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REMOTE SENSING IN THE WAR AGAINST TERRORISM

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Abstract

In the era of international terrorism with its roots deeply imbedded in many countries the structures of normalcy and safety have been challenged. In highly mobile societies with the constant movement of peoples and resources it has become necessary to protect against the sudden and hidden forays of terrorists engaged in widespread harms.

Imagine, for a minute, the convergence of hundreds of thousands of vacationers, or sports enthusiasts, or religionists upon a city in pursuing their special interests. Consider the huge expenses involved in facilitating such voyages and protecting the well-being of the travelers. To facilitate these goals the providers of countless goods, services, housing, transportation, and other needed facilities require protection. Protective costs can reach hundreds of thousands of dollars. Terrorists' destruction would cost even more.

One way to assure and protect all valid goals is to use remote sensing for peaceful

purposes. The sensing process can be the product of commercial firms and of governmental entities.. By surveillance and the rendering of all advice and warnings, if necessary, a high degree of normalcy and stability can be assured.

In the United States such peaceful protection is offered by private enterprise and by governmental agencies. Since remote sensing is a hybrid activity those institutions which have supported military activities can facilitate the successes of large private assemblages. In the United States one governmental agency, which has been increasingly engaged in the protection of individuals is the National Geospatial-Intelligence Agency (NGA). This paper will provide examples of recent beneficial achievements.

1. Introduction

Terrorists have demonstrated their ability and their willingness to attack large scale assemblages of human beings. The September 11, 2001 incident affecting thousands of workers in and around the Twin Tower buildings in New York City reflects this predetermined outlook. The fact of the innocence of the workers has evoked no moral compunction on the part of the terrorists. A response has been the many

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faceted “war against terrorism.” This war, which has been carried out through the efforts of many cooperating countries, has been waged on two fronts. One has been to reach out and destroy terrorists. The second has been through passive means. This is where remote sensing has been used effectively. The techniques employed in remote sensing have instilled caution into the plans of terrorists and have reduced their evil efforts.

2. Evolution of Remote Sensing Usages

Remote sensing has produced many benefits from the observation of relatively static conditions. It has been identified with terrain, soils, crops, natural resources, water courses, oceans, forested areas, deserts, human settlements, nuclear power plants, highways, bridges, railroad operations, airports, and similar facilities. Remote sensing, with its hybrid capabilities, has also been used effectively in planning for and engaging in military operations. In both the Afghanistan war and the Iraq war several American and foreign entities, both public and private, have provided important services. The successes of these operations can be attributed in no small measure to the coordination of and use of intelligence gathering activities.

In the United States the National Geospatial-Intelligence Agency (NGA), previously named the National Imagery and Mapping Agency, initially was assigned the task of collecting data relating to foreign targets and particularly those possessing a military orientation. However, with the involvement of the internationally orchestrated and extremely serious threats presented by committed terrorists, the role of the NGA has taken on a new function. It is to protect the well-being of mass movements of human beings intent on

pursuing special interests. These areas are the kind identified in the Abstract.

3. The Example of the 2005 Super-Bowl

While some observers may regard the compelling passions of football fans as quite irrelevant to the larger order of things, even when taking into account the enormity of the economic interests that are involved, particularly where there are massive movements of spectators from one part of the United States to distant areas, this compulsion would be countered strongly by actual and potential spectators and by scores of human beings who engage periodically in mass movements inspired by, for example, a mania for sporting events or because of religious beliefs.

In order to protect the integrity of the 2005 Super Bowl event the NGA was able to establish a task force composed of law enforcement officials and intelligence gathering institutions to create aerial images, to produce computerized graphs, to obtain access to aeronautical charts, to transform raw data into analyzed information, and in general to contribute to the security of the operation. Relatively minor concerns, such as overturned trucks, broken water mains, and the inadvertent ingress by a small plane into a prohibited area were immediately identified through the sensing process and quickly remedied or corrected.

4. The Danger of Excessive Regulation

The perceived danger of terroristic activities may result in excessive restrictions on the availability of sensitive information. When the NGA suggested in November, 2004, that it might place limits on the availability of aerial flight information and to NGA-generated maps there were claims of unnecessary secrecy. Long enjoyed

individual benefits and freedoms, may, on occasion be obliged to temper their claims so as to benefit community interests.

5. Conclusion

Unquestionably the “war on terrorism” is a very serious and a very necessary undertaking if the free world is to be allowed to engage in its normal preoccupations. In waging this war a very fine line will have to be maintained between traditional freedoms and governmental controls.