# The multiplicity of ways of routing in computer networks that reply on long-distance

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## Abstract

A method for increasing the efficiency of routing based on a system of agents. The analysis of the variation of the distribution network environment first and second order network topology and the location of the agents. It is shown that with a change in the topology of the density distribution varies in a nonlinear law.

## Introduction

We will speak on the subject for and guidance to the networks of computer security and be in accordance with the standards of quality and supply because it is considered the best way to ensure proper routing of data during road transport evenly messages and the possibility to download all the links on an equal footing and tracks trade in one direction to shorten the data and messages transferred to the best way to transport and guide But do not take consideration of issues that need load more when they are multiple routers with different protocols in one direction either of multimodal transport are in several ways, which measures the direct transport to reduce costs but increases the expenditure on reverse per transport data traffic

so The first type is unilateral singular moves the data unilaterally, but faces a problem if there's a growing communication path time data transfer, especially in the transfer of multimedia data such as audio, image and video then be needed to encode video and special Alsotefi this case monophonic no substantial risk of loss and delay data packets and then the quality is in the path of Telecom Alia using caching And high reliability In this case must secure protocols for the analysis and guidance in all cases individual tracks and multiple paths so as to ensure the authenticity of routing in mobile networks and ensure the confidentiality of information can be moved in different ways to ensure quality Search terms: multi-router, router in one direction, Insurance Directive presence transfer data

## APPROCH

In our research and our work, we analyzed and compared to secure PROTOCOLS routing in mobile networks and Adana comparison after analysis of the two methods of guidance as shown table 1

| Benefits | Short comings |
|---|---|
| reduction of volume calculations by use of identification codes message with a symmetric key;<br>- Guarantee the validity of routing information; | source and destination must have a common key;<br>- Missing data encryption;<br>- Delays in delivery packets to the application level due |

| | |
|---|---|
| | the need to open key;; |
| control packets sent data; - Nodes can not them selves change their priority; | Large storage data; - Not available ability to re-inclusion in the network isolated nodes |
| Information is sent on a regular basis | The information is sent only when changes occur |
| A router sends information about the next hop using the Distributed Bellman-Ford algorithm on the basis of the valuation of the way | The router first builds a description of the internetwork topology, and then can use any routing algorithm to determine information about the next hop |

Identify the problem and to increase the chances of nappy security during the transfer of data and information in the mobile network. To increase security, and the transfer of information in Wireless networks to form a group of separate tracks. We propose in this research separate tracks So we proposed multiple tracks of directing because the traditional means of directing do not meet the quality of service requirements and do not provide sufficient speed to change tracks on the Web

The solution of the problem

To solve the problem, consider the example of a graph consisting of 9 nodes (Fig. 1). As the shortest path algorithm using Dijkstra's algorithm. In [8], the example of the algorithm Dijkstra, which solves the problem of the shortest paths from one node to the weighted directed graph G = (V, E) with the initial vertex s, in which the weight of the edges nonnegative ((u, v) ≥ 0 for all (u, v) E).

Suppose that iq - the probability that a node intercepted. Then the probability that
that the path L1, l, is risk ,

p = 1 - (1 - q1) × (1 × (K- q2) × 1 - ql).

For example, consider a wireless network consisting of nodes and links, connecting them provided in the form of a graph G = (V, E), (Fig. 1), where V = {vi | i N) = 1 ...
The set of vertices, E = {Ej | j = 1 ... M} - set of connections between the nodes. Consider path LS, T between the vertices S and T, which includes a set of vertices {S, V1, V3, V5, T}.

In this case:
Since we are considering the safety message delivery, it is assumed that source and destination is 0
sdq = q =. chance

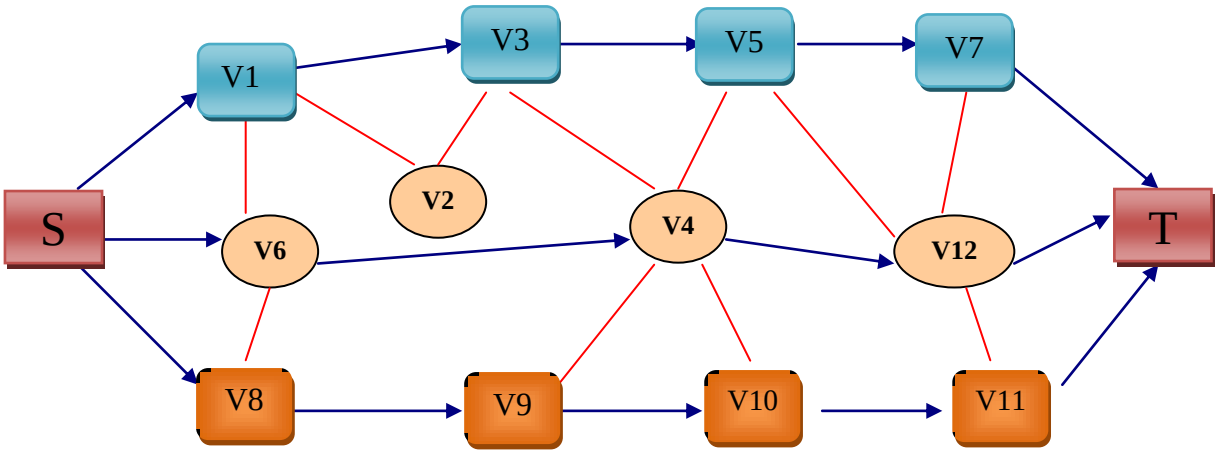


Fig 1 . Count one wireless network

Probability of intercept messages is:

$$p_{msg}^{m}(n) = \prod_{I=1} p_i$$

where I probability of intercept the message. The more parts p I , the lower the probability of intercept communications and better protection. Thus, the goal of the algorithm is to find ways to find as many ways that at the same time will be the most secure. For example, consider a method for finding the optimal set of paths in the block diagram (Fig. 2) In [9] the solutions to the problem of safe one-way based routing and multipath routing. It is assumed that the multipath routing is the optimal way security of transmitted data .In [10] a method for the separation of a secret message to pieces. He divides the message to N sections called lobes (share or shadow). In this case, the presence of any number of parts is less than T, it is impossible to get any information about the secret message. At the same time by using an appropriate algorithm can recover the message from any number equal to or greater than T. When choosing the optimal set of routes to take into account several criteria: to satisfy the requirements for latency and network load evenly. There are two ways to select the optimal set of paths: the optimal allocation and hard.

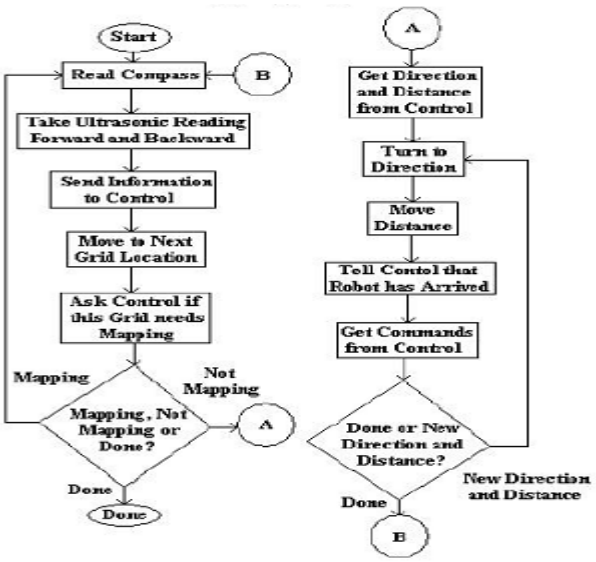


fig ( 2 ) : A block diagram of the algorithm for finding a set of paths

Here at the start of the show will Android ROM performance in the second test to ensure that the components work with each other in the section Alastruthristih robot will wait for instructions from the user interface, the user interface is to send the matter to be side by side with the command Initially receives the robot once and it will take time to read the compass and will performs checking this test consists of taking the measurement of each sensor wave ultrasonic and the transition of the sensor by 10 degrees in opposite directions from each other so Aqos sensors to completion 180 degrees and sensors should be facing opposite directions at all times and be sent compass sensor data and ultrasound waves to the user interface both in one package and if he is released stop must be done to stop And that once the scan is complete you will robots to move forward in the form of two groups and if something was issued to stop, this is the place where robots will stop and will if there is a problem with the site already and if there's no problem will be is the question of the new examination appeared, the robot will move a group of two or more of the network funds . And that if these robots faced a wall can not be that these robots are moving forward in the two funds and will turn out to be 90 degrees and will be repeating this process until the discovery of the gap or weakness until the receipt of the order to stop And that at any time will the user clicks on the site on the map robots will move until reaching the stop point and then following the instructions until you reach the exact location and then will rotate to designate guidance by the user and continue to conduct the examination

As a result, we can conclude that the optimal distribution of the security below, however, satisfy a given level of QoS. In contrast to the optimal distribution is not completely rigid provides QoS, but provides the highest level of security of transmitted messages.
If all of the parts of the secret message, a check and assembly into one original secret message. When a component shortage n, resubmitted a request for retransmission of the missing part of a different route, where a delivery time of minimum
In Fig. 4. through the process of distribution of hard

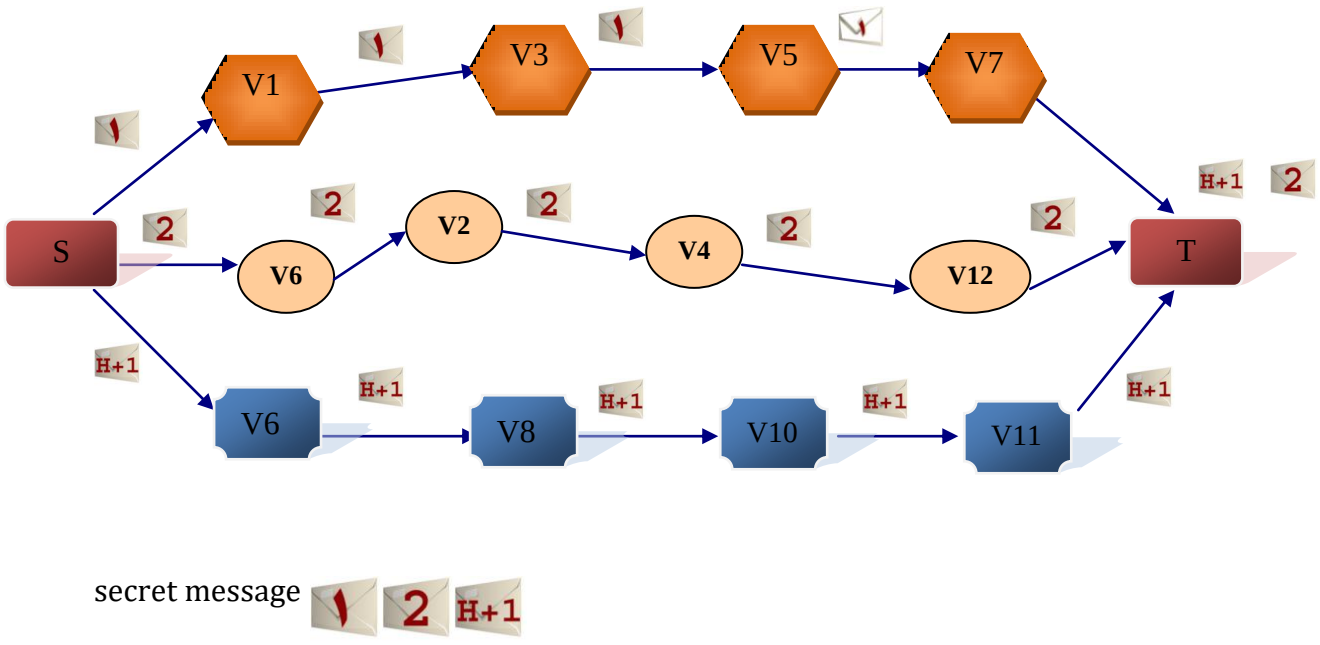


Fig. 3 . rigid distribution

## Results

1 - The traffic problem has been resolved through the optimal loading and routing through roaming networks

2 - the proposed method will work on the basis of secure multipath routing to create a modified route that will provide the most secure transmission of messages and evenly load all the channels of communication

3 - Here the problem has been resolved mobile phone using a projection algorithm and take advantage of them.

4 - Here the problem has been resolved to reduce the costs of mobile phone

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