

Set Human Coordinates Id By GIS Homeland Security Concept

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ABSTRACT

It becomes necessary in every science to use geographical information. This information is very useful in many fields, such as monitoring, locating places, knowing exact positions, and drawing routes to reach any place on the map. This research is concerned with getting the coordinates of each human in my country by two teams, the first team is outside the office (getting data experimentally), and the second team (checking, converting, and correcting data) stays at the office to convert coordinates to the center of hosts. If the coordinates have been obtained, the people's place is known easily on the maps. The benefit of putting everybody's ID is unaccounted for. One of the most important is knowing the relative address of suspicious, criminal, or terrorist people. It helps to catch them quickly if they make any mistakes. The data that is accumulated could be used in the Arc map program and then included in SQL Server. At last, connect the SQL with the Arc Map and spread the location of the database on the maps with a designer formula for this purpose. A platform used to show the data is more flexibl.

Keyword: Platform GUI designer in Python_ID Coordinates (Longitude & latitude) _ARC map_ GIS program from ESRI version 10.x.

1-INTRODUCTION

1-1 HOME LAND SECURITY :-

Homeland security: the definition of homeland security apperar since the event of September 11, 2001, terrorist attacks upon the United States of America. These terms have become increasingly important and have developed into a more widely used tool for protection, prevention, making informed decisions in critical issues, and saving lives. Recovery from most types of accidents, including natural and technical accidents, as well as other adversities caused by threats. Since the events of 9/11, terrorists have come back with more crimes, such as hacking of personal computing networks and attacks. In the years (2003 and 2005) the ohaio nuclear City, the disaster of Hurricane Katrina, and the California wildfires the policymakers were forced to pay attention and develop their abilities against sudden natural to be ready at any time in addition to cyber security problems this development had been using in 2017 involved in 2017. The definition of homeland security as the United States adopted was how could treat the critical issue with special policies[1]. Environmental degradation is considered one of the more important threats, and any government has to take care of and give it priority because it directly to homeland security and puts human life in danger. (All managements have to protect their people from any threats. Many management teams, or mostly governments, focus on terrorism, crime, and other types of security concerns. They forget so many threats that immediately affect people's lives, like natural threats, health threats, and electronic extortion. Homeland security is used to prevent all these dangerous problems either by solving for forever or by reducing the damage, and this research discusses how could employ geographical information systems and GIS programs to serve homeland security and management crises. The biological hazard will be taken as an example for studying biological threats. The threat of COVID-19 was represented as really challenging to the lives of people on the planet. Using all medical and technological resources became very necessary to save the lives of people. One of the technical applications which are helpful was the GIS program. It is used to locate

accurately where the patients are found and monitor the spread of the disease. After knowing the coordinates of the patients by using maps entered in the GIS program and a designed database associated to serve this purpose. According to GIS information, following the World Health Organization's recommendations became very necessary. Some of this was that people have to stay at home and should be obligated to clean up. Monitoring the spread of disease helped responsible men of homeland security to make the right decisions in difficult times through close endemic areas. COVID-19 regard. Humanity hasn't seen hardship since WW2. The COVID-19 disaster has woken up the world to adopt and develop homeland security with GIS science. This research offers a comprehensive understanding of 'the greening of homeland security,' which is named as necessary and depends on strategies to help homeland security management enhance prevention, detection, mitigation, and recovery from nature-driven threats. [2]. In addition, the stacks of the future become a very dangerous Place. To meet the challenges of geographical information in homeland security, intelligence solutions become Amazing, and Mirage GIS programs are required. Designing and implementing an integrated homeland security curriculum in our studies now can help to make the future safer. Improving such a study plan that successfully merges the full ability of geospatial solutions, including GIS information, requires hard work on the part of GIS experts. This professional ought to learn and challenge myself after learning how to discover a perfect solution to any impediment. Discovering and incorporating their expertise into that solution, after that convenience man who has knowledge in other fields of sciences to put their suspicious side and confidence in the potential of GIS solutions into homeland security education [3]. The idea of this research is that the Geographical Information can be used as a resistance for the Government to attacks from outside and inside parties that threaten the stability of the Iraqi National Security or any other organization that does not want peace in Iraq to be well maintained [4].

1-2 GIS for Homeland security:-

Everybody uses of GIS technique without decision-making tends to go unnoticed, But in fact, it exists in most our our activities. By unconsciously selecting the best route to walk, the vacation route, going to use all applications of smart phone a store, and more decisions else use analyzing GIS without being felled of it. This decision-making is implemented by a computer or smartphone. It is done when acknowledgment of geographical information systems have

[5]. According to GIS for Homeland Security concept the aim of roadblocks to execute any type of centralized geographical information systems, whether locally or nationally, is information sharing. For example the civil engineering field a personal municipality or related organization usually uses gis execution to simplify planning and development projects within it's own concepts. The suspicions are related that if they give their Geographical information with more entries, it may redistributed or used in other projects without their feel. They made the right choice. In addition, profit of money could be invested to create the GIS data in the first. Sharing their information even for homeland security initiatives often makes a municipality suspicious that it has unwillingly lost control or power and the chance for return the gain from gis data could be regarded as neglected [6].

1-3 Network Design:-

There are many reasons for using network design such as improved communication and efficiency as well as better decision-maker and management. Where GIS can be used as a platform for monitoring and gives authority to the user to access the network [7]. The geographical information system based on data quality is the base of all data processing and analysis and it has great significance for carrying out GIS business applications and improving the level of practical system. However because of the adjustment of the platform formula the new and old system data migration, wrong data source input, and any else reasons, the power grid GIS basic data quality issues are serious. In order to solve the problem of quality management of any

data, one should design and implement a GIS data quality management tool based on an algorithm called graph logic processing which includes data source management configuration management query management, and so on. Test results show that the use of the tool technology and optimization of the relevant management process can continuously improve the power grid GIS-based data quality and develop the practical application of GIS big data[8].Figure(2) explains the software and hardware components.

2-Transmit data (First team):-

Setting coordinates for each person's requirement human resources this resource can be divided into two teams according to job implementation. The first will be named (Transmit data) and the second will be called (Received data). Figure (1) explain exactly what the job of each person who belongs to the first and second team is. The first will be collected data according to a formula designed by the network administrator. Its fields are first name, last name, family name, and card ID, and certainly includes field associate to record longitude and the other for recording longitude. Transmit data teamwork through the union plan. The plan which is the first team should follow suppose that. Everyone has to have training in GIS and receive map with geodatabase-type points from the administrator. These geodatabases show the label setting by the GIS program on each house on the map. The transmit team will be moved to each hose located and record the data according to the formula which is mentioned. At the end, the formula will be ready to transmit to the data center by the GIS Server network through the user associated at eachstation.

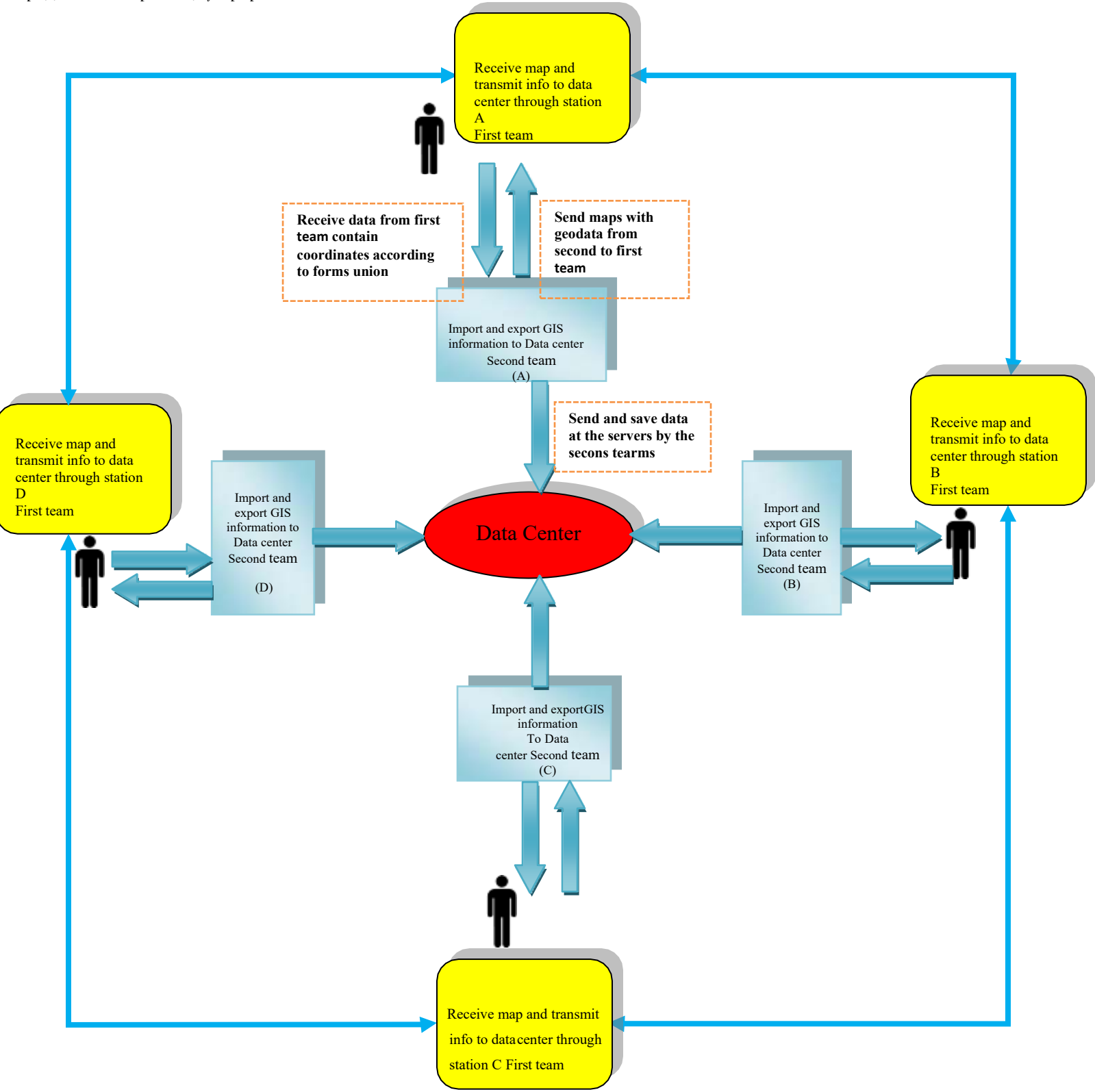


Figure (2) shown below explains how the network works for transmitting and receiving data added to the services inside the platform

3-Receive data (second team):-

This team will be named (Receive Data) team because they will be receiving data from the first. They have many duties more important than the first because they are responsible for designing maps for each particular area for each person in the first team. The properties of these maps must be correct, high accuracy, high resolution and contain geodatabase for each house. Another responsibility for these teams represented by the design SQL server database for receiving big data which are transmitted from one team. Build a platform in Python program for many reasons one of them to simplify searching inside the big database which will be connected later with Python script. Keep maintenance of the network from hacking. Monitoring data flow from each station. Create users with specific authors for each partner. Install all the programs that are responsible for keeping the network working like ArcMap, GIS server, SQL server, windows server...etc

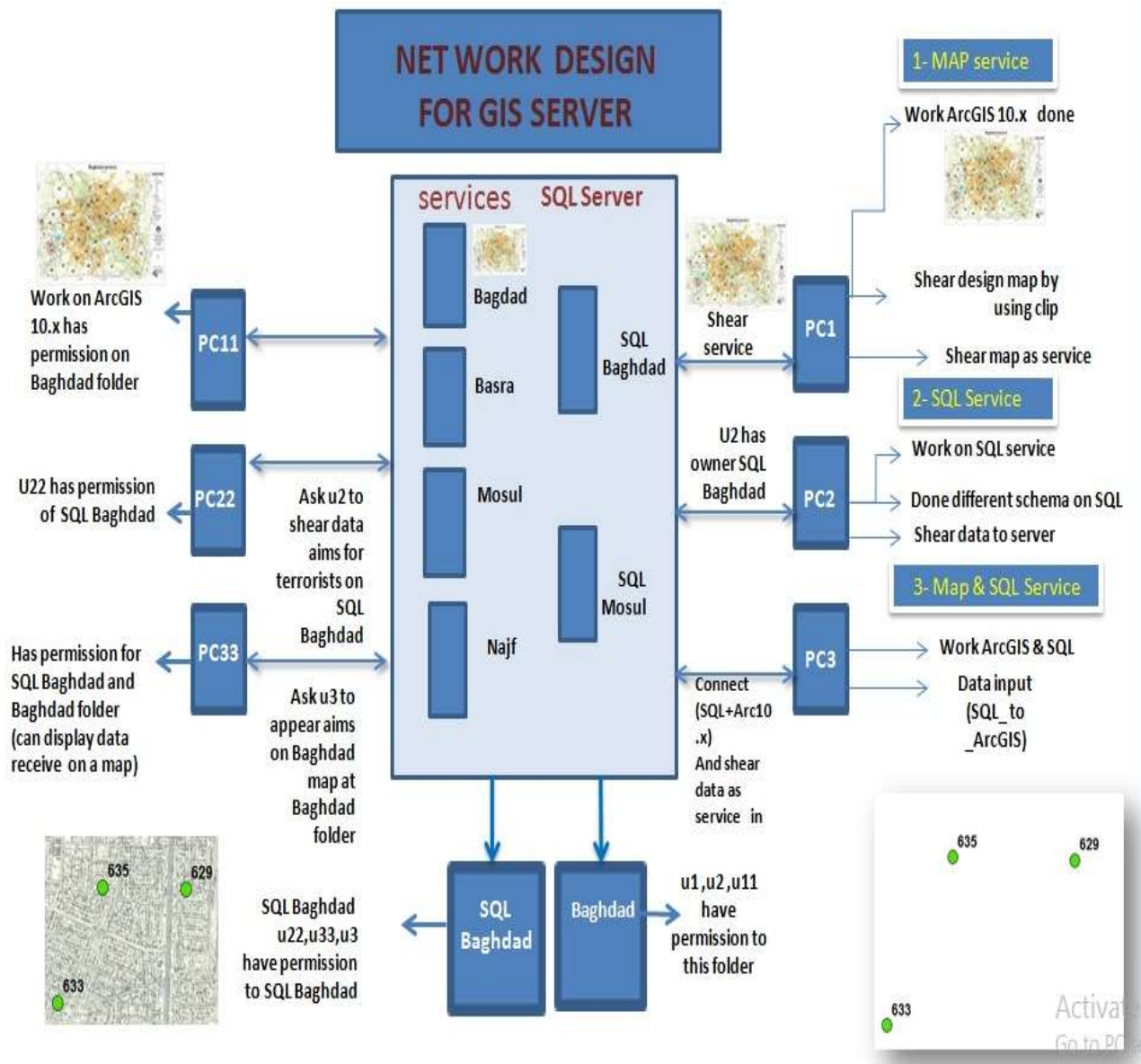


Figure (2) Network design for producing services (HW/SW) components

4-Python Platform:-

Platform design concerned with big data is important with GUI for many reasons like inserting or deleting information. GIS helps users understand patterns relationships and geographic context. GIS can be used as a platform for monitoring, and Protect data from loss or hack by giving authority to users to access the network. As known the GIS program had been written in Python language [7]. For example, the term artificial intelligence refers to a machine best system that can give a path of designer objectives and set decisions or rules designated on any environment real or virtual. Any intelligence system uses machines and designers according to input (A) to understand virtual and real environments (B) to convert this requirements image designer into a model by analyzing in an automated way and (C) to use model interface to innovation methods for information options or action. For example, the experiment of America's Congress Research Service in its mission to implement congress requirements with the highest accuracy by data analysis, secret consultation, and research analysis to support the monitoring and legislative representation .duties in. AI holds power helpful and many other benefits but also challenges some difficulties. Opportunities and benefits of the field are AI produce platform to provide seeing into scoping of data processing to the development designer activities including the optimization of the performances of the system. There is a challenge to artificial intelligence. It is in the pitfall side concerned with social as well as ethical issues associated with the use of AI. From an economics perspective, there is little systematic logical linking the results performance which is getting from AI research to the cost of ai research causing the data lack of relevant. Before the relation began to be understood much less quantified [9]. The reason to design Platform programming by Python languages programmable which is the ArcMAP had been written to process search in big data at SQL server in highly efficient

.This platform enables the network's administrators to implement what the users need to the information appear. This information's used for analytics, locating places, drawing roads on the map, Etc.

5-Case Study:-

Because the Najaf is one of the more important cities in Iraq, more people are visiting this city every day and year. These reasons make the security of Najaf city more important so that knowing the coordinates for people gives the Iraqi government tasks more facilities. For example knowing where the wanted live, easy analytics where the problem will be found. Figure (3) shown below shows the drawing geo database type polygon shape file to set the coordinates for each person living in Muthana district. If the administrator of the network search or look for anyone within the area shown on the map. Becomes easy to find him through the location which appears on the map. The network admin can use the Python platform for this purpose.

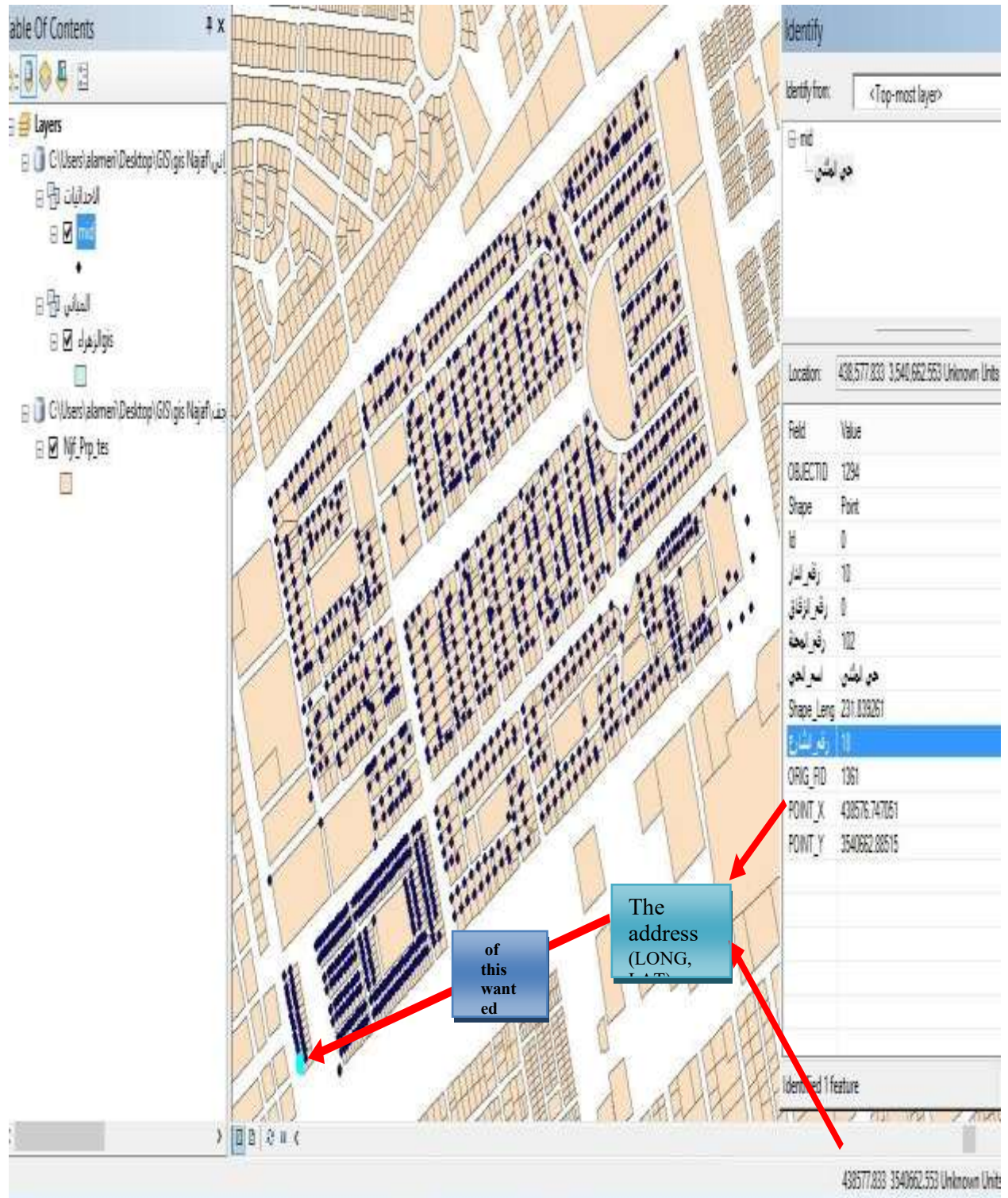


Figure (3) searching inside geodata for to catch wanted.

6-Benefit of this project:-

- Known the census of iraqipeople for each governorate
- Monitoring the places of the suspicious people
- Event expect by analyticgeodatabase
- Controlling of the naturalcatastorphes like covid-19
- Known the human resourcesof iraqi people

7-Study tools:-

- Programs (ArcMap,Python,GISServer,and SQL Server)
- Satallight image with high Accuracy
- Operating System(Windows,Windows Server)
- GPS Devices

8-Governmental entitiesbenefiting from the study:-

- Iraqi National Security Service(N.S.S)
- Iraqi National IntelligenceService
- Iraqi Ministry of Defence
- Iraqi Ministry of Interior
- Iraqi Ministry of Planning
- Iraqi Ministry of Trade

9-REFERENCES;-

1. " Changing Homeland Security: What is Homeland Security? Homeland "Bellavista, Christopher (2008) Vol.4 (02)."
2. "The Greening of Homeland Security",(2021(,Sefer Yilmaz
3. " GIS and Homeland Security Education:Creating a Better Tomorrow in our Classrooms Today" ,(David H. McIntyreand Andrew G. Klein), (2021),(GEJL,volume 94)
4. "A Course Correction for Homeland Security ",(Faiza Patel, Rachel Levinson- Waldman, and Harsha Panduranga),2022
5. Fundamental of GIS Application withARC GIS
6. "GIS for Homeland Security ",(Mike Kataoka),2007, ISBN 978-1-58948-155-8
7. 2022 "www.esri.com"
8. IEEE (2022) <http://2022> InternationalSeminar on Computer Science and Engineering Technology (SCSET)
9. "The Spatial Distribution of Public Support for AI Research ",(Farhat Chowdhury, Martijn van Hasselt andAlbert N. Link),2022
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