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Restraining Terrorism: An Infrastructure Preventing Terrorist Activities in Pakistan

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Abstract:
Pakistan a country that is at the forefront of combating Terrorism have lost 50,000 people since the events of 9/11, this war which is against an ideology can only be won through patience and state of the art technology, Pakistan as a country lacks proper infrastructure that is essential to limit and eventually eradicate these Terrorist activities, It is therefore essential to nip this plague of Terrorism in the bud before it spreads to all corners of the world. The aim of my work is to propose a infrastructure that can prevent and reduce the impact of Terrorist attacks by providing prompt medical services to the society, Jail Security , a Network of UWB based detectors to detect explosives, Integration of institutions with Exit Control to prevent culprits from escaping the country, and a anti terrorism wing under one umbrella, a nerve center that will control the flow of information and will make sure that in case of disaster those behind the activities not only be apprehended but also their terrorist network be identified so no such attacks can happen again, besides reducing the Affects of such activities other responsibility of this infrastructure would be to catch the culprits without any cultural implications before they could carry out attacks against the state and its people. Through such an infrastructure we will see a substantial drop in Terrorist activities and it would also be useful in identifying terrorist cells. Once successful it can be implemented in all those areas of the world that are affected with same problem.

Keywords: Terrorism, sociological impact of terrorism, preventive infrastructure, communications networks to identify terrorism, tackling terrorism, communications infrastructure

1. Introduction

This paper aims to prevent criminal activities. Main focus of this work is to suggest the ways to reduce the chances of a terrorist attack, and if such an event occurs then how to minimize its affects as much as possible. To be able to carry out this mammoth task of reducing terrorist activities I will suggest an infrastructure that could integrate different essential resources of the society to curb such activities. In the abstract I have mentioned a term "Cultural Implications" which means impact of culture when it comes to law and order and to apprehending certain culprits, though it's a universal rule that culture, religion or politics should have no impact on the Law or decision making but all these rules tends to fail when we talk about Pakistani Society where references, Cultural background and religious affiliations decide the outcomes of even every day decisions. Pakistani society has this issue of bending the law for influential and powerful communities and these tendencies are the biggest hurdle in implementation of Law & Order. The infrastructure that I will propose here will play a pivotal role in reduction of extremist activities; in the paper I have also proposed ways to create a resilient social and security infrastructure that could withstand such attacks with minimal casualties. In the coming Sections we will focus on Preparedness for such a disaster and how to limit crime and loss of life.

In this Paper I have Suggested a Social and Security Communications infrastructure that could prevent attacks from happening and in case of attacks should have the resilience to cope with the disastrous situation efficiently, for this a centralized monitoring cell need to be established that will integrate all the services required to prevent or in case of Disaster mitigate its effects, we will have to improve the present prison system in Pakistan where culprits though behind bars but still manage to plan from their cells few such examples Include that of Dera Ismail Khan where a banned organization attacked a Prison freeing several most wanted criminals (July 30, 2013, 250 prisoners escaped) , a infrastructure like that will blend the private services (Ambulances) with the public resources (Government Hospitals) in order to reduce the casualties as much as possible in advent of an attack. For the preventive means UWB based screening networks will be deployed at main entry and exit points of the city to detect for explosives in trucks and other vehicles UWB networks will be assisted by EMP generator that has the ability to disable any circuitry from grinder to Airplane, such mechanism can also be deployed at large gatherings whether religious or political to safe guard people. This Infrastructure will be connected with Civil Aviation and Bomb Squadrons to hamper the movement of terrorists, since Pakistan is the only country going through these trials and tribulations no other country has devised such a Infrastructure because it is not their need but in our case the primary issue is that of terrorism and casualties as a result of it. Paper[1] studied the impact of terrorism the study was on blasts and its effects the author took the example of Riyadh incident but no model was proposed to combat terrorist activities, further on [2] laid emphasis on close

collaboration between private and public sectors to prepare , mitigate and counter disasters in general since this collaboration is nonexistent in Pakistan I will propose a model so public hospitals can be integrated with private Ambulance services like Edhi, JDC, and Chippa this is necessary to reduce the impact of terrorism to greater extend, similarly [3] use of social media as means of Awareness should be incorporated by the Government as our youth spends more time on these social websites than Television, Family and Religious center (source of Information and Awareness), According to the criterion placed by [4] I classify Pakistan as the nation that is a target of both transnational and domestic terrorism and protection of people should be the number one priority. Countries that have political instability have higher chances for terrorist activities [16] that is exactly what Pakistan is going through since 1988 there is political turmoil no government was able to complete its term till 1999 after which came dictatorship and then again from 2008 onwards the political instability have crippled Pakistan, sit in protest and perpetual Rallies are an indicator that people are not happy with their rulers.

2. Related Work

[1] This paper focuses on the challenges that a hospital faces as a result of terrorist attack, in this paper the author Abdullah Al-Shimemeri discussed the Riyadh incident and the difficulties faced by hospitals in catering them, he further emphasized that such an attack is a challenge for all developed nations, because the overwhelming casualties creates chaos in which first few hours are essential and could make a difference between life and death.

[2] The focus of this paper was on close collaboration between private and public sectors to prepare for any such disasters or events; it includes information sharing in the field of Medicine, Intelligence and securing infrastructure. Such collaboration not only reduces duplication of efforts but also plays a pivotal role in improving efficiency.

[3] This work gives importance to the role of social media (Twitter) in the event of Natural disaster where it has proven its self as an early warning system and Means to inform many about Government's Endeavour's to provide relief and also pin pointing the location where relief has been dispatched, the paper also focused on the fact that through Twitter many were able to tell their loved ones about their whereabouts and because of this reason Twitter should be considered as the channel to distribute Awareness about such events.

[4] Here author discusses Transnational and Domestic Terrorism and advocates that transnational terrorism may have greater adverse effects than domestic terrorism, they have labeled all the events carried out by Organizations / Perpetrators having individuals of different nationalities or when victims belong to different nationalities as transnational terrorism, e.g. an attack against foreign Diplomat would be considered as transnational terrorism. In the research through Cross correlation they concluded that domestic and transnational terrorism is interrelated.

Paper [5] talks about UWB and its application like detecting humans through wall and for hostage rescue situations. They took various sets of measurements, data was gathered for different types of walls and door and they observed that heart beat detection using doppler approach works for wooden doors also for walls made of gypsum and brick but failed for concrete walls.

3. Problems and Proposed Solutions

3.1 Infrastructure for the monitoring of culprits and those associated with them

3.1.1. Problem

Culprits in prison continue to meet people in form of their relatives and friends, with master mind of all terrorist activities in prison he can initiate terrorist events by sitting in jail and forwarding instructions through those he meets in the prison. In Haripur prisoners were banned from meeting relatives on instruction of IG prison [8] as there was a fear of jail break after bannu and D.I khan events , in D.I khan terrorist attacked the prison freeing 250 culprits with 40 high profile individuals , in case of D.I khan attacks on Prison police accepted that it is very difficult to carry out such attacks without proper information and contacts [9] so this suggests that someone visiting the place regularly would have an insight on the internal structure of the prison and whereabouts of specific prisoners and a proof of that was a measure taken at Haripur prison where prisoners were banned as a precaution to meet their relatives[8]. Charlinda Santifort, Todd Sandler and Patrick T Brandt discussed in their paper that Instead of employing complex ways, terrorist these days are depending on simpler methods of carrying out attacks especially when it comes to bombings and this usually results in more destruction [17]. Same is happening in Pakistan these unpredictable attacks create havoc and authorities are challenged every time these attacks happen.

3.1.2. Proposed Solution

It is observed that even after detention of extremist leaders, terrorist activities continue to haunt Pakistan. The reason of this continuation is ineffective monitoring and non-computerized record at the prison. The masterminds or leaders should be barred from meeting their friends and distant relatives since they can be used as means of transmitting important information to the Gang or terrorist group, still after all security there will be certain people you cannot stop from meeting the prisoner as instructed by the constitution this include immediate family members. The proposed resolution includes computerized maintenance of record keeping national identity numbers of the visitors coming to visit the prisoner, and in case of any terrorist activity the immediate monitoring of the records is essential, the computerized data will monitor the frequency of visits to any terrorist leader in the prison before a major attack and apprehend those who visited the prisoner most recently, with the help of Artificial Intelligent Software one can pin point the most probable culprits and their links with other criminals(based on meeting the same prisoner, frequency of visits and timing of

visits) this will certainly be very fruitful in identifying the whole chain of culprits. Same data can be used later to predict the possible upcoming terrorist activity.

3.2 UWB based Network for the monitoring of entry and exist points and sensitive Installations.

3.2.1. Problem
At entry and exit points of every city there are Toll stations that allows the incoming cars from different other cities and if the security of a city is beefed up and no initiation of terrorist activity is possible within the city terrorist can initiate attacks from outside the city. We have seen cases in which a truck filled with explosives was used in terrorist activities, one such incident was the Marriott attack where a truck filled with 600kg explosives was used to completely destroy The Hotel in Islamabad [10] , as a result around 60 people died and more than 250 got injured [12], just recently a Pakistani truck bomber was caught near Pakistan-Afghanistan carrying 61,500 pound of explosives on capture he detonated his device killing himself [11] the truck remained safe and if it would have been detonated it could have created a catastrophe. Now since the above incidents are an example that terrorist use trucks filled with explosive to carry out massive attack the question remains if such a truck is moving from a small city with less or no security to a cosmopolitan city like Karachi than how to prevent a disaster? any vehicle can enter from less secure city to cities like Karachi, Islamabad, Quetta and Peshawar to carry out massive terrorist activity.

3.2.2. Proposed Solution
To reduce the chances of such activities from happening our infrastructure could incorporate a network of UWB sensors for detecting vehicles for explosives such networks can also be deployed in sensitive areas since UWB has the ability to penetrate through walls and used in medical imaging [13], [14] mentioned UWB's ability to detect objects under clothing, hence this is the feature which is required to detect individuals carrying some sort of explosives or arms under their clothes. Setting up this network at toll stations is feasible as trucks coming buys a ticket to enter the city sometimes long lines are seen at toll gates by implementing Ulta-wide band (UWB) based sensor network we can easily scan a truck or vehicle carrying explosives if Electro Magnetic pulse (EMP) is used in conjunction with UWB then one can use neutralize the detonator of the explosive truck by generating EMP burst along with it making the vehicle ineffective.

3.3 Integrate all the services through a universal number

3.3.1. Problem
When a disaster happens people are usually not aware of who to contact because in terrorist activity all departments are involved from bomb squads to specialize anti terrorist unit, medical staff and civil aviation authority. A citizen cannot remember or contact several numbers to call in case of any suspicious activity.

3.3.2. Proposed Solution
A Centralized cell should exist that could have all the required services at its disposal to combat pre and post terrorist activities, usually in case of a disaster people are not aware of who to contact , every department has its own emergency number so it would be easier to integrate all the services with a centralized monitoring cell and in case of any adverse incident one has to remember one emergency number to call and the rest will be handled by the central unit this monitoring cell will be in touch with Hospital and Ambulance services, Prison Data base, Civil Aviation, Bomb squads etc so in case of disaster all the required services can be summoned as earliest as possible to mitigate the effects of crises also simultaneously dealing with apprehending the required personals involved in such activities. In USA 911 services are considered essential part of emergency response and disaster preparedness system [15], this also includes upgrading the situation in form of status on social media websites for the awareness of the public e.g whether to go out or not, or which route to take in order to facilitate (keep clear) the routes that are being used for the relief efforts.

3.4 Specialized Ambulance Service and their integration with Hospitals and Anti Terrorist Cell

3.4.1. Problem
The biggest problem in Pakistan and specially the city of Karachi is that the government hospitals are not properly equipped with ambulances to cater the needs of the civilians. In our country this service is best managed by NGOs like Edhi,Chippa and JDC and the issue that arises is that there is absolutely no contact between ambulance and the destination hospital and in case of calamity doctors have to deal with several patients without any prior knowledge of the situation if one could develop a link between these two(ambulance and hospitals) then at least doctors and staff will have 10 to 15 valuable minutes to prepare and deal with the calamity.

3.4.2. Proposed Solution
Private Ambulances services have played a pivotal role in the process of disaster management in our country services like Edhi, JDC, Chippa and KKF continues to provide selfless contribution for the cause of Humanity, the suggestion would be to integrate these private services with public and private hospitals that receive the most casualties in case of Terrorist attacks , paper [2] focuses on this fact that a close collaboration is necessary between private and public sectors and especially this is true for Pakistan where Public Ambulance services are nonexistent and in comparison to that private services or NGO are providing this service, when disaster

happens and patients starts to fill the hospitals the problem of beds and management of resources arises, this issue is not limited to countries like Pakistan , Afghanistan and India as a matter of fact in face of the unexpected even well advance countries can't cope with it one such discussion was done by author Abdullah Al-Shimemeri in [1] in which he talks about the Riyadh incident and the chaos faced by well equipped hospitals of Saudi Arabia the author further emphasized that the first hour is critical whenever an event like this happens. Here I would like to emphasis that Saudi Arabia does not encounter Terrorist incidents as often as we do and for us these activities are a hindrance in our progress as a nation.

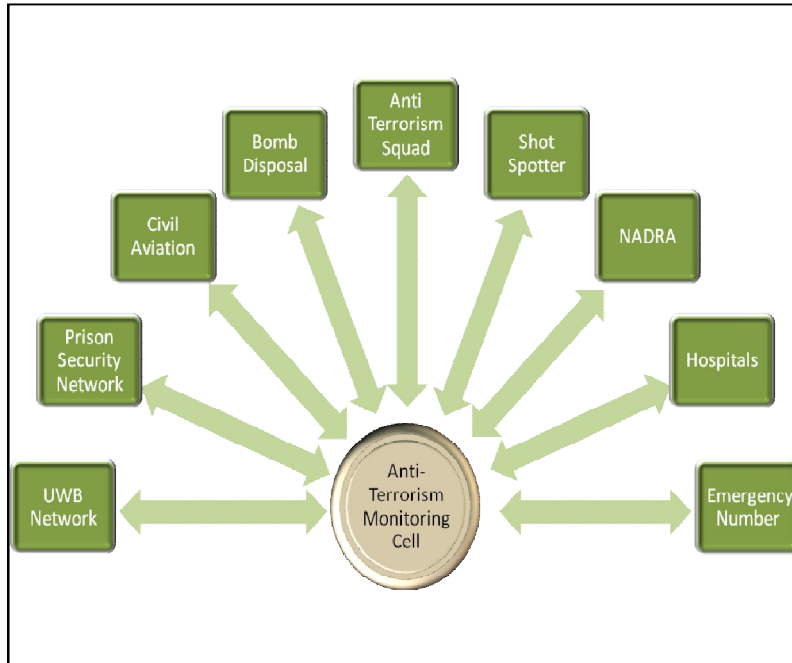## 4. Proposed Communications Infrastructure

Figure 1: Depicting Centralized Monitoring Cell Connected with all the units for Prevention and mitigating the effects of Terrorism.

UWB Network	Ultra Wide Band Network that is used to detect explosives
Prison Security Network	Computerized data of all visitors and monitoring of their links with Extremists
Civil Aviation	To put names of wanted culprits in Exit Control List Immediately after incident
Bomb Disposal	Will be called upon to deactivate an implanted explosive device
Anti Terrorism Squad	Specialized anti terrorism unit to deal with hostage situations
Shot Spotter	This is the device that identifies where the shot has been fired
NADRA	National Database and Registration Authority, having information of every Pakistani citizen
Hospitals	Hospitals will get connected to ambulances via Centralize Monitoring Cell
Emergency Number	Universal Number of Centralize Monitoring Cell connecting all the resources

Table 1: Description of all the Units of Anti Terrorism Monitoring Cell

5. Conclusion

The present situation of south east Asia demands that extremist activities should be nip in the bud with large populations like China, India and Pakistan the whole region has the potential to be future center of the world trade , economics and technology and all that is possible if there is no terrorism in this region. The proposed idea if adopted will certainly bring down the level of crime rate in Pakistan and the region as well, in this paper I emphasized on close collaborations between all departments. Peace in future is totally dependent on technology and its proper use to eradicate terrorism.

6. Author's Previous Work

This paper is not the first of its kind author has writtenook several papers related to this topic and a book as well some of the previous work is mentioned below this work is a continuation of the ongoing endeavor in this field

[6] This paper discusses the rising threats of Terrorism in Pakistan and its causes; a survey, the author also talks about the usage of technology to deal with the nuisance of terrorism; UWB was discussed as a method of detecting Suicide Bombers and using EMP in conjunction to make a suicide bomber ineffective. The paper also discussed losses in south East Asia due to terrorism from 2006 till mid 2011 and concludes that Pakistan and Srilanka suffered most because of terrorism. Tackling Terrorism in Pakistan: Repercussion of Terrorism and Technological Resurrection

[7] is a book that I authored and was published by LAP publishers in the book detailed discussion was done first to pin point the possible causes the basic survey done in [6] was extended to get an expanded view after which prevention and detection of suicide bombings was suggested, reducing affects of such attacks in case of occurrence and weapons needed to equip police and Para military forces was also suggested in this book through this work we can build on towards the possible infrastructure which if implemented can reduce substantially the problems that were discussed in this book, the publication has depicted the horrors of terrorism in Pakistan.

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