Tomorrow's Homeland secure

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Abstract:

Security is the main spinal core in our nations' freedom. Nowadays, there is an increasing need allover the world, to improve the safety and security challenges in the local level. As a lot of our era's impacts, have involved in our community such; terrorism, accidents, disasters whether natural or man-made, aero-plane crashes, and crimes and so on. Hesitating allover the world on the minor level is spreading on the global one in a very vast reaction.

Today, the surround circumstances need a powerful tool beyond the human being mind and vision, to control or at least to map and decrease the level of risk. GIS spatial analysis has been used for this purpose in some of the countries. By using some powerful GIS functions as; Geo-data base and Metadata, some of these crises have been under-controlled for a limit, in some of these countries. This research is trying to explain the ways of using GIS geospatial functions, passing by the trials of some cities as; the GIS secure system used in New-York city and security lessons required after the 11th of September. Also the trial of Jamaica achieving their security system. Trying to analyze the way of using this security system and its benefits in the entire national field.

Finally trying to allocate the ways and principles of using GIS geospatial analysis at the national security level, by achieving some of the trials on homeland security levels, passing by some recommendations to decrease the risk of disaster and rapidly of information. This may help to solve some of our Arab cities' crises and disasters!!!..

Tomorrow's Homeland Secure

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INTRODUCTION:

One of the primary responsibilities of the government is to protect people and provide safety and security for communities and real estate treasury. The recent events of this era are tolerating risks and disasters which citizens can face. This also doubles the government responsibilities for enabling an adequate homeland security.
We all have to view our Middle East Land Secure in a different way, in both a global and a national view combining together, not only this but in a national view we should also look in a local and government levels. This new view will work to see the recent scene, as most of the disasters can affect the whole area if it is a natural disaster, man made catastrophes[1] or terrorism.

"This is a time of fear, what is even more frightening to some people than the terrorist's attacks we suffered".(Bergen, J.: 2002) Terrorism is the most important issue in the whole wide world now, beside civil rights and national security. It started to be a monster and a very dangerous creature which soon can destroy communities and countries economics. For years now in our Arab countries, we have been suffering from terrorism in many countries as: Saudi Arabia, Lebanon and Egypt. Egypt is my nation country and I felt so terrified last summer at the bombs attack of Sharm El Sheik the land of Peace. The terrifying people, blood, death, loosing money, tourists and so on a hell of lose where there in Sharm El Sheik. Since then I felt so emotional and angry. I wanted to do anything, at least a paper that may help to reduce what had happened to my people and land. Also I was so young when the terrorist attached President El Sadat [2], bombs to kill innocent children in a school, killing writers and so on. On the other worlds no one can forgets the Twin Tower attack in New York City 2001 and how horrifying the event was for all the world.!!!.

This paper is negotiating the Homeland security working in technological futuristic new way, with all the GIS[3] weapons for defending land, people and economics. The mind weapon and technology is our way to defend ourselves now. Chapter two is taking about the ways of using GIS in Homeland security and the reasons of choosing GIS system not any other one, fields that GIS can help in its emergency, integration of the information, the elements of security by GIS and types of GIS secure projects Chapter three is discussing the key components of homeland security found out. Chapter four is a comparative case studies between the American attack in 11/9 and Sharm El Sheik attack and suggestion for Sharm El Sheik which, if used could reduce the costs and save time of national security . Finally there is the conclusion and recommendations of the paper.

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[1] **Catastrophe:** Sudden terrible event that cause great suffering.
[2] **Anwar El Sadat:** He was the military leader and the president of Egypt since 1970, till he was killed by terrorist in the 6th of October 1981.
[3] **GIS:** Geographic Information System.

CHAPTER ONE: HOMELAND SECURITY:

Homeland security means re-planning and new policies to be thought of, allocation of resources, new strategies for partnership between federal, local, state and private sectors. National Security should be our local wall against all kind of threats. This part is discussing all views and kinds of National Security, including the kinds of threats and people dealing with it.

1.1 What are the Requirements of Homeland security? Homeland security requires understanding all of the organizations, systems, infrastructure and all our community livelihoods especially our safety. (ESRI News-Winter 2001/2002: 16/12/05)

1.2 Home land Secure Aims: Homeland security focus on three objectives;

- ☺ Protect Lives.
- ☺ Protect Property.
- ☺ Protect serious and dangerous Infrastructure.

To achieve al these aims, we have to combine information together, which will be discussed next point.

1.3 Who is involved in Homeland Security? Many organizations help in National security combining their effort together with the new technology. Agencies involved should share their data and try to form one base data source. Citizens like;

- Community.
- Army or Military forces**.**
- Police.
- Civil Administration.
- Medical services. (Mishara, Sunil: 13/12/05.)

1.4 What is threat? The National Security threat comes from several things; terror, cyber attacks, organized crimes, riots and natural disasters.

1.4.1 Valuables which can be damaged by threat: Beside Human being lives, the valuable, dangerous infrastructure we should put into consideration, can be private or public ones in our countries as; (Mishara, Sunil: 13/12/05.) .

- **Citizens:** Usually all threats target the people lives to make a big "BOOM" or propaganda for any terrorist, always man is a victim in any crime or disaster. The government always looses control when the threat affects a large number of lives, as it will be too late to do anything after.
- **Serious Government Infrastructure:** All kind of strategic assets like aviation, power generators, electrical supplies, Dams, defence and military installations, trains railroads, fuel reserves and so on.
- **Sensitive Places:** In a country like Egypt, we have a very high population density inside of main cites as Cairo and Alexandria. Such areas as the centre of a city are where trouble emanates. If threat is terrorism or an earthquake, these are the most payable places to any minor attack. Beside crowded areas as markets, places of worship with poor planning as the old market of Cairo Khan El khalili[1] and El Azhar[2], which were sensitive and much attacked in 2005.

[1] **Khan El khalili:** It is an old market in Cairo, in Old Egypt's area. It is famous with the golden and brass Pharaohnic presents. Also it has many historical buildings and old cafés**.**

[2] **EL Azhar:** One of the famous, historical, touristic and Islamic areas in Cairo.

● **Data Infrastructure:** Computer technology plays a main role in most of ministries, all kind of rail & plane reservations, certifications, universities and so on. As we move to adopt e-governance, our weak areas increase too. Hackers are trying to interfere with government systems, which may afford us lot of money and lives.

1.5 Emergency management:

- The emergency has to start with locating the resources**.**
- Analysis Base plan maps.
- Visual decision making. **(**ESRI News Winter 2001/2002: 16/12/05)

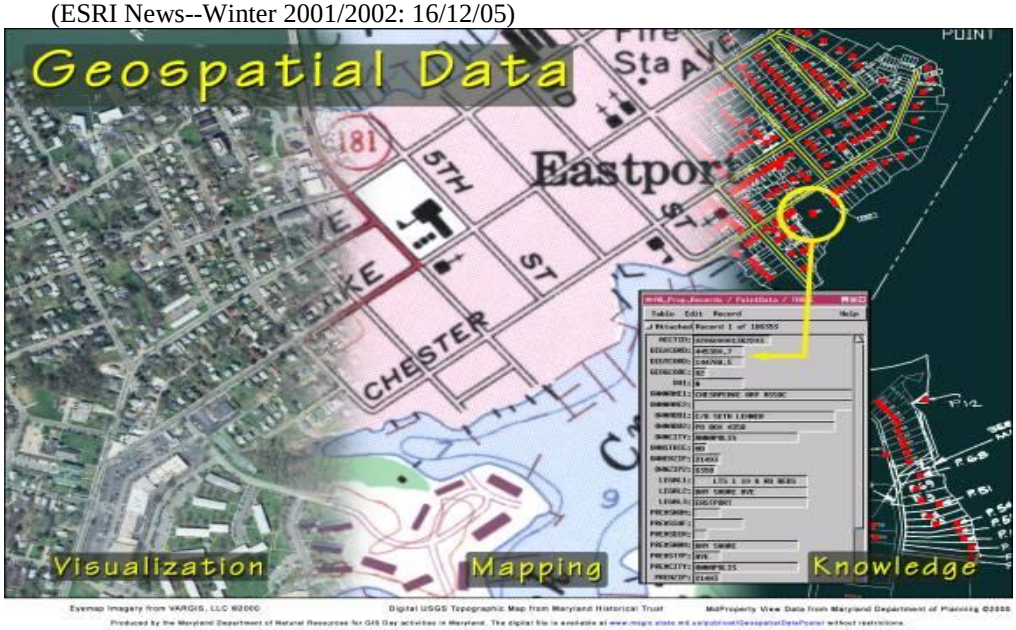
CHAPTER TWO: GIS & HOMELAND SECURITY:

GIS is the technology that will be crucial to all the security trials and efforts. (ESRI News--Winter 2001/2002: 16/12/05) It will play an enormous role in the process of integrating information, people and organizations in the process of secure.

2.1 Why GIS? GIS is the only technology system, which enables the integration of all types of information. Data sharing, analysis and visual representation will improve the decision making process at all levels. GIS and mapping technology can save lives and protect property. (Homeland Security and Geographic Information system, 13/12/05) It also has a tremendous invention in computer systems called GEODATABASE. The geodatabase allows the geographic information to be stored in a database management system, which helps in modeling any crisis event accurately with rules, feature types and relationships. (Research Progress: 16/12/05)

2.1.1 Benefits of GIS in the homeland secure:

- Fast response.
- Fast access to all kinds of information.
- Integrated layers of information.
- Great visualization tool.
- Reduce emergency time.
- Very strong analysis machine "*geo-spatial analysis*" as shown in (map 1). (ESRI News--Winter 2001/2002: 16/12/05)



Map 1 : Geospatial Data needed for GIS applications. (Source: Homeland Security and geographic information: 13/12/06)

2.1.2 How can GIS help in Internal Security?

- Medical support and rescue work. It can geographically track health indicators, identify disease clusters and explore locations of environmental risks as shown in (map 2). In Pennsylvania they used GIS for mosquito abatement programs. (GIS for government: 13/12/05)
- Quick reaction.
- Locating hot spots.
- Traffic management.
- Restoration. (Mishara, Sunil: 13/12/05.)

Map 2: Some GIS geospatial analysis for helping in security cases as fire, traffic and military. (Source: GIS for government: 13/12/06)

2.2 Data needed for GIS Security access: Emergency situations of any nation are dependant on the rapid access to and the application of different kinds of accurate key feature of 80-90% of all government data as; (Homeland Security and Geographic Information system, 13/12/05)

2.2.1 Employment information number of population related to specific locations.

2.2.2 Current and detailed framework data; including all kinds of the city's information from transport, elevation, political boundaries, geodetic control, orthophotography, ownership and hydrography.

2.2.3 Operations suspected for attack, or natural disaster and catastrophes expected to happen, as an earthquake or a Hurricane.[1]

2.2.4 Critical infrastructure, as electricity systems, water supplies systems, telecommunications, gas and oil products, banking and finance and emergency services. (Homeland Security and Geographic Information system, 13/12/05)

2.3 GIS applications in Emergency projects:
Any integration of GIS system in Internal Security can not be done isolated in one organization. All agencies spoken about in the previous chapter should contribute and join their data and information together, on a based system of national network to work. (Mishara, Sunil: 13/12/05.) The GIS system quickly renders several layers of digital geospatial data into map-like products. This operation makes it easy for these data to be accessed virtually anywhere as it is not analog data, which means it can be transmitted and stored to anyplace anywhere. (Homeland Security and Geographic Information system: 13/12/05)

[1] **Hurricane:** A storm with a very fast wind, it can be called also Cyclone or Typhoon**.**

2.3.1 Planning and detection: Geospatial information provides the special backdrop enough threat analysis is accomplished. By analyzing and linking information in his time.

2.3.2 Mitigation: When risk emergency is completed, GIS analysis can recognize utilities, population's areas to the possible assets and adjoining structure, material storage, security buffers around high risk properties or structures. It also involves potential hazards as infrastructure, environmental, lives, property and so on. (ESRI News: 16/12/05)

2.3.3 Preparedness: Security planners must depend on geospatial information in their job. Current data access and interoperability standards are important elements and they support the Nation's response units to react to terrorism, disasters and crimes. It includes activities prepare workers for actual emergencies.

2.3.4 Response: Geo-spatial data are used by many agencies in response to natural disasters as it is smart data isn't a collection of flat files (Verton: 13/12/06) available for all kinds of emergency response.

2.3.5 Recovery: It begins when emergency is over. Recovery efforts are in two phases as shown in figure (1);

- **Short term recovery:** GIS can work with GPS to locate and identify all damage places, recognize number of shelters needed and so on. Immediate recovery can be visually seen and rapidly recovered.
- **Long term recovery:** it means restoring all services to normal or better case. Long term recovery as streets, hospitals, buildings, schools, bridges, water systems and so on. Projects which can be recovered of rebuilt in years time.(ESRI News--Winter 2001/2002: 16/12/05)

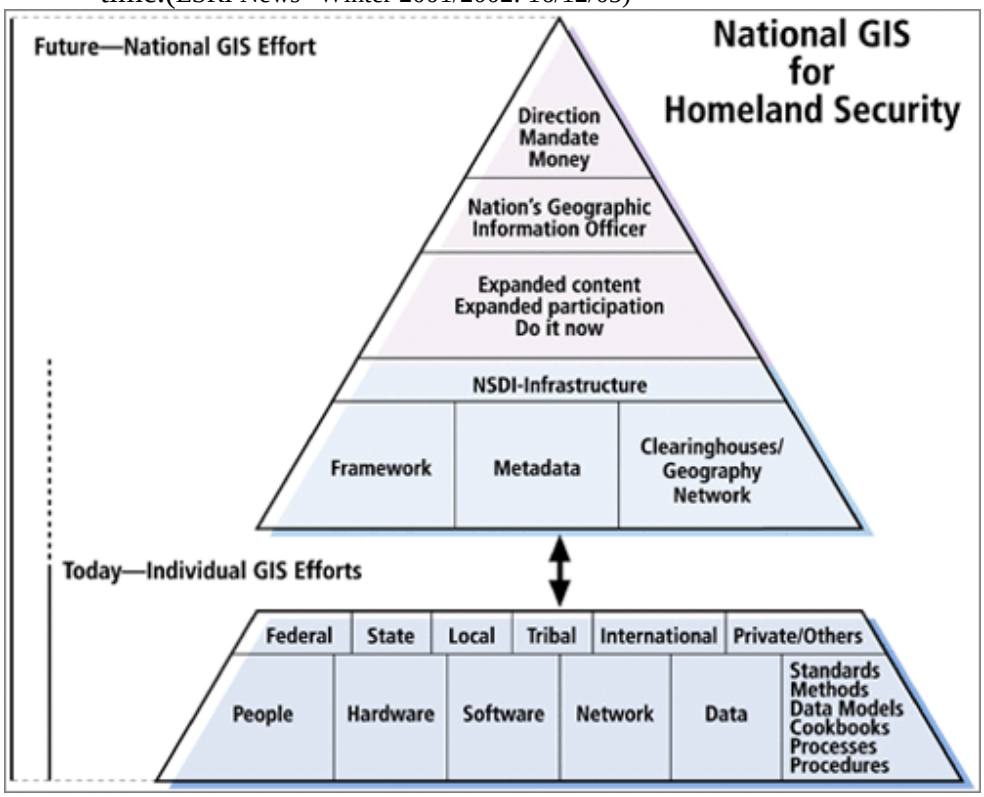


Figure 1: National GIS Home land security recovery. (Source: ESRI News--Winter 2001/2002: 16/12/05)

2.4 Stand alone network: ECN is a Standalone Network that's connects EOC[1]s around U.S.A. for video conferencing, e-mail, information transmission and to provide the internet applications a backbone for emergency management. In case of emergency the ECN has a mission of providing sound solutions for mapping of geo-special data and analysis. During an emergency response, platters and computers in Washington, DC become nodes on the deployment network of GIS equipment. (Guber: 13/12/06)

2.5 Software involved in Security work: Many of the GIS system soft wares are involved in National Security analysis. But ArcView is the responsible analysis software.

2.5.1 ArcView: ArcView software is a big value for planning and special analysis. It is used as a special and powerful tool for public safety and homeland security. It helps governments and business agencies to keep the challenge of national security. ArcView can answer the following important questions;

- What are the evacuation routes in case of emergency?
- Where are the nearest hospitals? What is the capacity?
- Where are the response resources and best vacation?
- Where are the dangerous infrastructure control points?
- Where are the community evacuation shelters? Are enough?
- What physical changes, policies or security measures?
- Where are the open areas suitable for emergency equipments? (ArcView for Community Safety: V. 13/12/2005)

2.5.2 Internet: The GIS group develops internet special application, including streams of real-time information, fast- staged infrastructure and demographic data, algorithms of health-risk and smooth visual models integrated with GIS functions to achieve the national security requirements. They designed these web- accessibilities to evaluate the on spot release of areas of different population densities through one day or a whole week. (National Security: 17/12/05.) All combined National security agencies should also address the issue of interoperability and open standards for the local user of different implementation of GIS to use and share information easily. (Mishara, Sunil: 13/12/05.)

2.5.3 Visualization: The advanced geospatial analysis provided in ArcInfo is a very powerful tool which helps in the decision making of National security. This real like visualization can do the following;

- Reduce the risk for training.
- View assets in relation to geographic information.
- Track assets in near real time.
- Improve emergency response time.(Security Government & Infrastructure: 13/12/05)

2.6 GPS and Security: (GPS) global positioning system is one of wonders of navigation in the 21st century (Cho: 2005), so it can collect real-time data in any emergency or attack operations. Each GPS system is consists of four satellites going in one orbit. We have 30 Navigating satellites cycling the globe. (Cho: 2005) This technology makes it easy for the emergency to trace crimes and accidents in the time

[1] **EOC:** The Emergency Operation Centre in Washington.

of the crisis. (Homeland Security: 16/12/06) hospitals and ambulances services depend on GPS systems and Radio transmissions to locate patients in emergency cases and send information in life-or-death cases. (Mann: 13/12/06)

CHAPTER THREE: KEY COMPONENTS OF GIS HOMELAND SECURITY:

GIS in an emergency response, should be very rapid and on the fly. It needs tremendous key components to help in integration of the hell of data stored. There are three key components of GIS homeland security which will be discussed in this part of the research. (Lessons Learned From 9/11: 13/12/05)

3.1 Metadata: Private and public agencies should always view the metadata beside the enterprise GIS systems and data as the main key component in emergency response and homeland security.

3.1.1 What is Metadata? Metadata is the information about a data set, which can include source of information, creates projection, date and format, scale, resolution and more. *"There are few things more valuable that a city can do to prepare for disaster and than invest in GIS data and in systems to share GIS capabilities. Metadata is a crucial part of this"* Says Al Leider, New York City Department of Information Technology

3.1.2. How Metadata is the secure key? As an example**:** Good metadata allows emergency response to quickly locate the most recent map to view where businesses and people are located in a damaged building. In catastrophic phenomena is good data inventory and good metadata overcome the difficulty of knowing where information is?

3.2 Common standards: Besides good metadata, common standards are important too. Common naming conventions, architecture, color palette and symbology. All these standards help in the integration and the exchange of data and information, as we need quick stored information to integrate in any case of emergency. Metadata is a rapid tool to locate the required quickly, while common standards make sure that: the right effective related information and maps are integrated.

3.3 Well trained staff: Them most important key component in home land security GIS integration is having a very well trained staff. Organizations can its employees to work with GIS system. This is the better way to have the best results. (Lessons Learned From 9/11: 13/12/05)

CHAPTER FOUR: COMPARATIVE CASE STUDY:

Many countries have been suffering from threat of terror and natural disasters for many years. May be for the whole history, but recently the matters have been very rapid in all nations. That means that no nation nowadays has no fear of terrorist or may be didn't suffer from it, even America the nation of power and technology wasn't saved from terrorist or the recent Hurricane of Indianapolis. All the Asian countries suffered two years ago from the Tsunami[1] which was expected half an hour before but no one could do anything. The Arab countries have a great deal of natural and human mad catastrophes as Saudi Arabia which had a recent attack on its oil

[1] **Tsunami:** The phenomena very high, destructive sea waves, usually as a result of an enormous earthquake in the bottom And

treasury, Lebanon and Egypt which suffered from an unexpected earthquake in 1992 and a lot of terrorist attacks specially last year 2005; three bombs in EL Azhar area and another 3 horrible ones in the city Sharm El Sheik last Summer. This part is a comparative case between the technological responses of the terrorist attack in New York 2001and the terrorist attack in Namaa Bay in El Sheik[1] 2005 as shown in (map3).

4.1 New York City and GIS saved the day:

The events of 9/11 showed that NO NATION, even if is so powerful, is protected from the acts of terrorism. (Mishara, Sunil: 13/12/05) The Americans were shocked as the thought they were protected from any attack due to their technology and high quality of their police administrative agency.

4.4.1 New York City attack: The attack in New York was by the aviation system. The terrorists used planes as bombs. They attacked the World Trade Center Towers and the Pentagon. They stopped the last plane flying to Washington. The terrorists were well trained and had no fear of death.

4.4.2 GIS project of the national security of New York City: As soon after the terrible event of 9/11, ESRI created an organization in Redlands in California, supporting teams in New York City and Washington. They all in worked to support emergency managements, fire, public work, health and all infrastructure systems of the city. The GIS system database created thousands and thousands of maps, which were used to make decisions. GIS software pointed assets as downed utility poles or any damaged water valves, emergency shelters, power grids and so on. GIS professionals collected the integrated data to create all the needed maps used in New York City's emergency response. (Lessons Learned From 9/11: 13/12/05)

4.4.3 GIS lessons of New York's Attack: The most important conclusion from the terrible attack is the idea of metadata, which is tremendously valuable in the event of emergency. GIS technology is a mission in supporting our future homeland security and protects our properties, lives and infrastructure. (GIS for Homeland Security: 13/12/05)

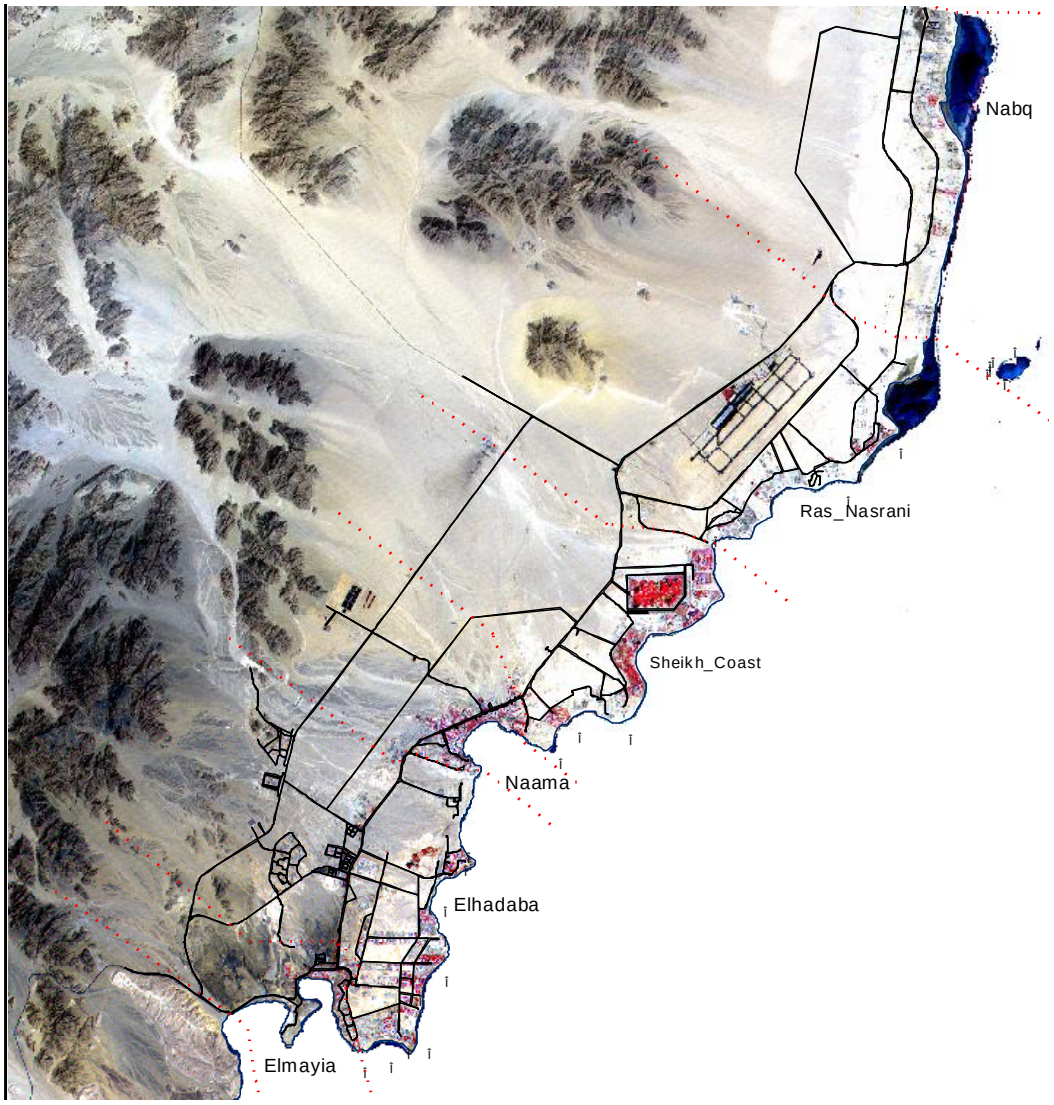
4.2. Suggested Sharm El Sheik GIS National Security System:

Here we are attacking not one building in each city as done in America, but the idea is horrifying to tourists and the citizens in three different places in one city at the same time. We can notice that the terror thinking is always the same which is attacking in different places together to defuse the people's minds in different directions. That means our enemy is very intelligent but we have to face him and think in the dark areas to understand his way of thinking. The decision may be using systems beyond human's mines and GIS security homeland system.

4.2.1 The terrorism attack: In this case study the terror attack is so different than the previous one. The enemy is attacking by bombs in cars, suicide with no fear of dying also. That means that our weakness in Sharm El Sheik is route system, as there is no way to demolish hotels or move the sea. In Sharm El Sheikh we can find that the urban pattern of the touristic area (not the residential) is a non-pattern condensed rows

[1] **Sharm El sheik:** It is a fabulous touristic City located in Sinai on the Red Sea. It is famous with its fantastic Marine World and diving. It has warm weather and multi- Color Mountains.

of hotels as we can see in (map3). This pattern makes a very high population in one small area, especially around Naama Bay and Sheik Coast. Our crisis happened last summer in Naama Bay and in the old city Market. These three areas are fully condensed with tourists and workers.



Map 3: Sharm El Sheik Coast (Source: Land sat. 2000)

4.2.2 How to start GIS Secure Project in Sharm El Sheik? The idea is to start a proposed GIS project inside the city of Sharm El Sheikh;

FIRST STEP: The project system has to start technologically by preparing well trained GIS GROUP workers inside the city Sharm El Sheikh. This group can start the project in a departmental office can be called Sham GIS group. They will start collecting all kinds of information which will be discussed in this part to enrich the new Sharm's metadata, which as we discovered is the most important part in homeland security.

SECOND STEP: By applying and preparing the city with METADATA information integrated analysis and data sharing (see figure 2), as the following steps;

Project GIS → Department GIS → Enterprise GIS → Citizen GIS.

(Source: Homeland Security: 16/12/05)

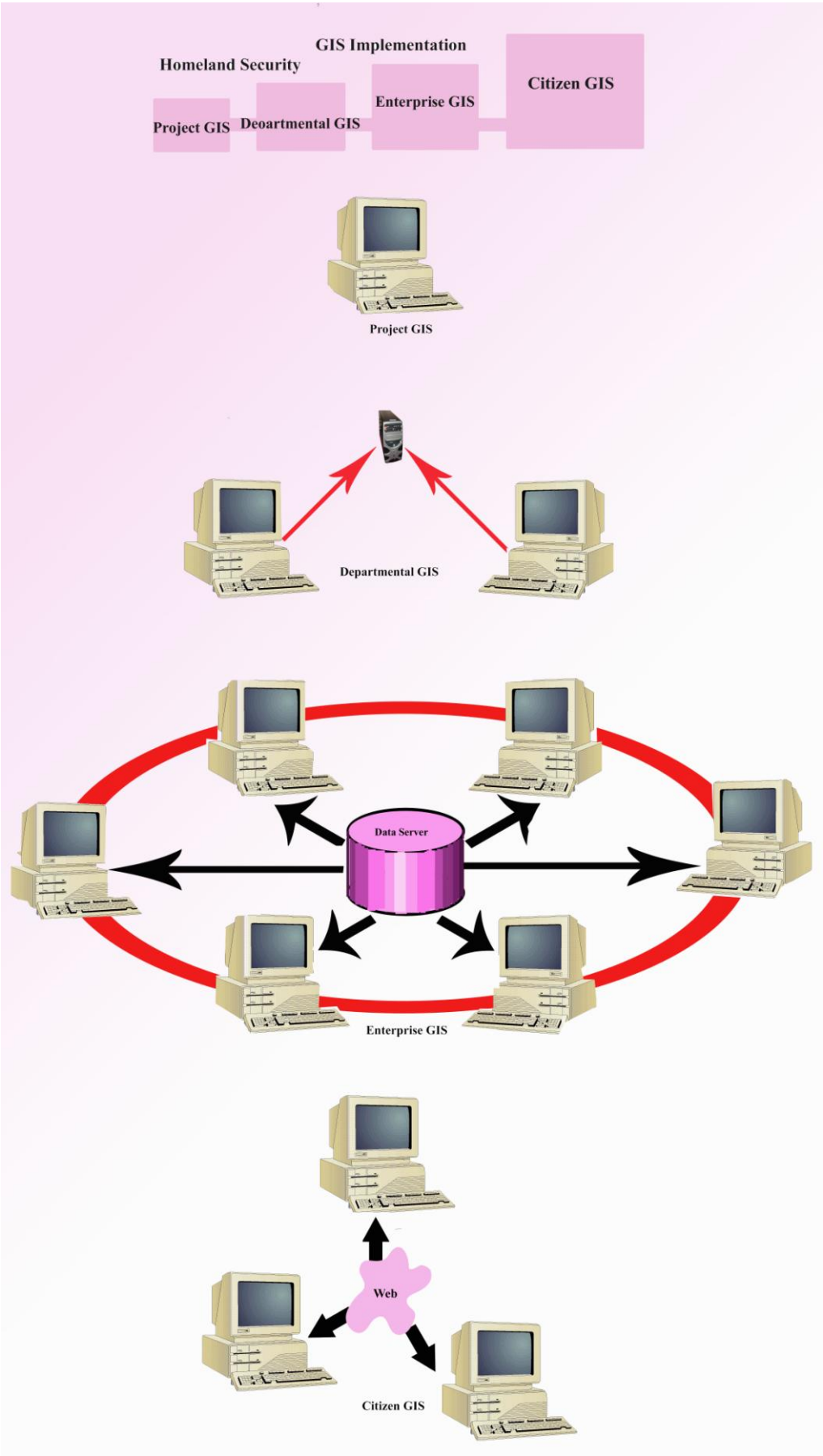


Figure 2: Homeland security GIS implementations. (Source: Homelands Security: 16/12/05)

What is the most important information in the proposed METADATA of Sharm El Sheikh?

- All the hotels in Sharm can consider being the target for attacks, and then all in the names of the hotels and their exact locations in Sharm's map are important data.
- The hotels details from architecture plans, electricity, and sections and so on are integrated in the metadata.
- In Sharm there are separate buildings for restaurants only, their locations and infrastructure and all the architecture plans are in them metadata.
- The beach is a target too, so beaches' locations and its' population density are put in the metadata.
- The location of all government or administration buildings.
- The location of Police stations and security offices are in our data.
- Leisure areas are condensed in Sharm all day, including; Aqua Parks, playgrounds, funfairs and so on. These gathering areas are targets, their locations and inside evacuation and emergency areas are data.
- Coffee shops are main tradition now in Sharm, tourists like to gather in the coffee shops to smoke our traditional Egyptian Shisha[1] and drink the special Egyptian drinks. So they are considered gathering points for the population and tourists. Their locations are in the metadata.
- The locations of all the hospitals and any medical support building and its needed timing from any hotel, restaurant or important area.
- There are many Casinos in Sharm; they are full with tourists and money. They are considered as targets too. Their locations are very useful data.
- Diving centers are very important in Sharm El Sheikh, their locations on the map is there an important.
- Harbors for yachts, tourist's submarines and small boats are targets.
- The infrastructure of Sharm has to be put in maps consideration from; electricity, water supplies, gas And so on. As in any case of emergency we can look in the metadata for any supply map.
- Markets, shopping areas, Bazaars and shops, are crowded with tourists and merchants. They are considered targets too, so their dimensions and locations are in our metadata.
- Root system with all in the main streets, primary streets, squares and any possible evacuation routes. All these in a map in our metadata.
- Number of citizens living in Sharm, hotel staffs, workers, tourists coming per week, and Egyptian visitors.
- Times of busy occupation in one day, as the density of people in Sharm increases at night and the cases at daytime. This is a natural result of the hot weather of Sinai.
- Times of busy occupation in the year; as the percentage of occupation increases in feasts and holidays.
- The safety of the Airport of Sharm El Sheik**.**
- Finally, private and public car parks now started to be targets too as cars If are the main way for bombing.

[1] **Shisha:** Is a traditional Egyptian smoking tool, the tobacco is put over a coke over a big bottle of water. When smoking the tobacco it passes through the water as a filter for it. It is famous with its different tobacco smells as apple and rose tobacco.

THIRD STEP: staring the enterprise GIS by connection to Data Server and to all in the organization's involved in local security system and government agencies.
The GPS Satellite system should be connected to Sharm project too. So that's the real time data can be collected or served in the field of emergency operations.

- Camera System should be used in all the recreation areas and in streets as was done in England national security system.
- Security officers should be increased at night time.
- Any information coming from the GIS group about any corruption in the security system should the connected directly to the official security stations in Sharm.

FOURTH STEP: The enterprise GIS and all the reserved information should be connected to the INTERNET and any Egyptian citizen anywhere can reach the security information in an easy way. We can benefit from the American trial in preparing a website especially for GIS of Sharm. We even can ask the help of ESRI as Sharm El Sheik is an International city and called the city of Peace. I hope with this minor trial of this paper, it may deserve this name now.

4.2.3 GIS Solutions: By using our Sharm Metadata, we can integrate the information into the GIS system for analysis. All kinds of information can be driven from the GIS analysis for example; finding the best evacuation routes in high density areas of Sharm as shown in the analyzed map of Naama Bay. (Map 4). And so on the project can find many solutions for emergency cases in Sharm El Sheikh.

Map 4: Example of the proposed spatial Analysis for Naama Bay. (Source of photo: Calzia: 2001)

CONCLUSIONS:

GIS will play a major role in the E-Governance in the future. Our Arab countries should not lag in this technological futuristic field. Our Industry and Academic forces, should gather together to run beside other world's technology to catch up and assist the governments in this new systems. This is the only way which may help to reduce crises in our Arabic new future. GIS allows public safety effective to emergency response, determine mitigation priorities, and analyze historical and future events. Using GIS to make the world becomes a safer place to live in. (Geography Matters: 13/1205) It has merged into the normal operating steps for public safety and emergency response. GIS will be in the future the main framework organizing and sharing data in a new digital world, for any city, country, state or Federal level organizations. (GIS for Government: 13/12/05)

Technologies and experiences of ESRI and Hewlett-Packard (HP) in homeland security were combined to design a catalog to assist people in identifying real solutions for real world problems. It is a road map to help in knowing GIS software, hardware and applications that anyone could need as; creating special data maps, integrating special databases and non-special Databases communicating and sharing geographic knowledge. (Brochures for Homeland Security, 13/12/05)

Companies must cooperate with government to achieve the maximum national homeland security efforts. There are three areas if infiltrated by any terrorist or could quickly cripple any country economy and infrastructure such;

- Telecommunications: includes telephones, modems and mobile phones.
- Emergency service; includes hospitals and ambulance which rely on GPS systems in case of emergency.
- Banking and finance; including Credit Cards. (Mann: 13/12/06)

The National Nuclear Security Agency (NNSA) and the Remote Sensing Laboratory (RSL) provides the GIS support in the case of nuclear emergency. RSL GIS is a robust system for analysis of special data for that geological the emergency response. (Guber: 13/12/06)

Every government, business, or private utility has information that is valuable to our for national homeland security efforts. These data saves time, effort and lives. Actually there is point for any agency or organization to waste time and money on data sets or GIS systems after the crisis is over. The light key in future homeland secure is: PREPARING BEORE CRISES OCCURS. (ESRI News: 16/12/05)

Applying the Department of Defence **(**DOD) security standards for planning and architecture design. This may be discussed later in another paper.

Unless our Arabian governments create new laws to enforce the adaptation of the idea of GIS Homeland technology and push agencies and organizations by force to collect and disseminate data. Our National Arabian Tomorrow's Homeland secure will just remain a DREAM in the Middle East. (Mishara, Sunil: 13/12/05)

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