Fire Control Systems

Pete Plocki (Brashear LP)
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<th>Report Date</th>
<th>Report Type</th>
<th>Dates Covered (from... to)</th>
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<tr>
<th>Title and Subtitle</th>
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<td>Fire Control Systems</td>
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<th>Author(s)</th>
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<td>Plocki, Pete</td>
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<tr>
<th>Performing Organization Name(s) and Address(es)</th>
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<tr>
<th>Sponsoring/Monitoring Agency Name(s) and Address(es)</th>
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<tr>
<td>NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061</td>
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<tr>
<th>Distribution/Availability Statement</th>
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**Supplementary Notes**

**Abstract**

**Subject Terms**

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**Number of Pages**
7
FCS Challenges

- Designing a fire control system that can withstand the military environment within size & weight constraints
  - Soldier handling is significantly more severe than the weapon firing shock
- Designing a sophisticated fire control system that provides simple, intuitive operation
  - Soldiers are upgrading from standard weapon iron sights
- Designing a reliable, cost effective fire control system
  - Widespread deployment requires management of total ownership cost
- Designing a fire control system that significantly improves soldiers effectiveness - lethality & survivability

The Futuristic Digital Battlefield requires systems that provide full day/night operation with communications capabilities
Individual & Crew Served Fire Control Systems

SACMFCS
MLRF 100
OICW Phase 3
OICW Phase 4
P³i SAFCS II (O)

BSTING
SACMFCS II
SAFCS
OICW PDRR

Jan 2, 1991
1/1/92
1/1/93
1/1/94
1/1/95
1/1/96
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
Jan 2, 2001
Maturing a Vision

Modular Weapon System

- M203 Leaf Sight
- PEQ 2
- PAQ 4
- M9 Bayonet
- Rail Assy System
- M203 Grenade Launcher
- Pistol Grip
- TWS
- PVS14
- Close Combat Optic
- Backup Iron Sight
- 3X Extender

Integrated System—Enhanced Capability
- Simplified Logistics and Maintenance

OICW

Bursting Munitions

Transforming Infantry Capability
OICW Complements and Expands
Today’s Capabilities
Modular Weapon System – M4 Carbine

Total Weight: 28.0 lbs + TBD (LRF, Compass, Video, etc)
(Uses 5 different batteries)

Difficult system operation with the large number of buttons,
OICW - 20 mm Airburst & KE Capability

<14 lbs. & Goal 10 lbs.

Sub-Module
- Laser Range Finder
- Housing
- Controls
- Power Source
- CPU
- Ballistic Computer
- Fuze Setter
- Display
- Video
- Direct View Optics
- Thermal
- Tracker/Laser Steerer
- CIDDS
- Compass
- Aimlight
- Laser Illuminator
- MILES
- Embedded Training
- Bore Sighting
- Zero
- LW ICD
Conclusion

- Perform system level functional module Value Assessment, QFD, & CAIV to determine the optimized functionality for the OICW System

- Established IPTs - FCS, Weapon, Ammo, Systems, Test, Synthetic Environment, Supportability, Training - Government/Contractor team jointly working to develop this futuristic weapon system

- Investigating emerging and future materials along with advanced manufacturing processes to minimize weight, power, and cost