Technology Assistance to Policing and Corrections: Less Lethal Weapons

Non-Lethal Defense V

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Overview

- Mandate, Mission, Tasks and Activity
- Learning the Environment
- Technology Examples
- Summary

Napoleon's Battle Plan

Show Up,

Then See What Happens

Starting Points

- Language Translation
  - Example: “Intelligence”
- Blurring of Crime and War
  - USS Cole
  - World Trade Center
- Operational Levels
  - Tactical, Operational, Strategic

Technical Assistance Division

National Law Enforcement and Corrections Technology Center System

- Regional Centers
- Specialty Centers
- Focus Areas of Study
  - School Safety (2002)
    - Study on the Use of LLW's in schools
  - Complex Incident Management (2002)

The Objective

- To Address these Capability Shortfalls:
  - Provide a Means for State and Local Criminal Justice Agencies to Access Information on Useful, Existing or Emerging Technology
  - Act as an Unbiased Source of Technology Evaluation for those Agencies
  - Identify Prioritized Requirements

Mission Tasks

- Support Development of Useful Technology for Public Safety
- Establish and Maintain an Information Source for that Technology
- Provide Criminal Justice Agencies with Technical Assistance at no Cost
- Scout Useful Candidate Technology

Activity

- Identification of Requirements
  - Advisory Councils
- Research, Investigation to Identify Threats, Emerging Threats and Concepts of Operation
- Identify/Evaluate Promising Technology
- Information, Education, Training

“Press Foot Firmly
on the Throat of Mediocrity”

--From a Mercedes-Benz Ad

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Useful Technology Exploration

- Understand the Operation
- Identify Useful Technology
- Explore Good Candidate Technology
- Integrate Appropriate Technology
- Implementation
  - The Chasm between Planning and Execution

Recent Personal Experience

- **“NEEDLE” Rounds**
- **Milstor 12 ga. Less Lethal Round**
- **Ring Airfoil Projectile**
- Ground Penetrating Radar
- Virtual Floor Plan
- BioTechnology Demonstrations
- Anthrax in the Park

Case Study: Ring Airfoil Projectile

- History: Developed in Response to Kent State Event
- Origin: Adaptation/Modification from a Grenade
- Development: 1970-1975/ Type Classified (mil term)
- Suspended Animation till 1996
- Rediscovered, Evaluated, Technology Transfer from Army to National Institute of Justice
- Retooled to Stated Operational Requirements

Lessons Learned

- Integration of a Foreign Technology to an Operational Event Requires a Plan, a Follow-through, Adaptability and a Good Sense of Humor
- The Utility of a New Technology May be Different, and Perhaps Very Different, From What You Thought It Would Be

The Concept of Development

- Henry Petroski's Engineering Theory:
- Function Follows Failure
  - New Technology is invented because the existing technology fails to do what we want it to do.
  - Example: Invention of the Fork
- Failure Accelerates Development

Concept-Based Requirements

- The Adaptation of Technology to Advanced Operational Concepts in Order to Improve, in Some Way, Those Required Operations
- The Rigorous Assessment of Technology and the Direct Influence of Operational Requirements on the Development of that Technology

Watson-Watt's Law of the Third Best

- *Best* Never Comes
- *Second* Best Takes Too Long
- Identify the *Third Best*-
  - The design that can be validated in time to meet an identified need and get on with it…….