Joint Service Small Arms Applied Research Activities and Approach

2008 National Defense Industrial Association's International Infantry & Joint Services Small Arms Systems Symposium

Joint Service Small Arms Program Office
John Edwards
Program Management Officer

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Outline

Approach - Joint Service Small Arms

Applied Research efforts

Warfighter focus

All photographs are from the DOD link photos page

Joint Service Small Arms Program

- Harmonizes/Coordinates Across Armed Services

  JSSAP Mission
- Consolidated Small Arms Science & Technology

  JSSAP Mission
  - Operational Based
  - PM Technology List (*total ownership cost*)
- Joint Small Arms Master Plan Updated every 2 years

  JSSAP SOP

Joint Service Small Arms Synchronization Team is the reviewing and approving authority

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JSSAP Tech Plan
Approach and Coordination

1. **Capability Assessments and Needs reviewed**
   - **Service Combat Developers**
   - **Joint collaboration and/or assessment**

2. **NSAC/NSATC subcommittees review of white papers**
   - **JSSAP Application Working Group as subcommittee**

3. **Coordination with OGAs either directly or through NSAC subcommittees.**
   - **Coordinate with other Lethality Technology Investments, ATOs.**

4. **Joint Service Small Arms Synchronization Team approval**

5. **Additional Reviews; RDEC Lethality IPT, RDECOM, ONR, ASAALT**

Small Arms Tech Planning

FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14

Lightweight Small Arms Technology

Caliber Study

Technology for Small Arms Capabilities

- **Lethality (ex. Miniature prox fuze components; Frag improvements)**
- **Advanced materials & recoil technologies**
- **Fire Control Tactile Range determination component**
- **Powered rail technologies & Wireless weapons interface**

Small Arms New Concepts & Technology Capabilities

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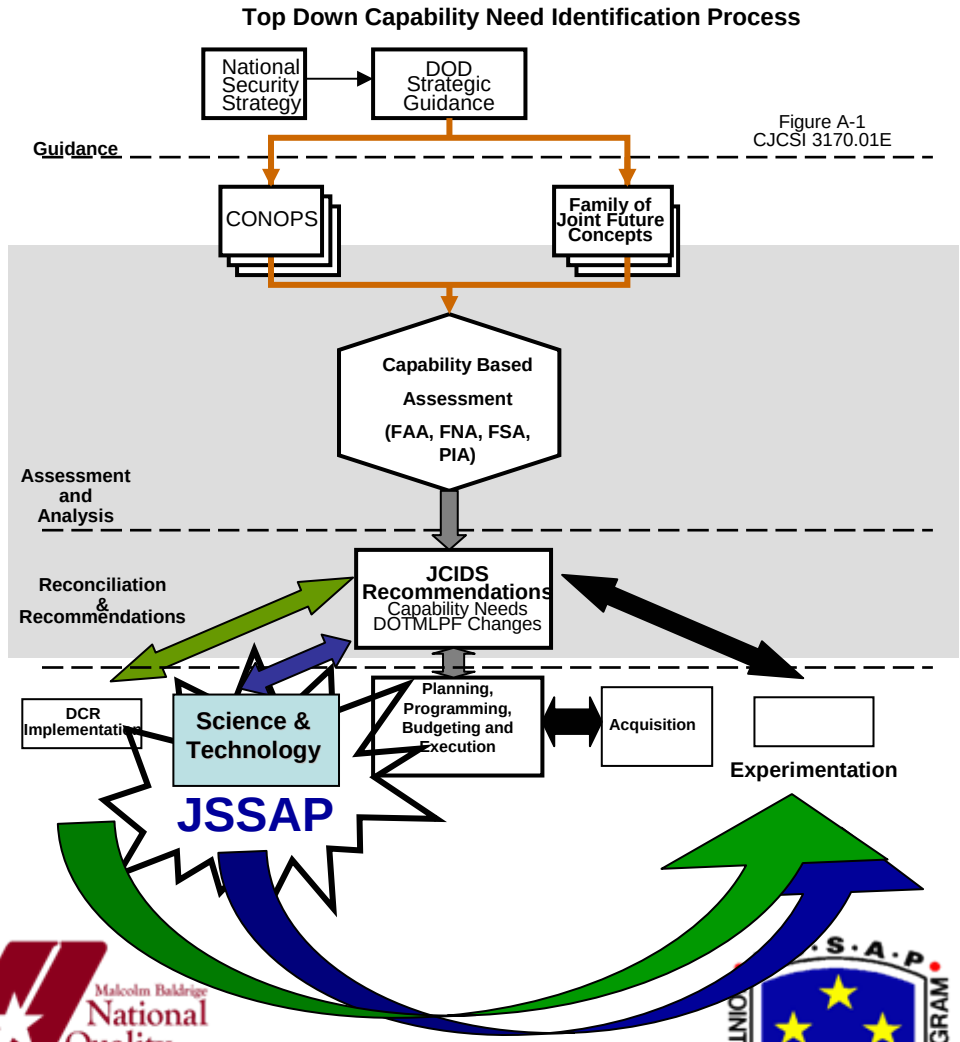
JSSAP Tech Plan Implementation



Small Arms Capability Based Assessment most recent JCIDs small arms update.

✓ ***Enhancing the warfighters overmatch capability***

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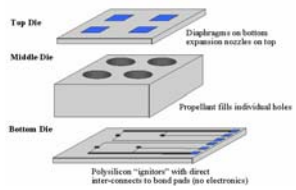
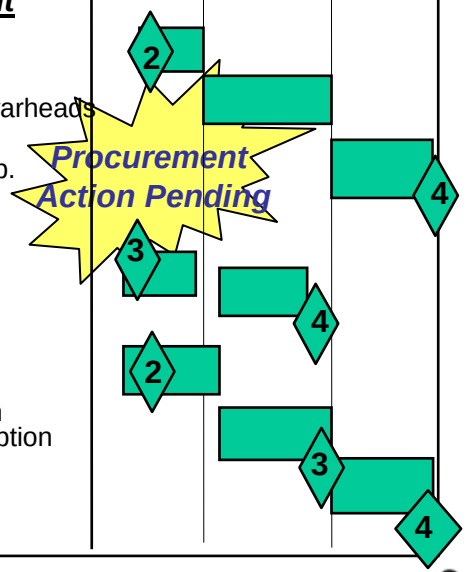
Army Technology Objective *R.ARD.2008.03*



Schedule & Cost

Milestones	FY08	FY09	FY10
Advanced Lethality Component			
•Concept small warheads with modeling.			
• Experiment geometric & directionality warheads			
• Breadboard lethal & frag concepts comp.			
• Miniature Proximity fuze electronics			
• Demo critical electronic comp.			
•Develop adv. recoil concepts			
• Tradeoff materials and recoil absorption technology. Experiment with recoil absorption			
•Critical breadboard of weapon launch survivability			



Purpose:

– To demonstrate advanced lethal armament component technology
– Terminal fragmentation effectiveness trades
–Miniaturize Proximity electronics power
– Lowest weight Recoil attenuation
– Modeling and Simulation assessments

Payoff:

- ***Provides improved munition effectiveness to targets***
- ***Multiple critical technology demonstrations***
- ***Enabling maturity measurement***
- ***Systems level analysis***

Supporting fulfilling broad small arms capability gaps for spiral transition.

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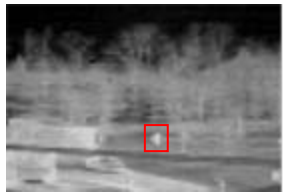
Advanced Fire Control Technology for Small Arms

Army Technology Objective *R.ARD.2008.054*

Target Tracker & Laser steering



Schedule & Cost

Milestones	FY08	FY09	FY10
Laser Steering / Adv. Range Finding			
• *Concept Studies*	2		
• *Component Experimentation*			
• Component analysis/define parameters			
• Critical breadboard proof of concepts		3	
• Selection for breadboard fabrications		*Procurement Action Pending*	
• Integration of breadboard components			4
• Component banding/maturation			

Purpose:

– To demonstrate advanced fire control component technology

– Determining correct range to moving targets

– Further power sharing within weapon

Payoff:

- ***Critical technology demonstrations***
- ***Technology maturity TRL path***
- ***Integration Systems Analysis***
- ***Available for spiral transition***

Supporting fulfilling broad small arms capability gaps defilade and covered targets

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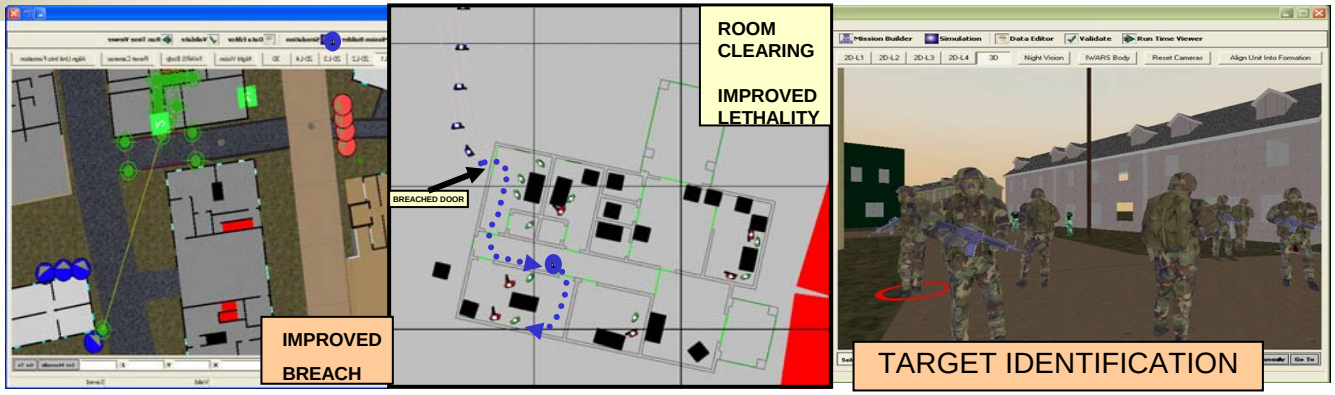
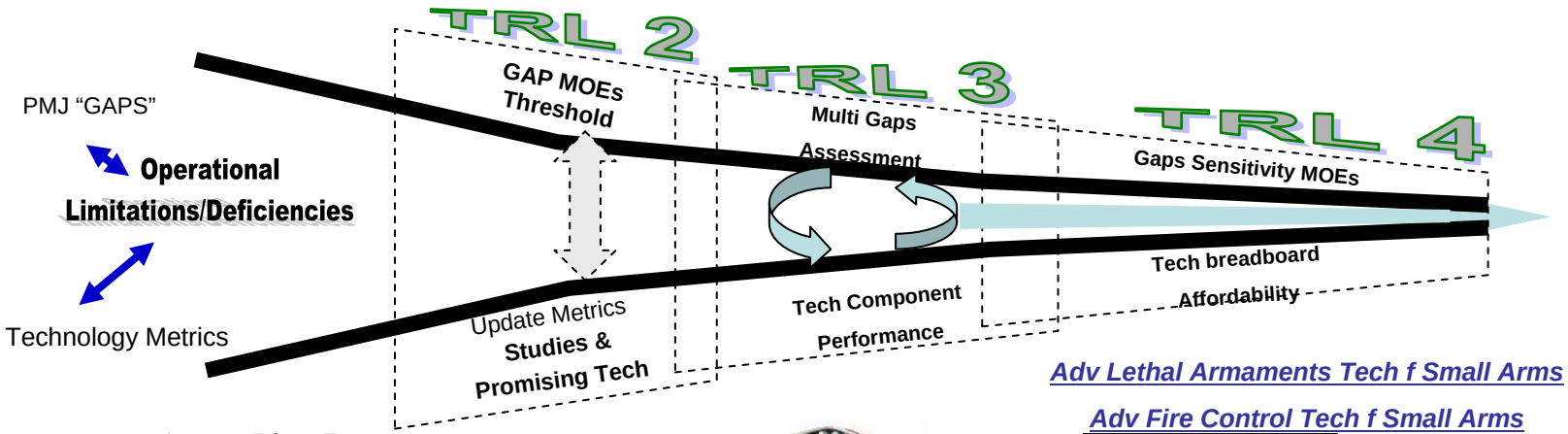
Modeling and Simulation Role in JSSAP ATO's

Operational Requirements

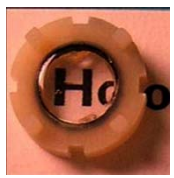




Applied Research

Adv Lethal Armaments Tech f Small Arms

Adv Fire Control Tech f Small Arms



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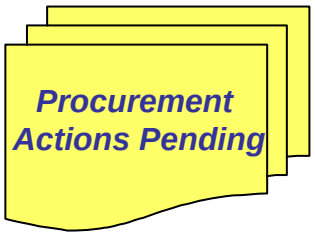
Outcomes of Applied Tech Programs

Technology Component Investments

- Warfighter Capability focus
- Critical Technology Demonstrations
- System Analysis Effectiveness

Modeling and Simulation activities

- Link to Capabilities
- Integration to weapons systems
- Underpinning analysis documented



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Summary

Approach - Joint Service Small Arms

Warfighter Capability Focus

Applied Research efforts

Modeling and Simulation links Capabilities to technologies

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