Intelligent Anti-Theft Finding Scheme Towards Itrust Establishment in Delay Tolerant Networks Using VANET

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Abstract- *In this paper, we propose iTrust, a probabilistic misbehavior detection scheme, for secure DTN routing towards efficient trust establishment. The basic idea of iTrust is introducing a periodically available Trusted Authority (TA) to judge the node's behavior based on the collected routing evidences and probabilistically checking*

Keywords- DTN, ITRUST, TA, VANET, ANTI-THEFT

I. INTRODUCTION

Delay tolerant networks (DTNs) which makes routing quite different from other wireless networks. For example, since an end-to-end connection is hard to setup, store-carry-and forward is used to deliver the packets to the destination. Although many routing schemes have been proposed to increase data delivery reliability. In this section we are discussing about some previous existing systems regarding this.

Novel Contact Based Mechanism to Decrease Overhead Ratio in Delay Tolerant Networks [1] proposed a mechanism to reduce the rate of replication based on contact duration between nodes. They proposed an algorithm that calculates the popularity vector for each node. The use of popularity vector allows them to select the most appropriate node for message forwarding based on its popularity value. The buffer space is varied from 5M to 15M. Simulation results show that reducing the replication of messages has increased the delivery ratio.

Bhogapathi Swetha [2] proposed a new statistical learning Approach to string transformation. Their method is novel and unique in its model, Routing algorithm, and misbehavior detection algorithm. Two specific applications are addressed with our method, namely spelling error correction of queries and query reformulation in web Search.

Christoph Ponikwar [3] conclude that hybrid approaches are underrepresented in current research, which might be an indicator that further research is needed or that hybrid approaches appear to be fruitless endeavors. To answer those questions further research, including a comparative study, needs to be conducted. The direction the standardization efforts, by IEEE and ETSI, are heading, is towards centralized architectures with all benefits and weaknesses. Those will set the mark against all other solutions have to prove themselves. Eventually decentralized solutions could be considered for integration in those standards if proven beneficial.

Hyunwoo Kang [4] performed a survey of vehicular DTNs with more emphasis on routing in detailed. They also provide a list of open challenges and future directions.

Carolina Tripp-Barba [5] importance of developing routing protocols in VANETs proposed for this kind of wireless networks.. However, routing protocol in vehicles' networks is very related with the mobility model, for that reason, other metrics that provide good performance are direction, trajectory or acceleration that are very related to the mobility of the network.

II. IMPLEMENTATION OF PROPOSED SYSTEM

In this section we are implementing proposed system by using four modules. Those are

- System Module
- Routing Module
- Threat Module
- Itrust Module

System Module:

The system model where we consider a normal DTN consisted of mobile devices owned by individual users. Each node *i* is assumed to have a unique ID *Ni* and a corresponding public/private key pair.

Routing Module

First Contact routing protocol is used here, and our basic assumption is communication range of a mobile node is finite. We also assume that the network is loosely synchronized

Threat Module

First of all, we assume that each node in the networks is rational and a rational node's goal is to maximize its own profit. In this work, two kinds of DTN nodes are considered that are: selfish nodes and malicious nodes.

Itrust Module

We know that iTrust has two phases, Routing Evidence Generation Phase and Routing Evidence Auditing Phase. Fig.2 shows that Flow diagram for Author and Fig.3 shows that Flow diagram for User

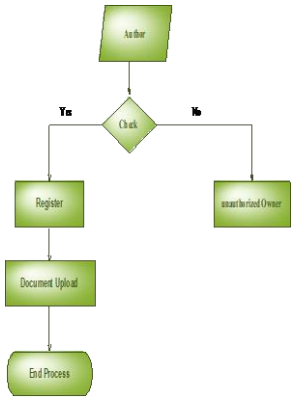

Fig.2 Flow diagram for Author

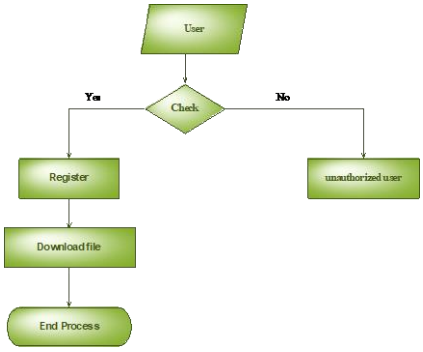

Fig.3 Flow diagram for User

III. RESULTS AND DISCUSSIONS

In this section we are discussing about results of our proposed system by using the following figures. Fig.4 shows that owner registration page. Owner need to register first by specifying the owner id, Email ID and password

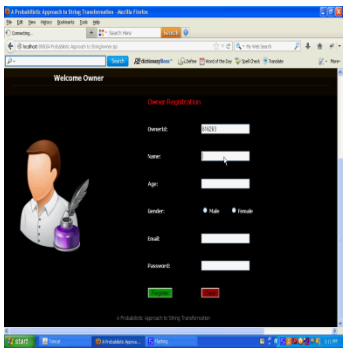

Fig.4 owner registration

User need to register by specifying the User ID, Email ID and password. Fig.5 shows that user registration

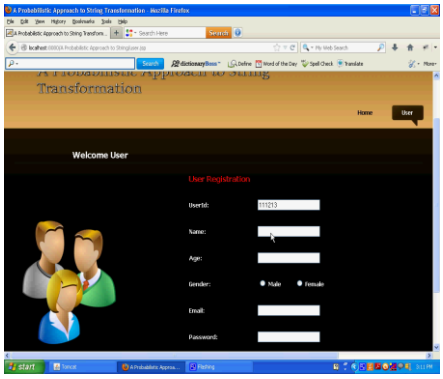

Fig.5 user registration

- It checks whether user needs to login or owner needs to login Fig.6 shows that checking whether user need to login or owner need to login

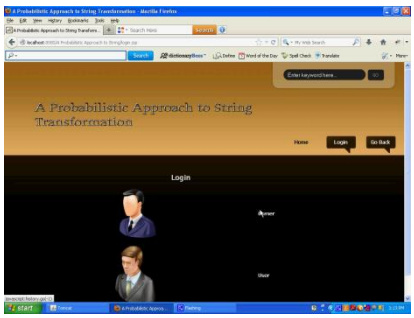

Fig.6 checking whether user need to login or owner need to login

- Owner need to enter the login detail. They are Email ID and password Fig.7 shows that owner login

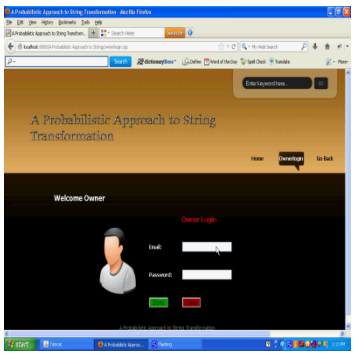

Fig.7 owner login

- Owner need to enter the word corresponding meaning and the shortcut details. Fig.8 shows that The path chosen for data

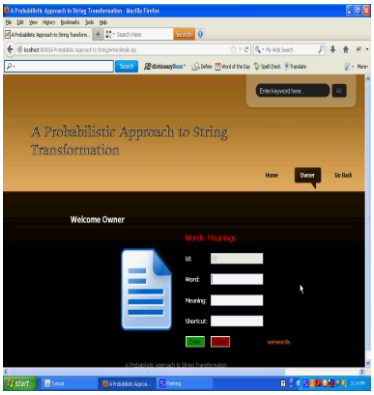

Fig.8 The path chosen for data

- It displays the list of entered words and its meaning. Fig.9 shows that displays words along with its meanings.

Fig.9 displays words along with its meanings.

- It selects among the user need to login or owner need to login. Fig.10 shows that checking whether user need to login or owner need to login

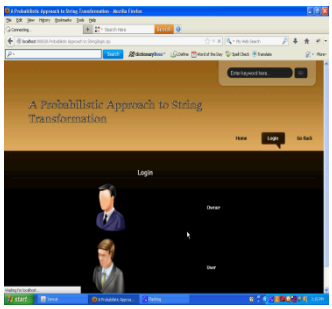

Fig.10 checking whether user need to login or owner need to login

- User need to enter the login details. They include user Email ID and password. Fig.11 shows that user login

Fig.11 user login

- After the login user need to enter the string and the spell checking is also done. Fig.12 shows that user need to enter the string.

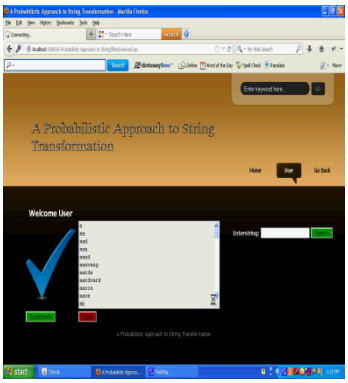

Fig.12 user need to enter the string.

- Now user needs to enter the string and search for that string. Fig.13 shows that user entering the string

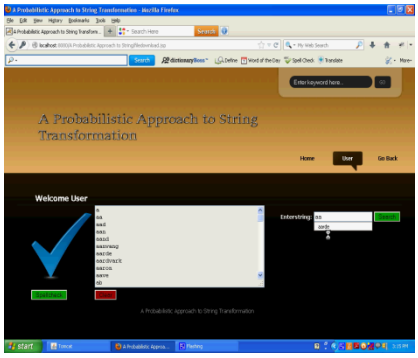

Fig.13 user entering the string

- Here spell checking is done user needed to type some word and checks the spelling. Fig.14 shows that spelling checking

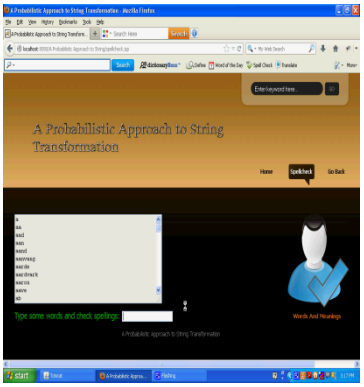

Fig.14 spelling checking

- It displays words along with its meanings. Fig.15 shows that displays words and its meanings

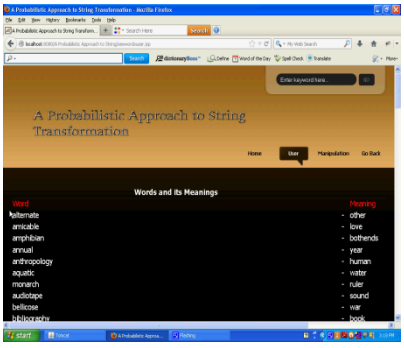

Fig.15 displays words and its meanings

- Here string manipulation is done. That is string substring and reverse is done here. Fig: 16 shows that string manipulations

Fig: 16 string manipulations

- Here we need to enter the letters and go for key search. Fig.17 shows that keyword search

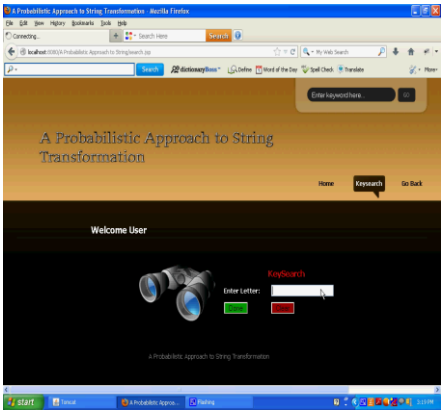

Fig.17 keyword search

- It displays the words along with its meaning. Fig.18 shows that displays words and its meaning

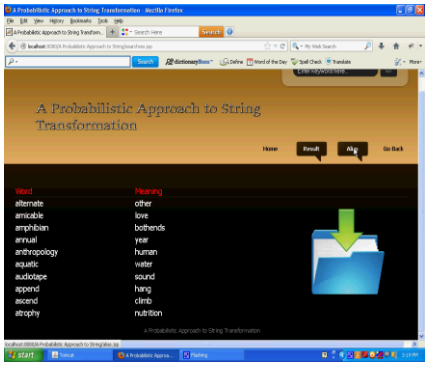

Fig.18 displays words and its meaning

- User need to enter the shortcuts and then user need to search for that word. Fig.19 shows that entering the shortcuts

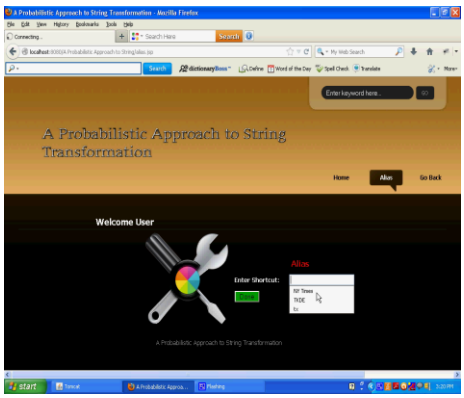

Fig.19 entering the shortcuts

- It displays the key word along with its shortcut details. Fig.20 shows that displays word along with its shortcut

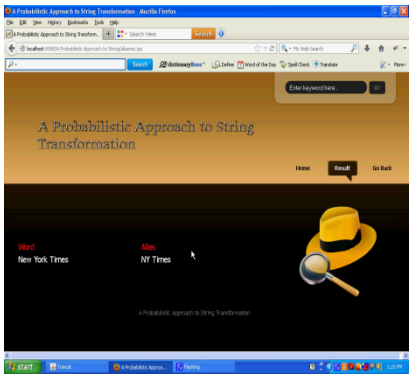

Fig.20 displays word along with its shortcut

IV. CONCLUSION

Intelligent Anti-Theft Finding Scheme Towards ITRUST Establishment In Delay Tolerant Networks Using VANET Implemented Successfully. We proposed a new statistical learning approach to string transformation. Our method is particularly useful when the-problem occurs on a large scale.

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