Chapter 5
Attack Scenarios Perpetrated by Terrorist Organizations Through the Use of IT and ICT:
On the Basis of What Is Already Available Today

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ABSTRACT

The ICT technology is even more central in modern society. Every relevant sectors of Western economies depend on ICT technology, from Energy Infrastructure to banking and finance, from TLC infrastructure to government administration. Throughout history, terrorist organizations have demonstrated capacity to adapt and evolve in order to further their ideological and political goals. Cyber Terrorism is increasingly becoming a top five national security priority for Nation States. The purpose of this chapter is to evaluate the threat Cyber Terrorism poses to the stability of the international community. It will explore the concept of Cyber Terrorism, its interpretations and terminology. This chapter seeks to identify potential attacks made possible through IT and ICT technologies (like SCADA and Industrial Automation, while it includes those ICT standards used in the field of Transport, Automotive, and Social Networks as well) and to classify all the possible actors, needed skills and relevant goals, thanks to the currently available public documentation and relevant case studies.

INTRODUCTION

Preventing and responding to possible terrorist threats in this last Century has certainly become a priority for many countries of the world. The terrorism, in fact, represents one of the most insidious and difficult risks both for implementing prevention policies and everything related to the actions to contrast this dangerous phenomenon. In this chapter we will therefore try to analyze the main features of the most insidious evolution of terrorism, the cyber-terrorism, which has become the most strategic threat that the contemporary world is facing.

But what is meant exactly for terrorism? Terrorism is a very powerful instrument that has been used both by small groups and States over the centuries.

The origin of the term "terrorism"[1] has to be found in the period of the French Revolution, and more specifically in the supplement to the dictionary of Accadémie Français, where it indicated the historical period of terror established in France by the end of 1793. Terrorism, in modern times, occurred in the late nineteenth Century and early twentieth Century, especially in the Balkans, Ireland and India, and appeared in the Middle East during the World War II, in the '60s in South America and Japan, in the '70s in Western Europe with particularly violent phenomena in Italy, Germany and Great Britain, until to the Islamic terrorism which started back in the '90s; that takes, over time, a global dimension, especially through the use of the Internet as a propaganda, but not only, instrument.

The UN General Assembly Resolution 49/60 (adopted on December 9, 1994), titled "Measures to Eliminate International Terrorism", contains a provision describing terrorism:

Criminal acts intended or calculated to provoke a state of terror in the general public, a group of persons or particular persons for political purposes are in any circumstance unjustifiable,

whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or any other nature that may be invoked to justify them. (United Nations General Assembly, 2004).

The UN Member States still have no agreed-upon definition of terrorism, there are countless, and this fact has been a major obstacle to meaningful international countermeasures.

If we take as indicative definitions those given by Raymond Aron "Terrorism is any action that produces a psychological impact much greater and long-lasting than the serious material consequences" and by RAND, the well-known US think-tank, which differs terrorism and political violence and other political and social crimes through this definition "terrorism is violence or the threat of violence, calculated to create an atmosphere of fear and alarm," we can get a picture of what we now mean by terrorism.

The psychological aspect of this phenomenon and the fact that the target is rarely only military, are certainly aspects that differentiate terrorism from similar actions like guerrillas, organized crime and riot.

Terrorism is an asymmetric threat, because physically the "front" is not symmetrical and there isn't a symmetry between strategic and tactical plans of terroristic actions, and its objective is essentially political.

The new phenomenon of international terrorism is born when the terror has become globalized and moved his actions beyond national borders, making any State vulnerable. In this sense, today the terrorist groups demonstrate to be perhaps more globalized than the nation-states, because they conceive and implement their plans of attack without apply the conceptual categories of the national State, within which take place security and intelligence policies (Sbailò, 2005).

Today we are assisting to a big change in the typology of threat. The enemy is every day more and more hybrid, partly criminal and partly political. The context in which this new enemy moves,

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