# **Targeting the Human with Directed Energy Weapons**

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New arms threaten and destroy lives in strange ways. Directed energy weapons are among the high-tech arms of the century. They hurt and kill with electromagnetic power. Microwave weapons can be aimed at computers, electronical devices and persons. They have strong physical and psychological effects and can be used for military and terrorist activities. These weapons are also part of crimes (in Europe) that almost nobody knows except the victims and the offenders. Until now they make the perfect crime possible. No doubt, these weapons have a terrible future.

# **Key Points**

- Directed Energy Weapons (DEW)
- DEW and Crime
- Perfect Crime?
- DEW and Terrorism

## Topic 1

- Manipulated Microwave Oven
- Magnetrons and Generators
- Intelligent Antenna Systems

## Topic 2

- Anti-Electronics Weapon
- Anti-Personnel Weapon
- Psychological Effects

## Topic 3

- DEW and Crime
- License to Kill
- Perfect Crime
- Mental Strength & Fighting Back

## Topic 4

- DEW as Terrorist Weapon
- Unseen Terror Attack
- Prevention and Protection

## **Summary**

- New Threats and Dangers
- Crime and Terrorism
- Recognizing and Knowing
- Prevention and Elimination
- Future Weapon! -Terrible Future?

#### **MICROWAVE WEAPONS**

## **New Technology in Crime**

#### **Activities and Sources**

There is a new, effective weapon for criminals and terrorists. Law-breakers often misuse modern technology. Through the illegal usage of innovative high-tech weapons, people are not "shot", rather their living quarters are bathed in (high frequency) electromagnetic waves for a length of time. Directed Energy Weapons (DEW) are mostly intended for military purposes (U.S. Air Force, Russian and Chinese armies). High-tech company Raytheon states about DEW: "We believe they are a critical element of how ultimately wars will be fought. HPM (High power microwaves) is the most mature right now" (in Fulghum & Wall 2002).

The renowned German newspaper "DIE WELT" acknowledges microwave weapons as arms of the 21st century. In another German newspaper, Süddeutsche Zeitung, a weapons expert has

recommended the police to procure microwave (MW) weapons for police use. Considering what certain criminals know about MW weapons, they have a significant advantage over the police until now. This puts the victims in extreme danger.

A primitive variation of a MW weapon would look like this: A microwave oven from the kitchen with the protective shielding removed from the door and replaced by a metal funnel. And then the waves can get through walls (Pictures 1, 2, 3).

The effects of the MW beam on the victims include extreme weariness, headache, irregular heartbeat, diarrhea, painful testis, damaged nervous system and internal organs, burned skin and eye damage. Later effects include blindness, heart attack, stroke and cancer. In the last months by some victims, cancerous tumors have been diagnosed.

In addition to that, victims (through intrigue and defamation) are seen as psychotic and dangerous; thus, they are completely helpless. At the same time, the new weapons (for certain contractors) are tested under ordinary circumstances and constantly improved.

HPM crimes are a new kind of crime with some very new characteristics. The International Union of Radio Science emphasizes in a resolution of 1999 on Criminal Activities using Electromagnetic Tools: "The fact that criminal activities using electromagnetic tools can be undertaken covertly and anonymously and that physical boundaries such as fences and walls can be penetraded by electromagnetic fields."

Expert Pevler stresses: "The development of high-power microwave (HPM) weaponry, and its proliferation into subversive organizations, offers the means to commit the 'perfect crime'. HPM attacks typically leave no residual evidence and their effects can range from nuisance to catastrophic" (1997).

The HPM-weapons that the high-tech gang uses supply continous or pulsed waves over long periods of time - especially in the night - from cars or vans or buildings around the target/person(s). They use magnetrons, microwave-generators, amplifiers, integrated systems. In addition they apply through wall imaging methods. There are already over 40 known victims in Germany, some of them even have been attacked while in hospital. But the police doesn't understand these new weapons.

Besides this the criminals use tactics of information warfare: Know all about the victims, let them know nothing about you, information dominance, disrupt the communication systems of the victims.

The criminal network has at its deposal plentiful first class technical know-how and high quality equipment. That assures high efficiency and precision strikes and enables to operate from cars or vans. The MW generators/transmitters can be camouflaged in an attaché case or hidden in a small suitcase.

Only through cooperative work between electronic specialists and physicists have we been able to shine a revealing light on this special high-tech criminal activity. For experts: The (pulsed) waves of two or more transmitters [MW generators] interfere in the target zone, and through that, strengthen their effects. There are also parabolic antennas modified to transmitters. Besides this, intelligent (adaptive) antenna systems (numerous small transmitters connected, instead of few large ones; for example hidden in parked cars) will be used. Sometimes frequency hopping is employed. These methods work over several hundred feet, if everything is well adjusted.

We could find out where (electronic) components for highly potent MW weapons or whole systems (pictures 4, 5, 6) can be bought legally.

The criminals follow a double strategy: One way the victims are weakened, injured, tortured and intimidated. On the other side, the victims experience extreme, unbelievable things; almost no one can believe their reports. Most interpret the information from the victims as chimerical thinking. Some experts who work for the German Army or Nato know very well about MW weapons, but secrecy keeps them from talking too much about in public.

In several German cities there are complaints of serious physical injury. One attorney represents the interests of many victims. About 40 victims have built a community of interests. We are aware of many cases with amazing similarities that have been reported in the last few months. We have names and addresses of many victims and the cirumstances of the cases. We also have the names and addresses of some perpetrators.

In some cases, the lifestyles of the criminals are well known to us. Similar to terrorists, many pretend good citizenship or student lifestyles to cover their crimes. Conventional criminal activities, (i.e. burglary) are undertaken by normal gangsters or former members of the Stasi (which was the secret service of former GDR). In this network, they have division of labor and a support structure that includes foreigners as well.

Terrorists could use MW as anti-electronics weapons too. With HP microwaves, they can attack the electronics of computers, cars, airplanes and so on successfully [see the other papers of the Workshop W8]. They can use microwave weapons (radio frequency weapons) to damage electronic systems in an unseen attack with all those bad consequencies.

Additional points to be covered in the workshop: Detection of microwaves and protection against attacks.

All that has nothing to do with MW beam fright, but is criminal high-tech forced on the people. It is frightening that these weapons are being increasingly used by criminals and terrorists.

#### References/Sources:

Fulghum, D. A. (1999): Microwave Weapons Await a Future War. Aviation Week, 6/7/1999, p. 30.

Fulghum, D. A. (2002): Directed Energy Weapons To Arm Unmanned Craft. Aviation Week, 2/25/2002.

Fulghum, D. A. & Wall. R. (2002): Farnborough 2002: Raytheon Links Future To Network Prowess. Aviation Week, 7/19/2002.

Hecht, J. (2001): The Heat is on (Microwave beam weapon tested). NewScientist, 10/27/2001, p. 26.

International Union of Radio Science (1999): Resolution on Criminal Activities using Electromagnetic Tools. General Assembly, Toronto 1999. http://www.intec.rug.ac.be/ursi/Tor99ResolENG.htm.

Laukenmann, J. (2001): "Hände hoch – oder es klebt!" Süddeutsche Zeitung, 9/25/2001.

Lövstrand, K. G. & Bäckström M. (2001): Intense Radio Frequency (RF) as a Tool for Graded Action. In: Non-Lethal Weapons. Hrsg.: Fraunhofer Institut Chemische Technologie.

Magdeburger Volksstimme (1999): Missbrauch elektromagnetischer Wellen durch Terroristen möglich. 10/8/1999.

Munzert, R. (2001/2002): Neue Technologie im Verbrechen – Mikrowellen-Waffen. Informationstexte an das Bayerische Landeskriminalamt, Bundeskriminalamt und andere Sicherheitsorgane. April 2001-march 2002, not published.

Nitsch, J. (1998): Gefahren erkennen. Wirkung von Hochleistungsmikrowellen. In: Elektromagnetische Verträglichkeit (EMV - ESD), Jahrgang 9, Ausgabe 3/98, p. 23- 26.

Nöldechen, A. & Dorra, B. (2001): "Europäer diskutieren über Mikrowellen und Laserstrahlen als moderne Waffensysteme". Serie: Waffen des 21. Jahrhunderts, 3. Teil. DIE WELT, 9/25/2001, p. 31.

Pevler, A.E. (1997), Security Implications of High-Power Microwave Technology, www.infowar.com/civil\_DE/civil\_090597a.html-ssi

Schimmelpfennig, U. (1999): Strahlenkanonen für jedermann – Kein Schutz gegen Erpressung und Terror? Tv-Beitrag in Kontraste SFB/ARD, 11/18/1999.

Schwartau, W. (1996), Information Warfare, Second Edition, Thunder's Mouth Press.

Scott, W. B. (1999): ,Beam' Weapons Edging Into Arsenal. Aviation Week, 7/5/1999, p. 53.

United States Air Force (1998): High Power Microwaves. Factsheet. http://www.de.afrl.af.mil/factsheets/HPMicro.html

United States Air Force (2001): High Power Microwave Division. Factsheets. http://www.de.afrl.af.mil/factsheets/HPM.html

Wall, R. (2000): Directed-Energy Threat Inches Forward. Aviation Week, 10/30/2000, S. 70.

Wilbers, A.T.M. et al. (2001): Susceptibility of COTS PC to microwave illumination. In: Non-Lethal Weapons. Hrsg.: Fraunhofer Institut Chemische Technologie.

Winkenbach, J. (2002): Mikrowelle als Nahkampfwaffe. Welt am Sonntag, Nr.1.1/6/2002, S. 12.

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http://mikrowellenterror.de/english/mw-weapon.htm

## THE MISUSE OF MICROWAVE WEAPONS BY CRIMINALS AND TERRORISTS

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High Power Microwave (HPM) systems are among the most mature non-lethal weapons. They can be used effectively against electronic devices (anti-electronics) and/or persons (anti-personnel weapon). Microwave weapons (Directed energy weapons/Radio frequency weapons) damage or destroy computers, disable the electronics of cars, ignite airbags, and take down airplanes. They have strong effects and can be used for military and police as well as terrorist and criminal activities.

Microwave devices are easily to obtain and can be built by terrorists or criminals with basic knowledge in electronics. To quote Jim Lewis, director of technology at the Center for Strategic and International Studies in Washington DC.: "It is unfortunately true that people anywhere around the globe get access to technology almost as advanced as the Department of Defense [has it]."

Not only the good guys can apply non-lethal weapons: "...there is mounting evidence that homebrew HPM weapons are being used to attack people...The latest research and finding on this horrific trend in Europe is quite frightening" (News from Infowar, Volume I Number 6, August 28, 2002).

Through the illegal usage of innovative high-tech weapons, people are not "shot", rather their living quarters are bathed in (high frequency) electromagnetic waves. A hightech-gang in Germany is using and testing HPM-weapons that supply continous or pulsed waves over long periods of time. They have magnetrons, microwave-generators, amplifiers and integrated systems. The (pulsed) waves of two or more transmitters interfere in the target zone and strengthen their effects. There are also parabolic antennas modified to transmitters. Besides this, intelligent (adaptive) antenna systems (numerous small transmitters connected, instead of few large ones; for example hidden in parked cars/vans or buildings around the target/person(s) are used. In addition they apply through wall imaging methods. - The effects of the HPM-beam on the victims include headache, irregular heartbeat, painful testis, burned skin, eye damage and cancer.

It would be an error to think that non-lethal weapons are not available for law-breakers. "Unless we are aware of the possibilities, and acknowledge them, there is no way we can begin to defend ourselves" (News from Infowar) - It is better to inform and to tackle than to wait and ignore.

http://mikrowellenterror.de/english/index.htm