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Framing Mining Response of User Interaction According to User's Demand in Diverse Spatial Data Cloud

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***Abstract*—** Although we witness routine computer based implementations on daily basis for utilization in real life, still we are further more distanced from better abstractions from spatial data. This paper introduces a framework to mine spatial data that provide better handling of user requirements on real time spatial data. The frameworks use two tier software paradigm which is vital for better mining strategies.

***Keywords*—** Spatial Data Mining, Spatial Database, Data Mining, Interactive Approach, Trigger, Bucket

I. INTRODUCTION

The applications of spatial data mining and its techniques are normally used in Healthcare and its Future Directions, market scene analysis, the education scenario, manufacturing engineering, CRM, The Domain Specific Applications language research and language engineering, Medical Science, Web Education, firewall technologies in the Network, Athletic data analysis, The Intelligence Assistances, Internal Revenue Service, The Digital Library, prediction in engineering applications etc. the mathematical and system generated errors associated with the capture and correlation of a spatial data piece significantly affects the overall result. The conventional error rectification methods are not capable enough to rectify a full-fledged spatial data acquisition and the extent to which the rectification is valid is somehow dis affected without having a procedure to handle spatial data [1-27].

This research focuses on how to find better user interaction and better mining without wasting too much time. Further here the emphasis is on the mining system's accuracy.

The spatial data differs drastically from the traditional data as we have very large quantity of material attached with it hence we have to develop a new computing strategy to deal with it.

Further the data differs from on set to another frequently and considerably which also creates problem to write a generalized query mechanism for it.
The referring parameter also holds some sort of effect on its behavior or quantity as it may vary from distances and over time frames.

Thus it has tremendous amount of changeability in its nature and all these features considerably focus on the fact that it may have some sort of lacking in its acquisition hence in consistency as well.

Together all these features make this data mining a challenging task, still due to some great hope usages we have to get through it, let us consider some of real time advantages:

- A farmer is more concerned about a land's fertility, sand nature, rain characteristics, previous measurements for fertility etc. it is desirable for him if he is able to get this information mined according to his choice.
- Suppose a politician is in a location for an election campaign then he is so concerned about the religion, caste, education, requirement, previous poll results etc. for that location. it is desirable for him if he is able to get this information mined according to his choice.
- If an aeroplane is in a topographical location then the pilot is concerned about the air density, atmospheric pressure, clearance of wind, safe height to fly, previous experimental results etc. for that topology. it is desirable if this information mined according to need.
- A mobile company is more focussed on acquiring information about its business parameter related data and army may get information about armour deployment if we have a suitable strategy to mine spatial data according to demand.

Rest of the paper is organized as follows, Section I contains the introduction of the research, Section II contain the

objectives of the research, Section II.I describes the problem statement of the research, Section II.II contain the some measures of impact of the research, Section II.III contain the architecture and essential steps of the methodology used for the research, section III explain the proposed framework. Section III.I describes the flow mechanism of the framework, Section III.II discusses the procedure of sequence of events in the framework, Section III.III discuss about the proposed algorithm, Section IV predicts the result associated with the simulations, Section V describes the significance of the proposed mechanism, and Section VI concludes research work with acknowledgement.

II. OBJECTIVES OF THE RESEARCH

We are concerned about developing an approach which mines spatial data in accordance with the user some of the spatial data mining algorithms exist which may address some of the typical requisites mentioned above still some problems being faced are as follows:

- The majority of these algorithms are migration and special case implementations of general mining approaches therefore they are not concerned with the complex characteristics of spatial objects.
- Due to massivity and acquisition errors the efficiency of these algorithms are not very high.
- As there will be a need of spatial query language till now there is not a standard query language associated with it.
- The knowledge discovery processed designed for general database has poor interaction with spatial data sets due to complexities in attributes which make the task further complex.
- Most of the spatial data mining algorithm target specific cases and do not have generalize technique.

A. STATEMENT OF THE PROBLEM

Hence we require

- A proper standardised method to mine spatial data according to user need.
- We are supposed to properly handle misleading queries in the system.
- We have to block malicious user in the system to minimize misleading searches.

B. IMPACT OF THE RESEARCH

With the introduction of a two tier interactive framework a sequence of events will be carried out and we will witness:

- Better interaction between the user and spatial data.
- Usage of different algorithms available to mine spatial data according to the user needs.
- A fault tolerant robust system which minimize the overall mining process effectively.
- A system which is secure enough to handle misleading queries as well as malicious user.

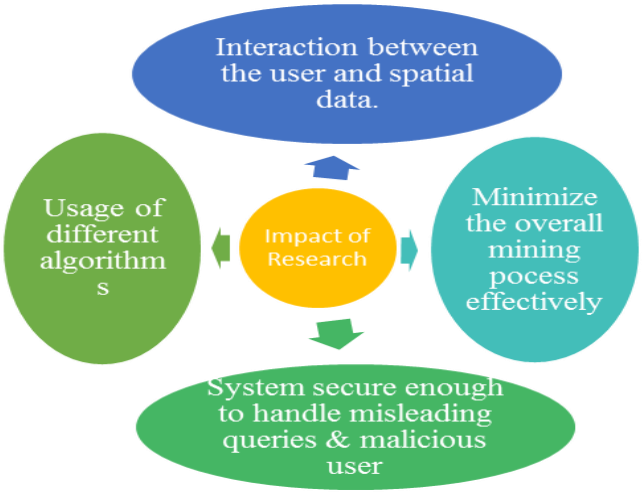

Figure 1. Impacts of Research

C. METHODOLOGY FOR THE RESEARCH we will employ an empirical approach of using a framework with two connected modules. The user will get a healthy interaction with the system and the overall accuracy and effectively of the system will not collapse.

The framework will have the following components:

User a user is defined as the human interface or a machine which interacts with the framework either explicitly or remotely

SW" A" it is the part of program which takes care of the user interaction as well as with misleads detection and prevention by interacting with "c"

SW" B" it is the part of program which triggers spatial data fetch mechanism to the spatial data cloud and informs SW"A" the resulting consequences of spatial data packets after being approved by "c"

"C" it is the part of program or the external mechanism for detecting the queries which are vulnerable to the defined threats.

III. THE PROPOSED FRAMEWORK

A. MECHANISM FOR INTERACTIVE FRAMEWORK

Let us consider the framework with the figure structure below:

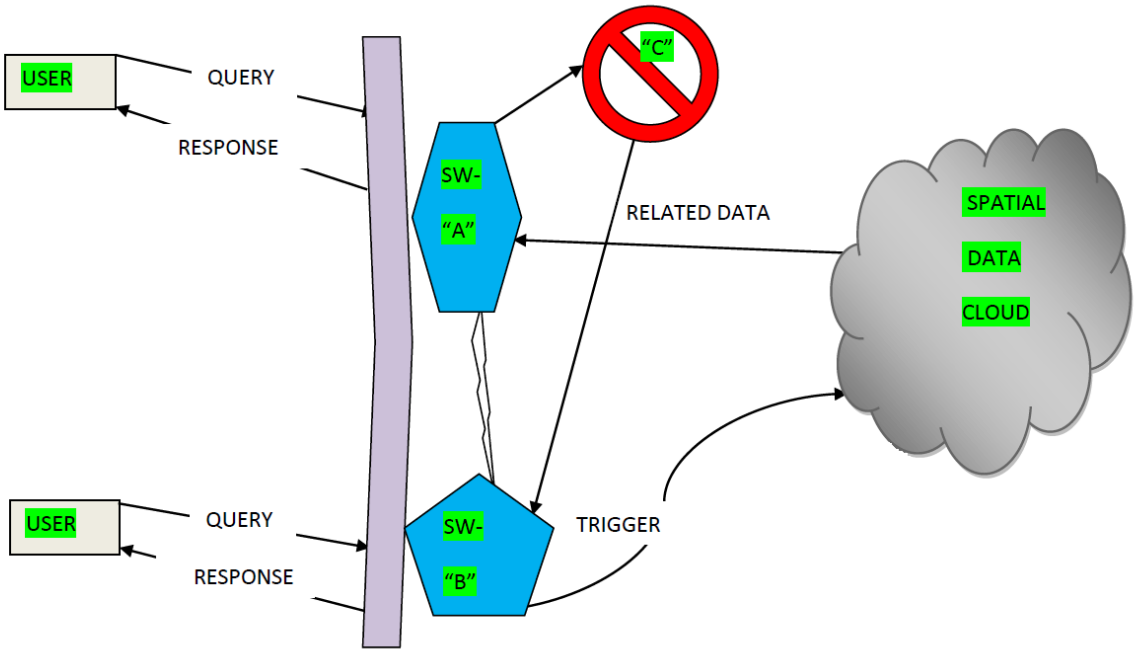

Figure 2. The Proposed System Structure

B. THE PROPOSED PROTOCOL FUNCTIONS AS FOLLOWS:

- The framework uses 2 tier software SW "A" and SW" B" along with 3rd party software "C".
- User connects to the framework and is being noticed by SW "A".
- SW "A" sends a message to the user and fires a verification query to "C".
- SW "A" passes the reference id of the user to SW" B".
- C returns a token to SW" B" about the reference id.
- SW" B" replies the SW "A" about the termination or execution of the query.
- If the framework assumes the token genuine SW "A" query is searched by the SW" B" of software which suggest a suitable strategy to handle the query according to the algorithms already defined in SW" B".
- If the framework assumes the token genuine it fires an appropriate trigger to the spatial data cloud.
- The trigger fetches the spatial data to the SW "A".
- The SW "A" then returns the user the requested spatial data.

C. THE PROPOSED ALGORITHM

TERMOLOGY

ADD USER if framework detects an interaction with it is assigns a reference id to the agent.

REP USER the framework part SW "A" replies to the reference id of the agent

REF C when SW "A" detects a request from a reference id it generates a token check to c

INF B when c replies a statement to execute of a token check.

FET B when the SW" B" fetches reference id from SW "A" on a token

GET D when the SW" B" informs SW "A" to accept the triggered data

QUT R when the SW" B" informs SW "A" to block a reference id.

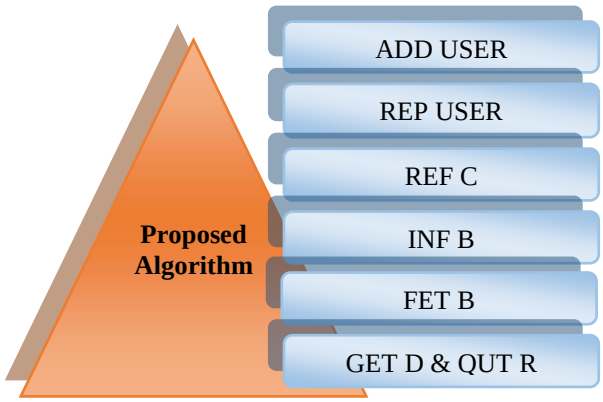

Figure 3. Proposed Algorithm

FRAMEWORK

If interaction found ADD USER
REF C
INF B
FET B
If trigger is ON
GET D
Else
QUT R

REP USER

IV. RESULT

On the usage of any type of spatial data may be satellite imaginary or topological or statistical data the framework will

- Mine the spatial data in accordance to user's demand.
- Will be able to Block malicious user which becomes serious issue whenever data is of prime importance, the system not necessarily blocks the unwanted user but it blocks its overhead to the system.
- Provide effective response to the user interaction. Not according to null interaction the interactive agent will find it get involved in mining processes which in turn become vital for the system and great achievement.

V. SIGNIFICANCE OF THE RESULT

With the usage of proposed framework, we will:

- Capable of mining complex and diverse spatial data cloud
- The algorithms used may be altered hence the framework will be capable enough to handle up gradation and compatibility challenges.
- The procedures will be efficient enough to handle very complex and large scale spatial data.
- Due to self-information generation effect in the framework it will possess expressivity and certainty.
- Having a module of security check the framework will be able to provide security and privacy to both the user and the mining system.

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