

Current Research Activities on Non-Lethal Weapons at the Fraunhofer ICT

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Introduction

After the “Cold War” had come to an end, conventional military combats were mainly replaced by many small, local, more or less military conflicts, which could no longer be dealt with satisfactorily “in the usual manner”.

Conventional use of force solutions are struggling to manage the ever-changing challenges in military, law enforcement and peace support operations. Hence there is the strong need for the adaptation and development of new use of force options.

A potential solution to meet these new threats and challenges is through the use of Non-Lethal Weapons(NLWs).

However, what are Non-Lethal Weapons?

First of all, the issue related to Non-Lethal Weapons is a rather difficult and complex one, and therefore there exist several different opinions and definitions.

Here is a proposal to give an answer to this question.

Definition:

Non-Lethal Weapons are life-conserving weapons, and are explicitly designed, developed and deployed to drive away, repel, or incapacitate people with intended temporary and reversible effects, or to disable equipment with minimal collateral damage and impact on the environment.

This means Non-Lethal Weapons are not intended to kill or destroy on purpose. Furthermore, their use has to be well trained, and their deployment is to be based upon special Rules of Engagements, etc.

As mentioned before Non-Lethal Weapons refer to a complex topic, and for this reason it should not be reduced to a pure technique.

In fact this topic should be dealt with a framework, which is based upon a holistic approach, including aspects such as the law, medicine, policy, ethics, culture, psychology, environment etc.

Referring to the more or less new challenges there is a broad spectrum of conflicts, from “non-combat operations other than war” like diplomacy, counterdrug operations, humanitarian assistance to “combat operations other than war” like peace-keeping, peace-enforcement, counter-terrorism to “war” like limited war, global war. There are many further tasks; this only is an extract from the large number of missions.

Specific scenarios are characterized by threats like

- Hostage release
- Human shielding operations
- Material shielding operations (material means: equipment at risk like large fuel storage tanks, etc)

where more non-lethal options are needed.