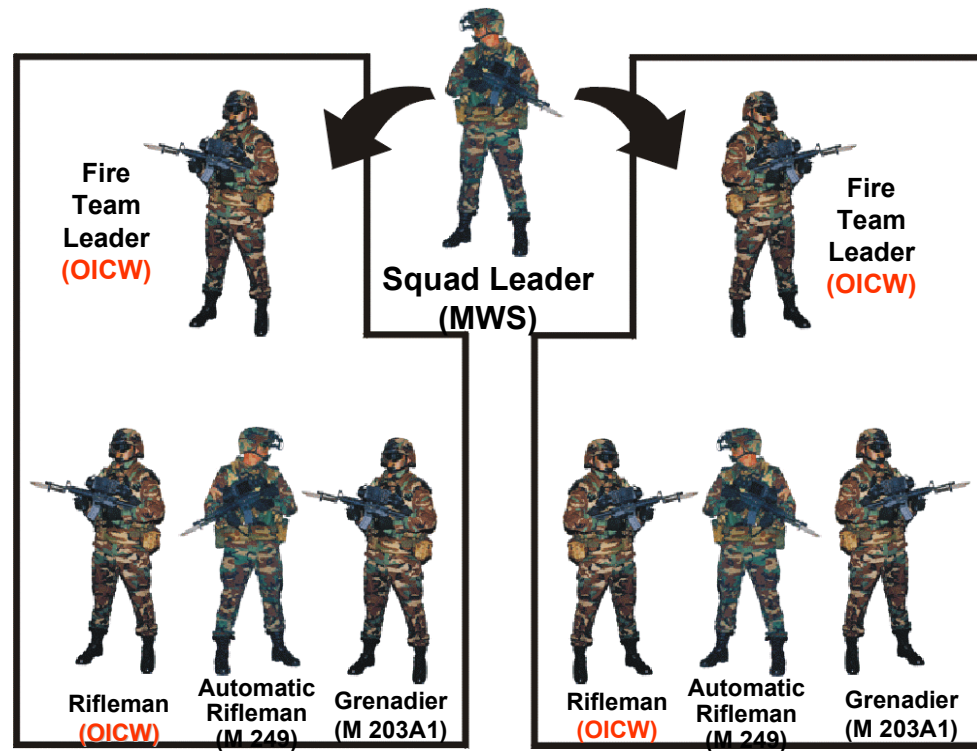
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Proposed 20MM Marksmanship Program



- ▶ Pre-Fire Phase
- ▶ Basic Firing Phase
- ▶ Advanced Firing Phase
- ▶ Decision Firing
- ▶ Qualification Firing



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▶ Classroom Instruction:

- Introduction To The Weapon
- Fire Control Functionality
- Assembly and Disassembly

▶ Fundamentals Of Marksmanship



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Basic Firing Phase



- ▶ Simulation-based
- ▶ Three ranges - Three firing positions
- ▶ Lasing techniques
- ▶ Day only
- ▶ Untimed
- ▶ All optics (DVO, Video, Thermal, Iron sights)



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Advanced Firing



- ▶ Simulation-based
- ▶ All positions
- ▶ All optics
- ▶ Laser exercises
- ▶ Untimed and timed
- ▶ Single multiple, and moving targets
- ▶ Day and night



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Decision Firing



- ▶ Simulation-based
- ▶ Weapon selection
- ▶ All positions
- ▶ All optics
- ▶ Variable ranges and targetry
- ▶ Timed targets
- ▶ Day and night



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Qualification Firing



- ▶ Simulation and live fire
- ▶ Pre-qualification done in simulation and live fire
- ▶ Qualification in live fire
 - ➔ Day and night
 - ➔ HE/KE decision making
 - ➔ TP only
 - ➔ Use existing ranges



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Trigger Pull Summary (Semi-Annual)



PHASE

SIM

LIVE

▶ Pre-fire phase		Dry fire
▶ Basic firing phase	108+	
▶ Advance firing	162+	
▶ Decision firing	324+	
▶ Pre-qualification firing	25	25 (TP)
▶ Qualification firing		25 (TP)
▶ Familiarization firing		5 (HE)
▶ CALFEX (Annual)		80 (TP)

1238 Sim rounds per man/per year
180 TP rounds live per man/ per year
10 HE/AB service rounds per year

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Training Aids, Devices, Simulators & Simulations (TADSS)



Institutional (I) & Sustainment (S)

▶ Training Aids/Devices

- ▶ Mock-Ups (I)
- ▶ Disassembly Mat for Hands-On (I/S)
- ▶ Maintenance Trainer (I/S)



▶ Virtual

- ▶ Engagement Skills Trainer 2000 with Pre-Planned Product Improvements - for marksmanship, collective, and shoot-don't shoot training (I/S)
- ▶ Dismounted Infantry Module (DIM) -- CCTT link (S)



▶ Live

- ▶ Conform to existing and future Tactical Engagement Simulation Systems, i.e., One Tactical Engagement Simulator System(I/S)

▶ Constructive

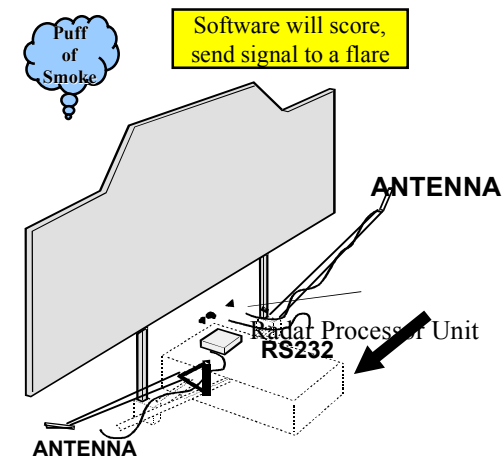
- ▶ One Simulated Automated Forces (OneSAF) (S)

▶ Range Instrumentation

- ▶ Developing Requirements to sense rounds (X/Y/Z Coordinates)
- ▶ PM - Instrumentation Training & Target Systems, STRICOM
- ▶ New Generation of Army Targetry System
- ▶ Location Of Miss And Hit (LOMAH) - like, Doppler Radar Technology



Computer Generated Graphics & Imagery



OICW Will Leverage Current Technologies



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- **OICW is evolving an affordable training system that will maximize the Soldier/systems required proficiency and capability. These approaches can also apply to other individual and crew-served systems. The end results are:**
 - ▶ **Minimizes training resource increases**
 - ▶ **Accomplishes individual and collective training requirements with an emphasis on simulation**
 - ▶ **Leverages legacy weapon training systems**
 - ▶ **Minimizes level of dependence on live fire**
 - ▶ **Maximizes use of existing ranges**
 - ▶ **Minimizes new special targetry procurement programs**



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