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Lethality, Survivability, Mobility and Sustainment for America's Army

Team of Experts on Military Operations on Urban Terrain (MOUT) & Non-Lethal Weaponry (NLW)

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MOUT/NLW Team of Experts

- Background:
  - Council of National Armaments Directors (CNAD – US Rep. is Under Sec. Of Def., Acq) establishes the Defense Capability Initiatives
  - Non-lethal Weaponry (NLW) becomes an identified capability – the NATO nations are to "develop NLW suitable for use in Peace Support Operations (PSO)"
  - Responsible organizations are the Research and Technology Board as lead with NATO Army Armaments Group (NAAG) support
  - Land Group 3 (LG3) is lead for the NAAG with US as lead nation

MOUT/NLW Team of Experts

- Background (continued):
  - Approximately 2 years ago, US introduces MOUT as a regular LG.3 discussion topic
  - LG.3 directs the formation of a Team of Experts (ToE) to handle the Defense Capabilities Initiative effort for NLW, but notes that NLW is a subset of MOUT.
  - MOUT/NLW ToE is formed. US is lead nation and also provides the chairman.
  - First meeting is at NATO Hq. in November 2000
  - A "way forward" is developed and agreed

The Way Forward

- NLW
  - It is agreed that we would seek to develop a NATO NLW Capability Set (NLCS)
  - The NATO NLCS will be based on the existing US NLCS, as modified by the nations
  - US NLCS has 5 materiel categories:
    - **Individual Protective Equipment**
    - **Munitions**
    - **Individual Enhancement Devices**
    - **Mission Enhancement Devices**
    - **Training Devices**

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Individual Protective Equipment

In Modern Peacekeeping scenarios the soldier is required to maintain a highly visible and vulnerable position. The Non Lethal Capabilities Set is designed to provide the soldier with the means to avoid injury during civil confrontations.

Non-Ballistic Riot Face Shield
Non-Ballistic Riot Body Shield
Non-Ballistic Riot Shin Guards

Ballistic Face Shield
Ballistic Body Shield
Ballistic Shin Guards

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Munitions

The largest part of the kit is devoted to providing the unit commander with a variety of non-lethal and non-destructive means for deterring hostile personnel and incapacitating their material

Diversionary Hand Grenade

Rubber Ball Hand Grenade

12 GA Shotgun

12 GA Launching Cup

12 GA Point and Area Rounds

12 GA Diversionary Round

12 GA Launching Cup Cartridge

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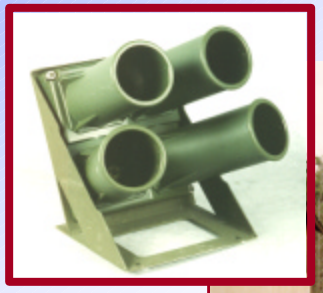
M5, Modular Crowd Control Munition (MCCM)



66mm Vehicle Launched NL Grenades (XM98 Distraction, XM99 Blunt Trauma, L96E1 CS)

40mm NL Crowd Dispersal Cartridge (CDC), XM1029

40mm Sponge Grenade M1006

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Individual Enhancement Devices

M7 Individual Voice Amplification System

Individual High Intensity Light

High Intensity Light Kit

High Intensity Light for Shotgun

Hickory Riot Baton

Disposable Restraints

Individual RCA Disperser

Batteries and Replacement Lamps

12 GA Utility Pouch

12 GA Buttcuff

Diversionary Grenade Pouch

40mm Pouch

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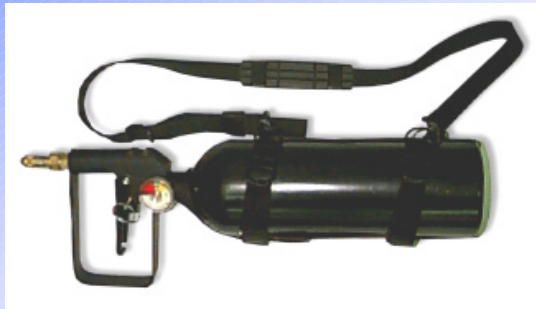
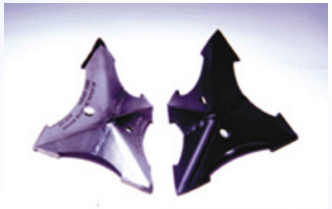
Mission Enhancement Devices



M37 Mid-sized RCA Disperser
Refill CR Riot Control Agent

Ground Mounted Bullhorn
Portable Bullhorn



Caltrop

High Intensity Searchlight

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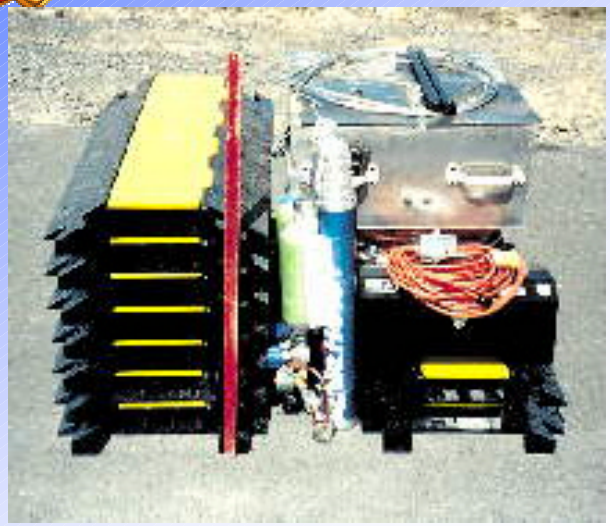

The M1, Portable Vehicle Arresting Barrier (PVAB) is designed to assist with short term physical security of critical facilities and for use for in vehicle check points. The device is designed to be set up by as few as 2 soldiers in under an hour. When emplaced it resembles a standard speed bump. It has the capability of stopping a light truck (up to 7500 lbs) at speeds up to 45 mph. It is best suited to mobile, short term vehicle check points in areas under US control where there is a threat of terrorist type activity where the threat uses the cover of noncombatants to infiltrate US areas of operation.

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Training Devices

The proper use and deployment of the Non-Lethal Capability Set runs counter to the normal doctrines and training that govern war. Familiarization with these new devices and techniques are essential.

12 GA Dummy Round

L97E1 – 66mm Training Round

Inert Individual RCA disperser

Riot Training Suit

Riot Training Bag

The Way Forward

- NLW Continued
  - The US has prepared a matrix for the nations to complete
  - Matrix establishes a **common reference point** for NLW
  - US, as lead nation, to convert completed matrix into the baseline NATO NLCS. There are many issues to be resolved:
    - Legality of materiel solutions by nation
    - Public acceptability of materiel solutions by nation
    - Differing national Rules of Engagement
    - Weapons platform differences
      - while small arms ammo is standard, rifles, shotguns and grenade launchers with associated ammunition, are not standard
  - STANAGs are to be developed for common NATO NLCS items

The Way Forward

- NLW Continued:
  - The established NATO regional test centers (RTCs) for North America and Europe are planned to be used to conduct the standardization testing of NLW.
  - Further, the RTCs are also being considered for use in effectiveness testing of NLW materiel solutions
  - The Defense Capabilities Initiative roadmap calls for fielding of the NATO Non-Lethal Capability Set by the 2005 timeframe

MOUT Goals

- To develop STANAGs for items within an agreed urban operations capability set
- To identify issues and challenges identified with joint multinational MOUT operations and to improve our understanding of them
- To promote information exchange
- To promote bi-lateral and multi-lateral cooperation
- To significantly reduce costs associated with developing, purchasing, training, maintaining, and mission execution as regards material solutions within our capability set
- To significantly improve survivability through various methods, including materiel solutions, and
- To improve urban operations capabilities associated with multi-national coalition operations

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MOUT Focus Areas

- Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (**C4ISR**)
- **Mobility** – the ability to move through the urban battlespace
- **Survivability** – all aspects of personnel and materiel protection
- **Lethality** – accurate lethal and non-lethal effects
- **Sustainability** – sustain the force throughout the urban battlespace
- **Situational Awareness** – know locations of self, friendlies, enemies, and non-combatants
- **Training** – the preparation of individuals, teams, and the entire force for success and survivability through constructive, live, and virtual means

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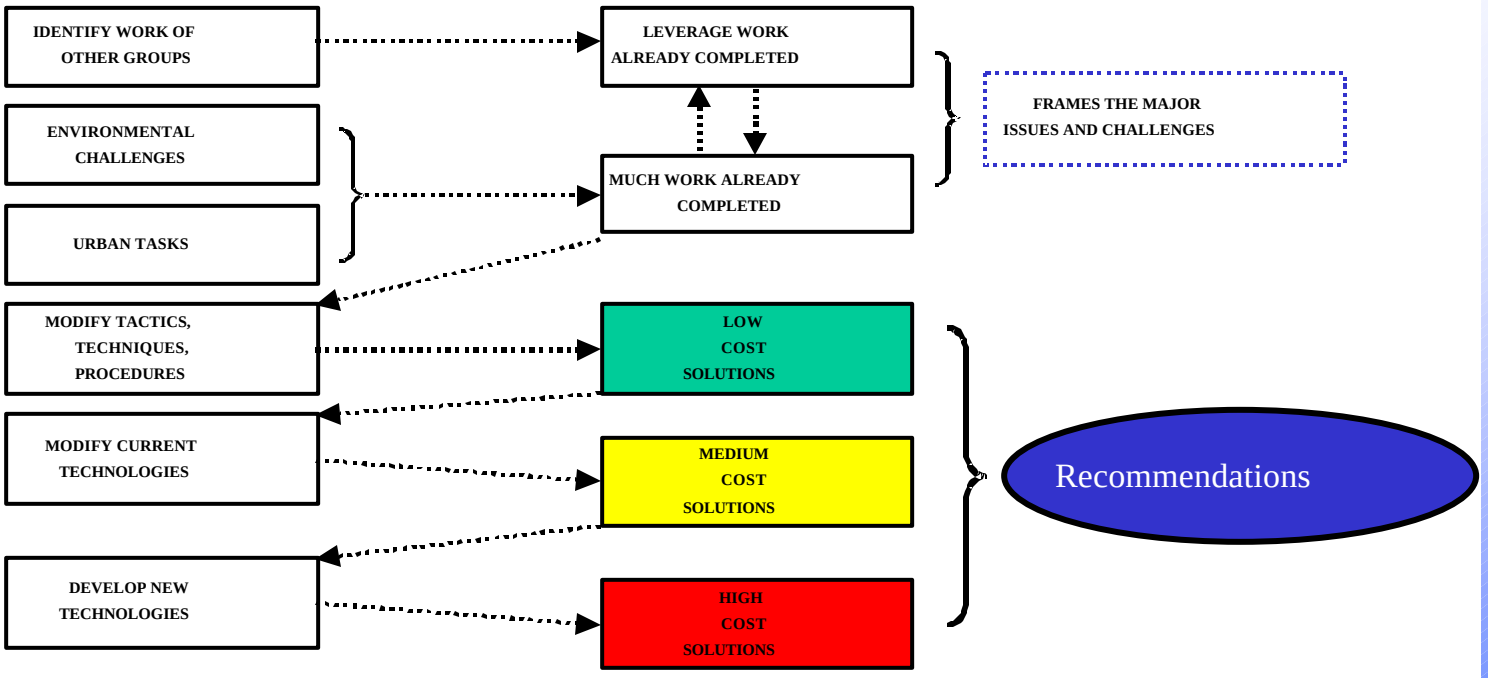
METHODOLOGY



Methodology Will Produce The Lowest Cost, Most Effective Solutions To Enable NATO Forces To Perform Full Spectrum Urban Operations With Significantly Reduced Risk To Our Forces and Limited Collateral Damage.

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MOUT Methodology

- Initially identify historical and current work
- Identify environmental challenges, individual and collective tasks
- Investigate modification of Tactics, Techniques and Procedures as potential solutions, the lowest cost solutions
- Investigate technological modifications as moderate cost solutions
- Investigate development/procurement of new technology as the final step as these are generally the highest cost solutions

The MOUT Way Forward

- To begin the MOUT initiative, the US has prepared a matrix with much data provided
- Selected core nations; Canada and either Germany or the UK add their data; this interim matrix is submitted to all nations
- All nations complete matrix under core nation guidance
- Completed matrix is used as the basis for executing the MOUT methodology (TTP changes, modification, development, or procurement of agreed materiel items)

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Conclusions

- MOUT incorporates NLW
- ToE mission is more complex than can be completed in 3 meetings
- Therefore, documentation to allow formation of a more permanent working group, a Plan of Work and Terms of Reference are being prepared for Land Group 3, NAAG approval
- A Non-lethal Weaponry NATO capability set is anticipated for 2005
- A MOUT capability set is also anticipated but no date for completion has yet been generated as the end state, including return of the mission to Land Group 3 control has not yet been agreed
- The next meeting is in Oberjettenburg, GE on 10, 11 Oct 2001.
  - **Many thanks to Germany for hosting this meeting**

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An Acknowledgment

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