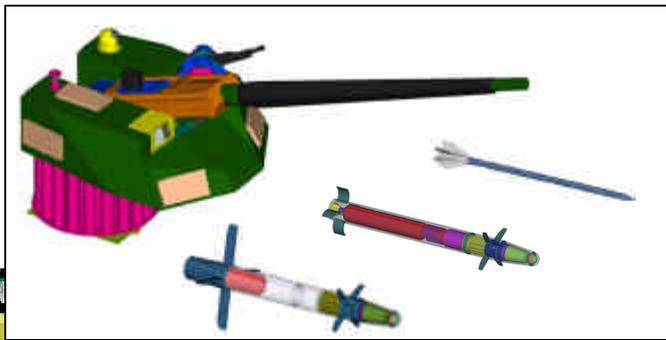


***FCS Multi-Role
Armament and Ammunition ATD
(MRAAS)
Guns & Ammunition Symposium***



Presented by:

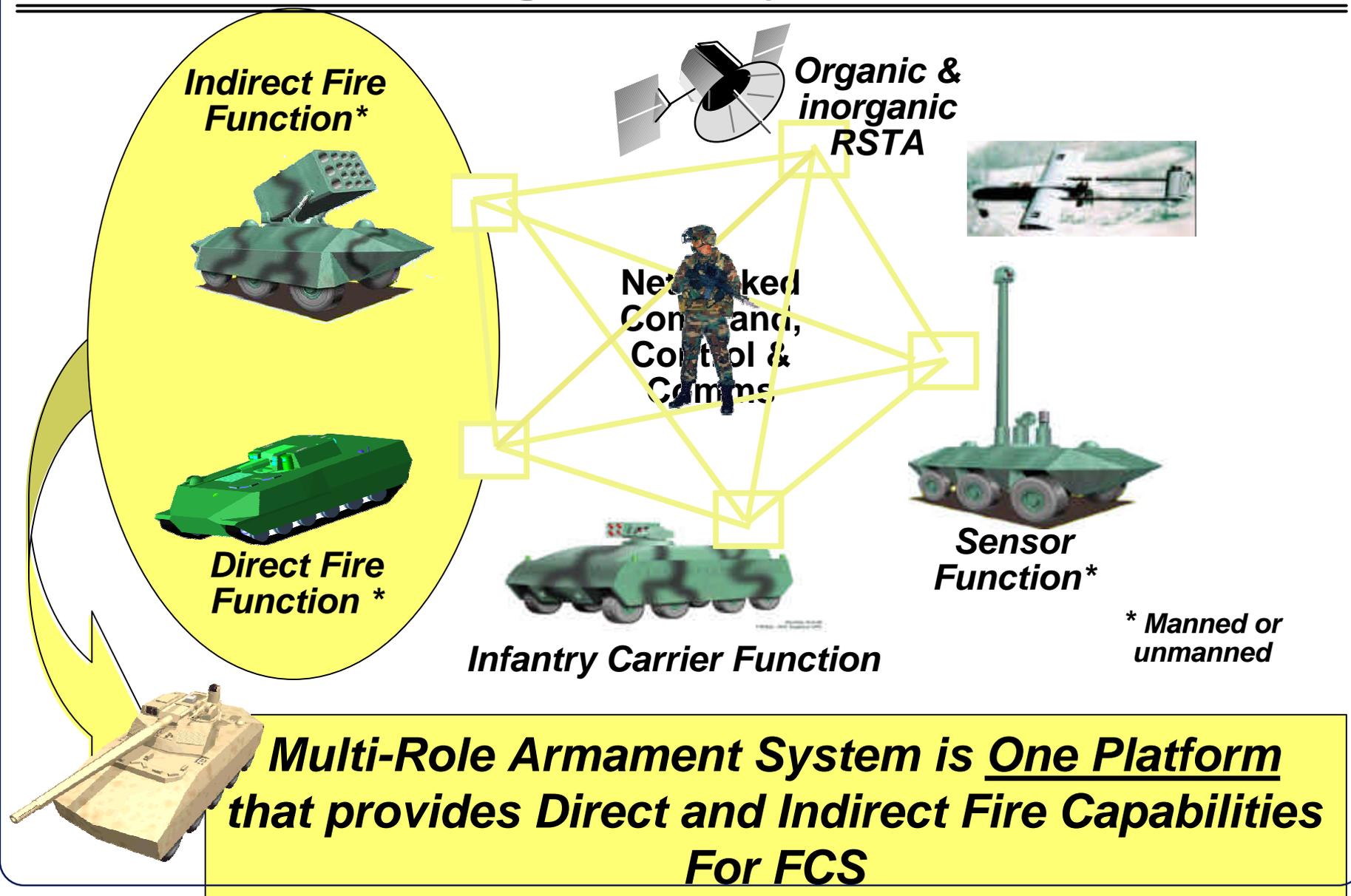
**Mr. Charlie Cording
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Multi-Role ATD Deputy
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Agenda

- Current Multi-Role Armament and Ammunition System (MRAAS) ATD
- Proposed MRAAS Restructure

Future Combat Systems Enabling the Objective Force

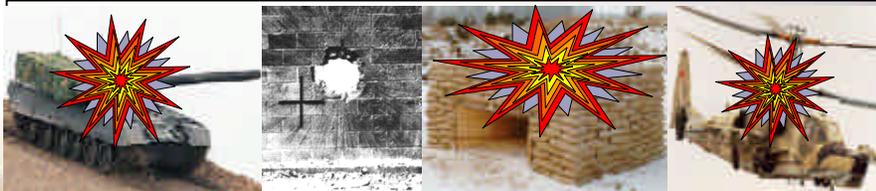
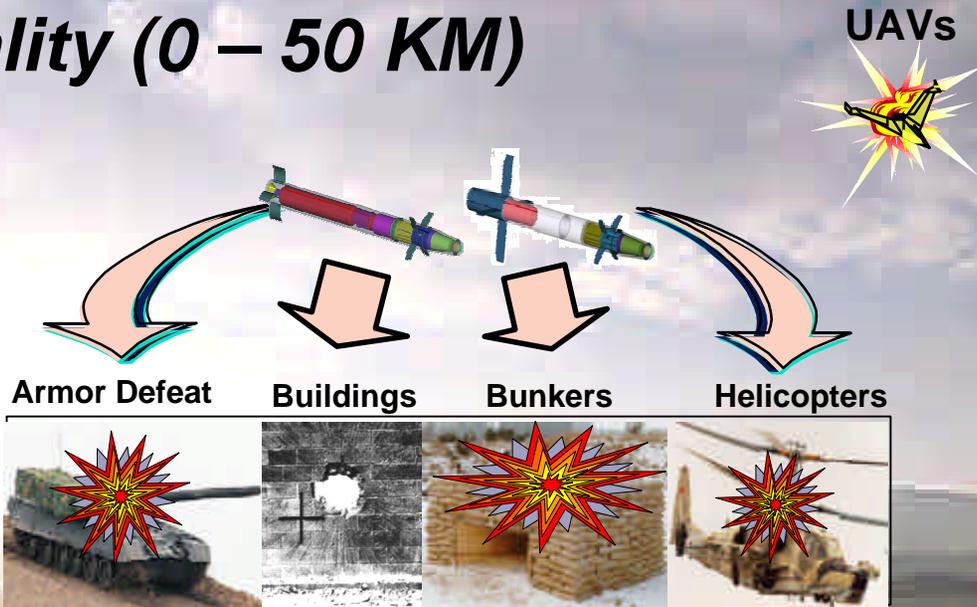


MRAAS Lethality

Full Spectrum Lethality (0 – 50 KM)

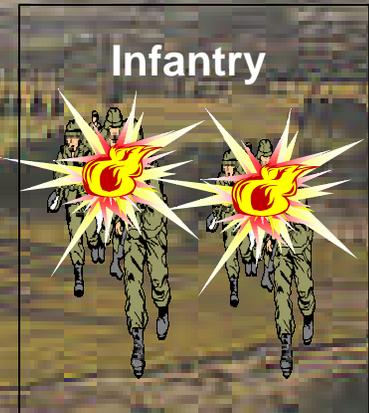
MRAAS Defeats

- Armored Vehicles
- Infantry
- Bunkers
- Buildings
- Helicopters
- UAVs
- Soft Targets



Soft Targets

Infantry



LOS - BLOS - NLOS

Multi-Mission Technologies

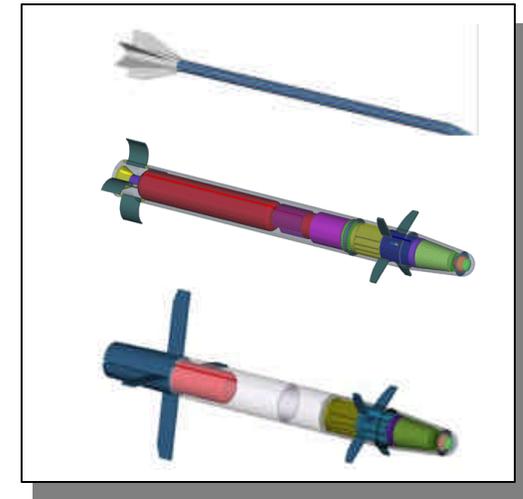
- Compact Lightweight Armament System

- Provides Three Missions in One Vehicle
 - **105mm Lightweight Cannon**
 - Swing Chamber Breech
 - **Compact Autoloader**
 - **Advanced Fire Control**
 - **Integrated Turret**



- Three Rounds of Ammunition Provide Full Lethality

- Advanced KE
 - **Novel Penetrator, Composite Sabot & ETC Propulsion**
- Smart Suite
 - **MP-ERM (Multi-Purpose Extended Range Munition)**
 - Multi-Purpose Warheads
 - Advanced Propulsion
 - **Smart Cargo**
 - Smart Skin, Metal Matrix Composites & Hi G Guidance & Control



Maximum Firepower at Minimum Weight



MultiR_Simul_480x360_I32_100

Why Restructure?

- **MRAAS Program**
 - Applies Advanced Technologies to Develop and Demonstrate a Lightweight, Multi-mission Armament System and Munition Suite for FCS
 - 105 mm LOS/BLOS/NLOS System
 - TRL 6 Demonstrations in FY06 & FY07
- **FCS Program Refinements:**
 - LSI Selected LOS/BLOS and NLOS Cannon as Separate Platforms
 - LSI & Multiple Trade Studies Recommend 120mm Caliber for LOS/BLOS Gun
 - FCS Development Becomes Increment 1 and Increment 2

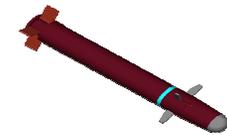
Restructure MRAAS to Align with FCS Program

Proposed MRAAS Restructure

- **MRAAS ATD Divides into Two Programs:**
 - 120mm LOS/BLOS ATD (Increment 1)
 - TRL 6 Demonstrations in FY04
 - Warfighter Payoff
 - Accurate Fires, 0-16 km
 - Increased Stowed Kills Per Weapon
 - Reduced Ammunition Logistic Tail
 - BLAAST STO (Increment 2)
 - BLOS LOS Armament and Ammunition System Technologies
 - TRL 6 Demonstrations in FY07
 - Warfighter Payoff
 - Accurate First Round Fires, 0-20KM
 - Multi-purpose Warhead Lethality Against Full Spectrum Threat
 - Simplified Armament System & Munition Logistics

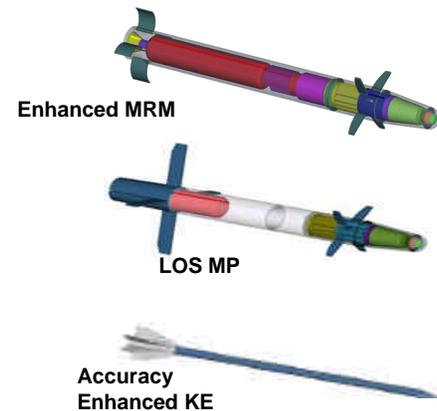
Technology Transition to LOS/BLOS ATD

- Armament
 - 120mm Gun with Conventional Breech
 - Lightweight Gun, Mount & Recoil System
 - Advanced Steel
 - Improved Muzzle Break
 - Advanced Fire Control
 - Firing from -10 to $+30$ degrees Elevation
 - Compact Ammunition Loading
- Ammunition
 - Mid Range Munition (MRM)
 - Autonomous Mode Seeker
 - Advanced KE
 - Temperature Insensitive Propulsion
 - Precision Ignition



Technology Transition to BLAAST STO

- Armament (Minimum Impact to Inc 1 design)
 - 120mm Gun
 - Advanced Lightweight Materials
 - Low Impulse Launcher
 - Firing to +50 degrees Elevation
 - Extended Range Fire Control
 - Automated Ammunition Resupply
- Ammunition
 - Advanced KE
 - Enhanced Accuracy
 - Munition Suite
 - Enhanced MRM (BLOS) & LOS MP
 - Multi-Effects Warhead
 - Dynamic Retargeting
 - ETC Ignition



Program Summary

- **Proposed Restructure will transition MRAAS to a 120mm LOS/BLOS ATD and BLAAST STO**
- **Restructure Better Aligns Technology Development with FCS Program.**
- **Provides Maneuver Commander Maximum Flexibility**

Restructure Supports FCS Program