

FUTURE REQUIREMENTS & DEVELOPMENT OF A NON-LETHAL WEAPONS INDUSTRIAL BASE

Presented To:
Non-Lethal Defense III

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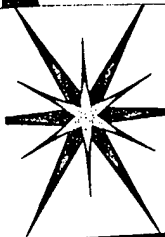
Johns Hopkins Applied Physics Laboratory
26 February 1998

“It’s a non-lethal
area neutralizer”
Michael Crichton
The Lost World

“ Our people were under orders
to use nonlethal force”
Tom Clancy
Debt of Honor

WHAT'S NEW?

- WORLD GEOPOLITICAL SITUATION
- MATURITY OF TECHNOLOGY
- OPERATIONAL EXPERIENCE
- DESERT STORM TECH DEMO



REASONS TO CARE ABOUT NON-US CASUALTIES

- * WE WANT A FRIENDLY POPULATION
(AFTER THE OPERATION)
- * IMPACT ON A COALITION
(REMEMBER THE BUNKER IN BAGHDAD)
- * LONG-TERM GOALS REGIONAL STABILITY
(VICTIMS HAVE LONG MEMORIES)
- * CONSCRIPTS HAVE LITTLE POLITICAL MOTIVATION
(THEY MAY BE IN MILITARY FOR ECONOMIC REASONS)
- * AMERICAN VALUES & SENSE OF FAIRNESS
(A FINE LINE BETWEEN WINNING BIG & A MASSACRE)

NON-LETHAL WEAPONS & The INDUSTRIAL BASE

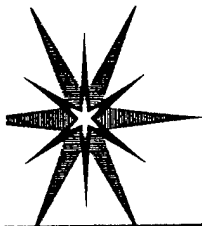
Where are We Now

- **Most Major Defense Contractors are not Engaged**
- **Requirements are Slow to Evolve**
- **The Money is Comparatively Small**
- **Legal Risks are being Accentuated**
- **Efficacy Debate Generates Concern about Market Stability**

NON-LETHAL WEAPONS & The INDUSTRIAL BASE

What Needs to be Done

- **Produce Hard Requirements Documentation**
- **Increase Funding to Attract Major Players**
- **Conduct Studies that Demonstrate Multilevel Needs**
- **Incorporate NLW in Standard Training Courses**
- **Reward Innovative Research & Development**
- **Purchase Beyond Established Requirements**
- **Resolve Legal Issues ASAP**
- **Increase Political Support**



Ethical Issues Associated with Non-Lethal Weapons

- Non-Lethal weapons as precursor to lethal weapons
- Possible permanent Injuries
- Unintentional fatalities
- Increased williness to use force
- Possible Treaty Violations
 - Chemical weapons
 - Biological weapons
 - Blinding weapons

Many believe there are
"Fates worse than death."

RECONSIDERATION OF ISSUES

- WHAT PROBLEM ARE YOU SOLVING?
- MOST ARE BASED ON EMOTION VS. FACTS
- BLAME TECHNOLOGY FOR HUMAN PROBLEMS
- CHEMICAL & BIOLOGICAL AGENTS HAVE PEACEFUL PURPOSES
- FUTURE ADVERSARIES ARE NOT SIGNATORIES TO TREATIES
- MORE OPTIONS ARE PREFERABLE TO LESS

THE PRIMARY QUESTION SHOULD BE:

COMPARED TO WHAT?

NATIONAL SECURITY ISSUES

- Redefinition of WINNING
- Complex, Often Limited Objectives
- Extremely Broad Spectrum of Threats & Circumstances
- Perception Management
- Coalition Engagements vs. Unilateral Action
- Materiel Integrity
- Personal Loyalties and Commitment
- NGO Hi-Tech R&D Threats
- Recruiting

C4I an Order of Magnitude More Complex



SUMMARY

THE NATURE OF CONFLICT IS CHANGING

- There are still Conventional Bad Actors

Future Threats are more Diverse and Complex

WE WILL NEED TO REDEFINE "WINNING"

**NON-LETHAL WEAPONS *WILL BE REQUIRED*
*AS PART OF THE SOLUTION IN USE OF FORCE***

**TACTICAL - OPERATIONAL - STRATEGIC
INTENT - CAPABILITY - WILL!!!**